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Safety and Security Through the Lens of Biology, the Building, and Belonging

The need to feel safe and secure is “baked into our biology” and must be addressed in school building design.

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Providing a safe and comforting environment is key to creating a place where students can learn.

Across the country, schools collectively spend billions of dollars on safety measures to create a safer school environment. These measures range from professional development training to camera systems, storm shelters, and alert systems, including an evolution of safety drills from duck and cover to active shooter. The need to feel safe is baked into our biology.

Biology and Basic Human Needs

Safety is a basic human need rooted in our quest for survival. It is identified as a key component of Maslow’s hierarchy of needs, which is “a psychological theory about what drives human behavior and what makes humans feel fulfilled.” The first need in this theory is to meet a person’s physiological needs, such as food, water,

and shelter. The next level is ensuring that we are mentally and physically safe.

These base levels are hard-wired into our brains as a part of our survival instinct. Safety can look like survival, but more often, it is part of critical development that begins in early childhood and can look like feeling secure in your emotions, finances, or relationships.

When our safety is threatened, our survival response, often referred to as fight or flight, kicks in. Adrenaline is released, our heart rate increases, our breathing changes, and our skin becomes pale or flushed. Our entire body and mind are now focused on dealing with the perceived threat.

As a result, when we feel unsafe, we are often easily distracted, struggle to focus, and are more likely to react in fear. To feel safe, many of us crave order, predictability, and a sense that we have control over our environment and emotions.

Safety in Schools

Threats at school come in different forms. There are everyday threats that occur, like bullying, name-calling, or physical attacks that may come from students or staff and trigger students' fight or flight response. When this happens, some students studiously avoid spaces where they might find themselves alone and vulnerable to protect their physical or mental safety.

Schools can also be targets of active threats. While rare at any particular school, they are still a cause for concern that generates fear. Staff, students, and parents want to know that thought has been given to how the school building, staff, and first responders will react to an active threat.

Building and Site

When it comes to school safety and security, both types of threats need to be considered within the building design.

This consideration starts with the building code, which sets a baseline standard to keep building occupants safe from harm. As architects, we are tasked with protecting the health, safety, and welfare of those who occupy the buildings we design, and the building code helps us do that. The building code establishes expectations for fire areas, exits, and travel distances intuitively set up to get occupants away from a threat and out of the building should the flight response kick in.

Creating fire areas in school buildings has long been a part of the building code and is now being looked at to enhance safety and security for other threats. By being strategic about where the fire area compartments are located, we can use them to segment the building during an active threat, restricting the movement of the threat and giving the occupants more time to exit.

Other building aspects mandated by the code, such as the fire alarm system or a camera system, can address threats to occupant safety by informing occupants and first responders of what is happening.

However, the building code is just the beginning. Today's best practices build on the baseline that the code establishes to increase safety in our schools. This baseline starts with parent pick-up and drop-off, bus routing, and how the students get to outdoor spaces safely to improve how students feel when on campus.

Creating layers of security best prepares everyone for threats from the front door to the classroom door.

This also includes a widely accepted best practice of integrated and layered protection. Many schools implement lockdown points, cameras, panic buttons, and communication devices to notify occupants and first responders. Creating layers of security best prepares everyone for threats from the front door to the classroom door.

While schools in the past put the offices in the center to create more centralized access to the school operations, today's school leaders recognize that a secure perimeter and tightly controlled visitor management are important aspects of better school security. A controlled, single point of entry for students, visitors, and evening entrances lets you know who is in the building. Adding transparency and longer sight lines at these entries allows occupants to see threats approaching, giving them more time to react.

In many schools, restrooms are the one space where behavior cannot be observed and where many students report feeling unsafe. Schools report that as much as 90% of students' daily illicit behaviors occur in these areas.

A "home-like" design for restrooms, where the toilets are in individual rooms that are completely private physically and acoustically (just like home), and handwashing and grooming are moved into public areas where they can be observed and where cameras can be installed has been proven to greatly reduce the incidents of bad behaviors in restrooms and increase students' feeling of safety and belonging.

Understanding how a district approaches safety and security is fundamental to how the building will be designed, influencing the reaction of building occupants to threats within and outside the building.



Attention should be given to creating a “home-like” design for school restroom areas.

Detailed conversations between the school and the architects must occur during the building design to align the design and the school’s philosophy, training, and procedures. When that happens, the building can be a critical component in keeping students and staff safe.

Belonging, Esteem, and Self-Actualization

Once someone’s physiological and safety needs are met, they can begin to satisfy other needs in Maslow’s hierarchy, such as feelings of belonging, self-esteem, and self-actualization. This feeling of belonging comes from connecting to others, making friends, or establishing a sense of community. These interactions help us feel fulfilled and play a significant role in our ability to feel physically and emotionally safe in our spaces.

Physical practices put in place by the building code or best practices can only go so far. The building design, coupled with the district’s educational delivery system can also help.

One way to foster belonging in the building is by implementing passive surveillance and educating staff on what to look for regarding day-to-day safety needs. Creating an environment where students feel they belong reduces everyday incidents that threaten feelings of safety, such as bullying, hazing, intimidation, fights, or vandalism.

Breaking down a school into communities of 150 students or fewer can also foster connectivity and belonging. This arrangement provides opportunities to create a school within a school where everyone knows each other. These smaller learning areas become communities

for students, giving everyone a sense of familiarity and belonging.

This Century Education

This Century Learning Environments are designed to allow education to occur everywhere. Education becoming more project-based means creating flexible opportunities for students to work in and outside the classroom while still being observed.

It has been said that transparency translates to accountability. Working in a more transparent environment is a learned behavior. Distractions happen, but we have seen students and staff typically adjust in a matter of days. Some studies show that transparency reduces distractions and improves focus by allowing occupants to break focus and then re-focus.

When the students and staff can be easily observed, illicit behaviors are reduced. Coupled with smaller learning communities, it also allows community members to watch out for each other more easily.

Opportunities to Thrive

Providing a safe and comforting environment is key to creating a place where students can learn. Combining the preferred educational delivery and school culture with facilities designed to maximize those efforts is the best way to keep students safe and provide them with opportunities to thrive.

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