

INCLUSIVE SCHOOL DESIGN

ach school day, the roughly 500 students at Woodland Hills Elementary School in Kingwood, TX, spend time playing in and exploring one of the hallmarks of elementary school education: the playground. But this school year, Woodland Hills's fairytale-themed playground looks noticeably different, with the presence of new wheel-chair accessible ramps, sensory panels, height-adjustable structures, and a smooth playground floor.

The new playground design, recognized in a recent report as one of the nation's most inclusive, is emblematic of a changing perspective on K-12 education, not just in this Houston suburb but across the nation. Increasingly, educators are making public commitments to ensuring that all students – regardless of ability, age, or background – have an equal opportunity to play, learn, and develop both inside and outside the classroom. As the student population continues to become more diverse, it is imperative for educators and school administrators to create environments that meet the needs of all students.

Every child deserves a quality education, but not every child learns, plays, and develops the same way. A "one-size-fits-all" approach to education betrays our commitment to ensuring that every child has access to a robust K-12 education. That holds especially true for neurodivergent students, students with learning disabilities, and students with special education needs.

There are around 7.2 million students with disabilities in the United States, comprising 13% of national public school enrollment. That number has grown by 11% between the 2009–2010 school year and the 2020–2021 school year, the most recent year for which data is available









The most common disability category among PreK-12 students is "specific learning disabilities," such as dyslexia or problems resulting from a brain injury. In the 2017–2018 school year, 34% of students with disabilities had a specific learning disability, 20% had a speech or language impairment, and 14% had a chronic or acute health issue that negatively affected their educational performance. Moreover, students with autism constituted 10% of school children with disabilities in the 2017–2018 school year, a dramatic increase from the 1.5% of students with autism two decades ago.

Inclusion is more than just a buzzword; it requires taking actions that tangibly enrich the student experience. Creating inclusive-learning environments starts with changing how we design schools and educational infrastructure.

Historically, accessible and inclusive education spaces were almost nonexistent because students with learning disabilities themselves were not visible and lacked legal protections. That began to change with the passing of The Americans with Disabilities Act, but our evolving understanding of these issues necessitates a 21st-century approach.

One of the most common steps educators have implemented in recent years is ensuring that a school's physical environment is accessible to students with mobility impairments. That includes installing wheelchair ramps, elevators, and accessible washrooms.

Educators can think even more creatively to make learning environments more accessible. For example, classrooms should be comfortable for students with visual- and auditory-processing impairments, with sufficient natural light and good acoustics to reduce sensory overload. Sensory-friendly spaces should be provided where students can take a break or engage in sensory activities, such as a quiet room, a sensory garden, or a dedicated sensory room.

Additionally, technology and assistive devices, such as text-to-speech software or closed-captioning, should be deployed in classroom settings to support students with disabilities or those with diverse learning needs.

While the design of learning environments is instrumental in creating a more inclusive and accessible educational experience, educators also need to change how they teach students to meet unique needs. One learning model that can help achieve that goal is play-based learning in early education settings.

The play-based learning framework builds on a child's natural motivation to play by using it as a context for learning. Designing schools with textured surfaces or other mediums to interact with the environment through physical or sensory processes can be a crucial tool in helping those students meet early-education targets. Moreover, play-based learning can promote creativity, problem-solving, and critical thinking skills, which are important for all students but can be particularly helpful for those with special needs. It can also encourage collaboration and socialization, helping students with social or communication difficulties to build relationships and develop social skills.

Inclusion is a necessary component of a more equitable and enriching educational experience for all students. Educators can create a stronger foundation for success by designing environments that cater to the needs of every student and embracing diverse learning styles, abilities, and backgrounds.

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