Deaf Space: Architectural Design for Deaf Students

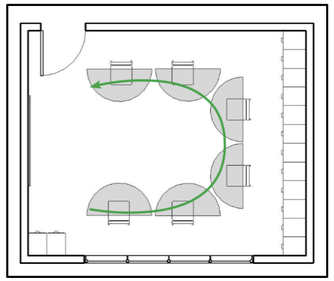
Abigail Connor, Deaf Studies Fellowship

"Deaf-first architecture is better architecture for all" (Hauan, 97)

DESIGNED SPACE

Many components of deaf-space work best when they are part of a building's initial design. HVAC systems and sound insulation can be chosen and located to minimize noise that interferes with hearing aids or cochlear implants (Nelson et al., 2). Pathways can be designed to be wide enough that two signers have enough space to view each other while walking, and visibility can be maintained through the use of transparent railings, corners, and doors (Tsymbal, 46).

Clear partitions and open layout increase visibility (Hauan, 91)



Circular seating arrangements allow everyone to participate (Hauan, 54)

ADAPTED SPACE

Adapted space can be a cost-friendly way to make changes to existing structures. In only a single room, "classroom characteristics" can be modified, including rearranging seating so that students are all in view of one another and installing better lighting (Guardino and Antia, 530). On a larger scale, obstacles from pathways can be removed, stairs can be replaced with ramps, and walls can be painted colors that provide contrast to signers.

EXISTING SCHOOLS

The Atlanta School for the Deaf has incorporated "chamfered [cut away] corners to increase visibility; a reflective globe on the ceiling to increase spatial awareness; a diffused skylight to eliminate glare; cloth light diffusers; and U shaped desk arrangement" (Hauan, 53-54).

The Georgia School's for the Deaf color-coded communication system: "blue [stands] for intruder, red for tornado and yellow for class change" (Hauan, 53).

DEAF SPACE

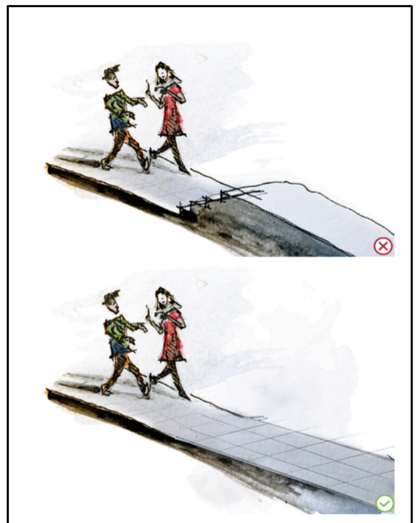
Gallaudet University is largely responsible for the development of deaf-space, a concept that revolves around the recognition that visibility is key to communication when using sign language (Tsymbal, 22). In light of this, deaf-space designers focus on building an environment that can, at the most basic level, provide a visual field to adequately see others. Even further, Deaf space can provide safety warnings and a better learning environment for multiple student populations.

This style of design can be incorporated prior to construction, when buildings and environments are designed with the needs of the Deaf in mind (designed space), or can be achieved in the form of modifications to existing structures (adapted space). These strategies center on the need to "make a building porous, and create a fabric of visual connections throughout the building" (Tsymbal, 46). It is vital to the Deaf community to create a space where communication is effortless and efficient, and schools are the easiest place to start incorporating these ideas.

Chamfered [cut away] corners increase visibility, school-wide information displays replace intercom systems, and wood floors diffuse light and better transmit vibrations to feel when others are approaching (Hauan, 66)

OTHER BENEFITS

A study by Guardino and Antia found a relationship between a modified environment and higher levels of academic engagement and lower levels of disruptive behavior (518). They implemented simple modifications, including changing seating arrangements and increasing non-harsh lighting, which teachers were easily able to implement and continue after the study (Guardino and Antia, 524).Because these types of changes can increase attentiveness and encourage communication, they can also be beneficial to students with learning disabilities, language challenges, and auditory processing disorders (Nelson et al., 2).



Removing pathway obstacles like stairs allows signers to keep their gaze on each other instead of the ground (Hauan, 63)

RECOMMENDATIONS

Many design elements that are critical to Deaf students' success align with other modern school designs. If these can be made into new "standards for architecture," they can benefit a wider audience (Tsymbal, 77). Architects, schools, teachers, and parents, "need to understand and to help others understand that classrooms are not simply neutral and interchangeable locations within a school building" (Ramsey, 112).

WORKS CITED

Guardino, Caroline and Shirind D. Antia. "Modifying the Classroom Environment to Increase Engagement and Decrease Disruption with Students Who Are Deaf or Hard of Hearing." *Journal of Deaf Studies and Deaf Education*, vol. 17, no. 4, 2012, pp. 518-533.

Hauan, Travis. "Deaf-First Architecture: An Educational Design framework for Deaf and Hard of Hearing." M. Arch. thesis, University of Washington, 2017.

Nelson, Peggy B, Sigfrid D. Soli, and Anne Seltz. *Acoustical Barriers to Learning*. Acoustical Society of America, 2002.

Ramsey, Claire. *Deaf Children in Public Schools: Placement, Context, and Consequences*. Gallaudet University Press, 1997.

Tsymbal, Karina A. "Deaf Space and the Visual World – Buildings That Speak: An Elementary School for the Deaf." M. Arch. thesis, University of Maryland, 2010.

Specific details such as the amounts and concentrations used, equipment settings, sample size, and statistics are important. For example, you should report: the final concentrations of the solutions used in the actual assay, specific equipment and equipment settings used, how you obtained your measured values, any calculations that were used in collecting your data, and a brief description of statistical methods used to analyze your data. Statistics are often used to make conclusions about experimental results, so your description of statistical methods should at a minimum tell your audience the test you are using AND your criteria for a significant difference.