Accessible and Equitable Informal Science, Technology, Engineering, and Math (STEM) Learning

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Context

As increasing numbers of people with disabilities participate in academic opportunities and careers, the accessibility of classes, services, electronic resources, and events—as well as informal STEM learning (ISL) activities—increases in importance. The goal is simply equal access; everyone who would like to engage in informal STEM learning should be able to do so comfortably and efficiently.

Questions

What **factors** contribute to accessible and equitable ISL? Which **stakeholders** can contribute to making ISL more accessible to individuals with disabilities?

Scholarly Basis

Review of research and practice literature underscores the importance of applying universal design (UD) concepts in education settings, including informal STEM education. UD is defined as "the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design."

Method

In pilot activities*, 46 students with a wide variety of disabilities from 13 high schools and 16 postsecondary institutions contributed a total of 79 accessibility reviews of ISL programs including the Seattle Aquarium, the Pacific Science Center, Museum of Flight, Burke Museum, and the Woodland Park Zoo.

Results

Students with disabilities increased their awareness of access issues related to ISL offerings, access solutions, and advocacy strategies. **ISL educators** learned more about accessible offerings and gained further appreciation of the talents and perspectives of students with disabilities. A follow-up project, *AccessISL*, was funded by the National Science Foundation.

AccessISL supports efforts **to develop a capacity building model** for making ISL opportunities more welcoming and accessible to everyone. *AccessISL* offers engagement that will empower STEM students with disabilities and museology students and bring together three groups of professionals—those who offer ISL programs, those who train future ISL professionals, and those who specialize in access issues for individuals with disabilities—to work toward **more inclusive ISL programs in our communities**.

*Crawford, C., & Burgstahler, S. (2013). Promoting the design of accessible informal science learning. In S. Burgstahler (Ed.), *Universal design in higher education: Promising practices*. Seattle: DO-IT, University of Washington. Retrieved from *uw.edu/doit/UDHE-promising-practices/accessible_design.html*

Resources
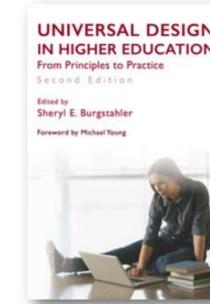
UD in Higher Ed Book:
Universal Design in Higher Education: From Principles to Practice Second Edition. Cambridge, MA: Harvard Education Press.

AccessISL **Project Website:**
uw.edu/doit/programs/accessisl

Visit the AccessISL website to learn more about consultation and other opportunities such as:

Engagement of students: Participating students promote accessible ISL as they develop leadership skills, complete projects, and engage with mentors.

Online Community of Practice: Staff and administrators of ISL programs, instructors, students, individuals with disabilities, and other stakeholders discuss strategies and share resources for promoting accessible ISL.

Capacity Building Institute: An institute will include information sessions, panel presentations, and group discussions to identify systemic changes for making ISL programs more welcoming and accessible.

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