Accessibility for Deaf and Hard of Hearing Audiences at Cultural Institutions

A Project Access White Paper
Art Beyond Sight

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Providing access for deaf and hard of hearing audiences is complicated because deafness and hearing loss include a very wide range of individual ability. While cultural institutions sometimes consider the deaf and hard of hearing as one audience, this approach to accessibility overlooks the fact that a deaf audience of native American Sign Language (ASL) users has very different communication needs than an audience of people who have some ability to hear. Best practices function well to meet these communication needs in specific environments, but current practices are more specifically aligned with regulatory compliance and not with social inclusion of these two distinct audiences.

Cultural institutions must critically assess the effectiveness of best practices within the context of dynamic informal learning environments, and also incorporate user ability and desired outcomes into the process of evaluating accessibility.

Cultural institutions, especially museums, are increasingly participatory and interactive, with a major shift towards facilitated experiences and away from static displays. This focus on audience engagement and education through public programs, guided tours, hands-on activities, and so forth, neglects to take into account the communication needs of visitors who are deaf or hard of hearing. Without alternative methods of communication, these visitors are not afforded the opportunity to benefit from participation in socially enriching activities because so much information is delivered verbally and requires that visitors can hear. Cultural institutions must critically assess the effectiveness of best practices within the context of dynamic informal learning environments, and also incorporate user ability and desired outcomes into the process of evaluating accessibility.

When speaking of user ability with regard to hearing, the terms deaf and hard of hearing are the acceptable vocabulary to use. People who have no functional hearing are considered either Deaf (upper case D), or deaf (lower case d), and people who do have some functional hearing are considered hard of hearing; the term hearing-impaired is the least appropriate label. The difference between Deaf and deaf is based on linguistics and not on the cause of deafness. A person who is Deaf is part of a very specific sub-culture of people who use ASL as their means of communication; a person who is deaf is a person who grew up hearing, lost the ability to hear due to illness or injury, and communicates through spoken language. Other distinguishing terminology is culturally Deaf vs. medically deaf.

Culturally Deaf people are part of what is called the Deaf Community, which extends far beyond city or state lines. This bond between individuals who are Deaf grows around the use of ASL, as well as specialized social etiquette, behaviors, and attitudes that emerge and evolve over time. Because of language and communication barriers, the Deaf Community can be very insular. Becoming deaf does not automatically make an individual a part of the Deaf Community, although a person who becomes deaf may choose to learn ASL and try to integrate. Also, many hearing people are included in the Deaf Community. Hearing people who use ASL to communicate with Deaf family or friends, and ASL interpreters are also considered part of the Deaf Community because of the bond through language.

People who are hard of hearing do have some functional hearing, which means they can understand speech and sound with added effort or with assistive devices. For example, it is not uncommon for people who are hard of hearing to use hearing aids or to need others to speak loudly when talking. A person with a cochlear implant is usually considered hard of hearing, although that person may be fully deaf when not wearing the sound processor. Regardless of the severity or nature of deafness and hearing loss, many people struggle to remain socially active as it becomes emotionally difficult and stressful to function in situations where communication barriers prevent active participation in community and cultural activities.

Demographics

While extensive sources of demographic information can be found via Internet databases and various government and independent research publications, statistics related to disability are much more difficult to find. Disability status is not currently questioned as part of the United States Census, and hearing status has not been questioned since the 1930 Census (Reilly & Qi, 2011). Most population estimates of individuals with hearing difficulty have been extrapolated from surveys of small sample sizes (typically a few thousand people), or from published medical research on hearing loss (Burke, 2010).

Hearing loss is the most common sensory deficit in human populations, and the most common cause of adult-onset hearing loss is age.

Another complication in reporting accurate statistics on deafness and hearing loss is that there is little consistency in defining degrees of hearing loss. Medical researchers test and report findings based on audiometric decibel scales, but the questions on general surveys, like the American Community Survey (2010), only ask if a person has any "trouble" hearing. People's responses may be misleading, depending on how they interpret the word "trouble." Social stigma associated with hearing loss may also lead some people to underestimate, or avoid reporting, hearing loss (Burke, 2010). Statistics on deafness can be even less reliable because of the discrepancy between how deafness is medically defined, and how people perceive their hearing loss. Some deaf people may technically be hard of hearing, and some people who may self-report as hard of hearing may actually be functionally deaf (Burke, 2010).

The Center for Disease Control (CDC) estimated in a May 2010 report that 2.8% (approximately 8.5 million) of adults ≥18 years of age had "a lot" of trouble hearing, or were deaf. The Gallaudet Research Institute issued a report in 2011 that described the U.S. population as having anywhere from 600,000 to 1.2 million deaf individuals. If "severe hearing impairments" are included, the estimates jump to a range of 2.7 million to 6.7 million individuals. If any kind of "trouble" hearing is included, the estimates make a huge leap to a range of 11 million to 42 million individuals. The National Institute on Deafness and Other Communicative Disorders (NIDCD) state that 36 million people are affected by hearing loss (2010). These figures support the aforementioned difficulties and inconsistencies in data collection and reporting methods, but there are some conclusions that can be made with certainty. Several aspects of hearing loss are reported by Mathers, et al (2000), in a World Health Organization publication. Hearing loss is the most common sensory deficit in human populations, and the most common cause of adult-onset hearing loss is age. Statistics across all major surveys and research studies show that men are more likely to have

hearing loss, and the highest proportion of hearing loss occurs in adults over the age of 60 (NIDCD, 2010).

Best practices

This introduction to best practices is a summary of key advice from the Smithsonian Institution's "Guidelines for Accessible Exhibit Design" and the National Endowment for the Arts' "Design for Accessibility: A Cultural Administrator's Handbook." Website information about accommodations for D/deaf and hard of hearing visitors has also been reviewed. Two major points expressed in both the Smithsonian and NEA documents are 1) museums should strive to be leaders in promoting the highest standards for access and inclusion, without settling for meeting minimum legal requirements, and 2) museums should deliver content through multiple sensory channels to provide multiple "entry points" for visitors to choose the channel that works best for them. Best practices in providing access for D/deaf and hard of hearing visitors are centered on assistive listening devices, ASL interpretation, and captioning.

Assistive listening devices (ALDs) are used by people who are hard of hearing. ALDs work to amplify sound and/or reduce background noise. FM systems, infrared systems and induction loop systems are the three primary types of ALD systems (Hearing Assisitive Technology, 2013). Having ALDs available for visitor use is essential, and a related best practice is to train staff on the location, use, and care of ALDs. ALDs are only useful if staff know where to find them, know how to operate them, and remember to charge them.

FM receivers pick up specialized radio frequencies that tie into the overall sound system, like the ones used in theaters, or public address systems. The visitor gets a receiver that may be connected directly to a hearing aid or cochlear implant, or the receiver can be used with earphones to amplify sound for people who do not use a personal hearing device. Infrared systems transmit infrared light waves, which are picked up by receivers similar to FM receivers. With induction loop systems, wire is installed around the perimeter of areas such as theaters, and is activated when sound is transmitted, creating an electromagnetic field within a specific range of the loop. The system works directly with hearing aids and cochlear implants that have a telecoil setting, which most do. The visitor can adjust the volume on his or her own personal hearing device (Hearing Assisitive Technology, 2013).

The induction loop system is viewed as the most effective because FM and infrared receivers are susceptible to damage, or normal wear and tear, making them less reliable as they age. Technology also becomes outdated and it is costly to upgrade or replace receivers regularly. The overall cost of initial purchase and installation can also be a very real financial barrier for many institutions. Although these systems directly benefit people who are hard of hearing, their use is traditionally limited to theater-style settings, where patrons attend scheduled ticketed performances. Another major limitation of ALDs is that they provide no effective communication to D/deaf patrons.

While ASL is essential for creating accessible experiences, a lack of visitor studies research with Deaf audiences makes it difficult to make conclusive statements about the most efficient use of ASL interpreters. Museums are expected to provide ASL interpreters when requested in advance by a Deaf visitor, but this accommodation is

usually limited to scheduled events, such as guided tours and theater performances, or pre-registered groups that request ASL interpretation in advance. As places where people go to engage in free-choice learning, ASL interpretation may not be effective as a means of providing access to the short programs that are offered throughout a typical day.

For example, if a Deaf family decides on a Friday night that they will go to a museum on Saturday morning, that does not afford time to request an ASL interpreter, and as casual visitors, they will probably not follow a strict itinerary. The communication needs and preferences of casual visitors engaging in free-choice learning must be studied to refine cultural institutions' approach to effective communication in informal learning environments. Also important to note is that ASL is only useful to patrons who know it, which excludes many late-deafened and hard of hearing patrons who do not use it.

Any video produced by a museum should be captioned, if it will be on view for longer than three months, or a verbatim transcript should be available for videos in short-term displays.

Captioning comes in three forms: open captions, closed captions, and real-time captions. Open captions are present on videos at all times; closed captions must be activated through device settings. Open captions are preferred because they provide instant access, and D/deaf or hard of hearing visitors will not be required to take extra action to request that staff activate closed captions. Any video produced by a museum should be captioned, if it will be on view for longer than three months, or a verbatim transcript should be available for videos in short-term displays. When using uncaptioned videos produced by outside sources, verbatim transcripts should also be made available. Videos without dialogue should be noted as such, so people who are D/deaf or hard of hearing do not assume that they are missing out on uncaptioned content (Guidelines for Accessible Exhibit Design, Smithsonian).

Real-time captions are most frequently used for live events, such as lectures and theater performances. A professional captionist uses specialized equipment to type dialogue and describes sound effects throughout an event, and the text is read on some style of monitor. Typical display devices are a scrolling text board, or a projection screen (Design for Accessibility: A Cultural Administrator's Handbook, NEA). Closed or open captions are necessary and effective for access to video content, but like the use of ASL, real-time captioning requires that the patron must plan and request it well in advance; this may make it unrealistic for providing access to short programs with drop-in attendance. The cost associated with hiring ASL interpreters and real-time captionists limit these services to be provided on an advance-request basis.

Effective communication begins with making accessibility information available to patrons, and cultural institutions should publish accommodations and services on their websites. Information about TTY, ALDs, ASL interpreted events, procedures for requesting accommodations, availability of scripts, etc., should be clearly posted with other visitor information, or on a designated accessibility page. For cultural institutions that offer regularly scheduled ASL interpreted or real-time captioned events, market directly to the Deaf community to maximize the number of patrons who take advantage of the services provided. Local Deaf clubs, schools for the Deaf, and social service agencies may be willing to distribute announcements to their network. Social media can also be a means of delivering announcements to the Deaf Community. When producing television advertisements, closed-captioning should be included. Producing ASL videos for websites is also an emerging trend. For instance,

the Whitney Museum of American Art, New York City, maintains a video blog, or vlog, of videos in ASL (The Vlog Project, 2013). Being known as a "Deaf-friendly" institution involves paying attention to these kinds of details in marketing accessibility.

Another area of development for fostering positive experiences is staff training. While any institution will strive to give excellent service to all patrons, people who are D/deaf or hard of hearing have very specific and predictable communication needs. Training staff on basic etiquette and tips for successful communication empowers them with the knowledge they need to feel confident in their ability to provide good service to patrons. Background information on how hearing loss can affect a person's ability to create a meaningful experience may also be valuable for building a sense of empathy. As part of its staff training, Baltimore's Port Discovery Museum collaborate with the Deaf Studies department at a local university; students speak with museum staff about Deaf Culture and communication (Bergantz, 2012). Some museums, including New York City's Metropolitan Museum of Art and Whitney Museum of American Art, have Deaf staff and docents conduct ASL tours to Deaf visitors.

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Keeping in mind that people who are Deaf (upper case D) are members of a distinct sub-culture, audience research will be essential to improving accessibility and innovating new methods of engaging this audience. Even though this audience most likely plans visits to cultural institutions for the same reasons that hearing people do, their behavior and resulting experiences may differ greatly from the hearing population because of communication and language barriers, especially in the realm of programs.

Without ASL interpretation or print materials to deliver program content, D/deaf and hard of hearing visitors are excluded from the educational and social benefits of participation. With a strong focus using technology to provide accessibility, the use of print materials is overlooked as a low-cost and low-tech method of communicating program content. This may be a fruitful area of research and evaluation, since print materials provide effective communication to the combined D/deaf and hard of hearing audiences, whereas other best practices target only one or the other audience. Key considerations in prototyping formats for print materials are 1) people who are D/deaf or hard of hearing are visual learners, so the use of images, graphics and diagrams may be preferred (Marschak & Hauser , 2012) and 2) for native ASL users, written English is a second language, and light text with simple sentence structure may result in better reading comprehension (Marschak & Hauser , 2012).

Current best practices are undeniably effective in specific contexts and for specific audiences, and cultural institutions are legally required to provide specific accommodations. There is no argument against ALDs, ASL interpretation, or captioning, but these methods of providing access have not caught up with the increasing participatory and interactive nature of museums. They also do not support social inclusion for the Deaf Community, which has historically been isolated from the hearing population. It is very important to pursue innovative ways to engage the Deaf Community and generate more meaningful interactions with hearing people during cultural experiences. Finally, any attempts at outreach or research must take into account that the D/deaf and hard of hearing are separate audiences with similar yet not exactly the same communication needs.

Resources

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