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Universal Design: Enhancing Interpretive Programs for All Visitors

Abstract: Educators and planners alike find that when they consider the diversity of their visitors and plan interpretive programs with that in mind, it improves the experience for all visitors. This program will provide an overview of some accessibility concerns of visitors with disabilities and solutions to common barriers. Applications to brochures, exhibits, interpretive trails, multimedia and other programs, special events, and websites will be highlighted. The presenter will also provide several "just-in-time" resources to use when planning programs, publications or events so that interpretive professionals can begin to design with accessibility in mind.

Defining Universal Design

The origin of the concept of Universal Design is credited to Ron Mace and fellow architects at the Center for Universal Design at North Carolina State University. They noted that historically many of the features put in place to accommodate individuals with disabilities were segregated, expensive, and unattractive. On the other hand, some features added to accommodate people with disabilities made built environments more usable by people without disabilities. It is easy to see examples of features designed to meet accessibility guidelines, which in turn benefit other visitors. Lowered water fountains benefit young children. Ramps benefit people carrying large loads with dollies. They began to approach design in a way that integrated assistive technology and barrier-free design in a natural, aesthetically pleasing manner. They defined this practice of Universal Design 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." These visionaries, under the leadership of Ron Mace, further defined the concept through the development of seven principles to guide the design of environments, products and communications:

- **Equitable Use:** The design is useful and marketable to people with diverse abilities.
- **Flexibility in Use:** The design accommodates a wide range of individual preferences and abilities.
- **Simple and Intuitive Use:** Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.
- **Perceptible Information:** The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
- **Tolerance for Error:** The design minimizes hazards and the adverse consequences of accidental or unintended actions.
- **Low Physical Effort:** The design can be used efficiently and comfortably and with a minimum of fatigue.
- **Size and Space for Approach and Use:** Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

Others have embraced the concept as having promise in interpretive environments (Hunter, 1990; Salmen, 1995). Carol Hunter (1995), in fact, in *Everyone's Nature*, defined Universal Design as it applies to interpretive environments to mean "taking into consideration the needs of as many people as possible, then incorporating those needs into nature trails, visitor centers, and interpretive displays." When interpretive planners use the principles of universal design as a guide, flexibility is built in so that visitors can interact with the medium in

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different ways. Visitors with disabilities are able to be more self-sufficient and better able to relax and enjoy their visit. Visitors who may be reluctant to request accommodations are more likely to take advantage of them. Integrating these principles into interpretation benefits not only people with disabilities but young children, people who use English as a second language, people with diverse cultural backgrounds, and many other visitors.

Visitors with Disabilities

People with disabilities represent about 20 percent of the total population of the United States (Bowe, 2000). That is, 1 in 5 people has some type of disability. Many people are surprised to hear this statistic, in part, because they have a narrow view of what the term "disability" implies. A disability is defined by the Americans with Disabilities Act as "a physical or mental impairment that substantially limits one or more major life activities; a record of such an impairment; or being regarded as having such an impairment." Major life activities include "functions such as caring for oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working." Therefore, the population of people with disabilities includes not only those with apparent physical disabilities, but people with chronic illnesses for whom fatigue greatly limits their ability to walk and people with learning disabilities such as dyslexia who have difficulty comprehending written instructions.

The percentage of people with disabilities increases as the age of the population increases. Among 65 to 79 year olds, for example, almost half (47%) have a disability (Bowe, 2000). Given that people of retirement age represent one of the most faithful groups of visitors to our parks and museums, it follows that as we plan for accessibility, we are planning for a sizable population. As you begin to plan your interpretive programs and facilities with accessibility in mind, it is helpful to understand the barriers that people with disabilities often face when they visit parks and museums (See Table 1).

Some common barriers faced by people with disabilities visiting parks and museums:*

Visitors who are blind or who have low vision

- There are protruding objects in pathways, which make walking through a museum without a guide dangerous.
- Artifacts or other items on display are all in exhibit cases. There are few, if any, "touchable" items.
- Printed materials are not available in large print, Braille, or on audiotape.

Visitors who are deaf or hard of hearing

- Audiovisual programs are not captioned and transcripts are unavailable.
- Information is not provided on how to request sign language interpreters, and when one is requested, staff are not aware of resources for obtaining one.
- Amplification and assistive listening devices are not provided.

Visitors with learning disabilities

- Exhibits are written with large amounts of text that is not broken up with headings, photos or other images.
- Audio tours are not available.
- The only means of engagement involves reading text.

Visitors with mobility disabilities

- Pathways in exhibit areas or gift shops are cluttered and impassible by visitors using wheelchairs, walkers, or crutches.
- Benches and/or pullouts are not provided along trails.

- Trail descriptions do not provide enough detail to allow a person with a disability to make an informed decision about their ability to traverse a given trail.

All visitors with disabilities

- Procedures for requesting accommodations are not provided on publicity or at park/museum entrances.
- Park or museum staff make assumptions that people with disabilities cannot participate in certain activities.
- Staff, though well meaning, are uncertain how to respond to a visitor with a disability and may make statements that are embarrassing to the visitor.

* The focus of this table is on those aspects of a visitor's experience that are typically within the realm of interpretation.

As you better understand the diversity of your visitors and the barriers they face, you can begin to use the principles of universal design to improve your interpretive programs and facilities.

The Application of Universal Design to Interpretive Programs

It goes without saying that people with disabilities are present in all walks of life. Look around your park or museum on a busy day and you are likely to see several people with disabilities. Some of the disabilities will be obvious; others will be hidden. How many of your visitors—whether or not they have a disability—would learn better from an interactive exhibit than static exhibit text? How many would enjoy touching a fur or feeling the weight of a rock or the fractures of a projectile point? How many would choose to check out an audio player of an exhibit rather than reading the text in a brochure or on an exhibit panel? All of these opportunities for interaction are a part of universal design.

Table 1. Examples of strategies for applying universal design.	
Brochures:	Post text (.txt. or .rtf) versions of your brochures on your website.
Benefits to Visitors with Disabilities	Visitors who are blind or who have learning disabilities can access brochures in advance and read them using screen reader technology.
Benefits to Other Visitors	All visitors are better able to plan for their visit and can have access to brochures even if they arrive when visitor centers are not open.
Exhibit design:	Break up text with headings and images.
Benefits to Visitors with Disabilities	Visitors with learning disabilities and attention deficit disorder are better able to process text.
Benefits to Other Visitors	Exhibits allow visitors to "drill down" to the level they prefer, are easier for all visitors to read and are more attractive.

Table 1 (cont'd)

Website design: Design websites that meet accessibility guidelines.

Benefits to Visitors with Disabilities

People who are blind, people who have low vision, and people with learning disabilities will be able to access the sites with assistive technology. People with limited manual dexterity will be able to navigate the site using alternatives to a mouse.

Benefits to Other Visitors

Websites that are designed to meet accessibility standards also more accessible to people who are using a variety of browsers or who have slower connections.

Audiovisual Programs: Caption audiovisual programs.

Benefits to Visitors with Disabilities

People who are deaf or hard of hearing will be able to enjoy your slide or video presentations. This is also beneficial to people with auditory processing disabilities.

Benefits to Other Visitors

People for whom English is a second language often benefit from captioning as their reading skills may be better than their auditory skills in the language.

Conclusion

"That's just good interpretation!" I can hear you saying. Yes, it is good interpretation, and with a little more understanding of the diverse needs of visitors to your park or museum, you can accommodate those needs while providing quality interpretive programs and media.

References

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