A Case for Accessible, Usable and Universal Design for Learning

Submitted by Romy Rukel on June 3, 2015 - 4:12pm

Issues of learning technologies and accessibility are more of a hot topic in our field than usual these days. EdX recently reached a settlement with the Justice Department to make its website, course creation platform and mobile applications accessible under ADA [2].

Harvard and MIT are facing a lawsuit for lack of online captioning [3] for materials for the general public. Both generated significant conversations about disability accommodations and usability of learning technologies [4] in our pedagogical communities and consortia [5].

It is my hope that any resulting changes being considered and implemented on campus and beyond provide us with an opportunity to discuss not only disability accommodations but proactive approaches to learning design that is at once accessible, usable and universal.

First, a clarification of terms:

Issues of accessibility generally refer to the Americans with Disabilities Act (ADA) [6] of 1990, which mandates that public facilities and services be fully accessible to people with disabilities. Additionally, overlapping sections 504 [7] (pdf) and 508 [8] of the Rehabilitation Act of 1973 mandate equal opportunity for people with disabilities, including providing auxiliary aids as necessary and meeting accessibility standards for software, hardware, websites, videos, and other information technology.

These, along with Web Accessibility Initiative [9]'s resources for designing accessible web pages, serve as benchmarks for institutions as they strive to meet ADA obligations and provide equal and integrated educational access for increasingly diverse constituencies. ADA standards can and should be enforceable and prescriptive, establishing minimum requirements that allow many individuals increased opportunities for accessing educational programs and activities.
Universal design is not a substitute or synonym for ADA standards or ideas of barrier-free design. Rather, it is a broader concept for the design of products and environments so that they can be used by all people, to the greatest extent possible, without the need for adaptation or specialization. Sidewalks with curb cuts, ramps to buildings, and doors that automatically open when a person moves near them are examples of universally designed products in the physical environment.

They benefit a variety of people — people with disabilities as well as people with bikes, suitcases and strollers, delivery workers, production and building crews and so on. In a learning environment, universal design means providing participants with multiple means of representation, engagement and means of expression throughout the learning process.

It means using varied formats (visual, auditory, kinesthetic, numerical, narrative etc.) for delivering content; individual and social engagement options; and choices of modalities through which students can demonstrate learning comprehension.

In all cases, universal design moves beyond the benchmarks of accommodation and assistive technology to address cognitive differences and changes experienced by the human body over time, as well as human characteristics of age, gender, race/ethnicity, culture, language proficiency and possible trauma histories.

Usability further refers to learnability (ease with which users learn to operate a product and remember how to do so when returning to it at a later time); instructional consistency (such as clear and consistent labeling); and efficient effectiveness (the amount of effort it takes to complete a goal).

When implemented, inclusive design should be virtually invisible, which is to say physically safe and emotionally accessible to most users most of the time, with a potential for adjustment to meet varied personal requirements. Accordingly, when thinking about learning design, the following questions (among many) suggest themselves:

- How might our designs take into account the broadest possible spectrum of human ability across our lifespans and encourage an integrated approach rather than multiple separate solutions?
- How can we continually affirm and acknowledge that “disability” is part of the human condition, so that people with disabilities are participants in (rather than only clients or service recipients of) learning design efforts?
- How can we best work toward the kind of inclusivity that eliminates acute focus on “special” features and spaces that may hold stigma or embarrassment for being “different”?

Read more about accessible & universal design (from which many of the points in this post draw their information and inspiration):

- Seven Principles of Universal Design, from North Carolina State University [10]
- Universal Design for Learning Guidelines (and a wealth of related resources) [12] from CAST [13]

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National Braille Press (NBP) is an organization that offers services for the visually impaired. Our mission is to promote literacy for the blind through braille and provide access to information that empowers blind students to actively engage in education, work, family, and community. We strive to create fair advantages for the blind community by producing print material into braille and large print formats.

NBP works with school districts nationwide in producing braille versions of textbooks including many different subjects such as English/language arts, math, foreign languages and music. NBP also creates tactile graphics for images, maps, and graphs. The price is generally between $2.00-$7.00 per braille page, depending on the complexity and number of tactile graphics. The first volume takes approximately 4 weeks with each subsequent volume following every 2 weeks thereafter. NBP is able to customize orders based on the student’s needs and is able to work in line with the syllabus to ensure that the student has all necessary materials in a timely fashion.

Enclosed are samples of braille textbooks and tactile graphics that are produced by National Braille Press. These are some examples of how we can assist you to better serve your customers.

We hope to work in partnership with your organization. We would greatly appreciate a chance to discuss these options further.

Sincerely,

Whitney Mooney  
Sales Administrator