Chapter 44
Accessibility and Usability Issues

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ABSTRACT

Democratic governments seek to serve all citizens equally and fairly. Achieving this ideal in e-governance will in large measure be determined by government's commitment to the development of websites and web applications that encourage and enable participation by all. Accessibility and usability are gateways to participation. This chapter examines the professional and legal standards for accessibility and usability as well as studies on actual implementation. A survey of New York State webmasters found that while IT professionals considered usability and accessibility important, none of them rated user satisfaction as excellent. Agency management was perceived as less aware of the importance of usability and accessibility than IT professionals. Assuring usability and accessibility is an on-going, iterative process that requires continual accountability and involvement of user/citizens, political leaders, and IT professionals.

INTRODUCTION

This chapter examines issues surrounding accessibility and usability as gateways to e-governance. The standards for usability and accessibility are examined in-depth. Accessibility is addressed as a civil right for individuals with disabilities in the U.S. as codified in Section 508 of the Rehabilitation Act. Usability describes the ease with which all users of a particular website can find information and accomplish tasks. Central to achieving greater usability is the concept of user-centered design. Accessibility and usability jointly affect the degree to which citizens who use the web are empowered to access information and interact with their government via web-based applications. When websites, web technologies, or web tools are badly designed, difficulty in using them can become a barrier that excludes people.

The second focus of this chapter is the implementation of accessibility and usability in the design and development of government websites. Studies of accessibility and usability in government websites point to on-going difficulties in meeting legal and professional standards. Nevertheless, a number of state and federal sites have achieved success.

The authors conducted a survey of webmasters in New York State agencies to explore their perceptions on implementation of accessibility and usability. The study reveals tensions between IT professionals and agency leaders with respect to the perceived relative importance of accessibility and usability, and provision of resources to enhance usability. While IT developers make hundreds of decisions daily that affect usability and accessibility, the survey results suggest that there is less than sufficient interest on the part of agency leadership, and little accountability for leaders or IT.

A model for conceptualizing how usability and accessibility are implemented is introduced. Standards for accessibility and usability are not enough; on-going accountability and user-input are also critical. It appears that accessibility and usability are impacted at the intersection of IT developers, political leaders, and citizen/users. Citizen/users and disability advocates are critical to implementation in two ways. First, their participation is essential to usability testing. Secondly, they need to hold their government accountable to provide accessible and usable sources of information and tools for engagement. Citizenry provide feedback about what is and isn't working for them. IT is responsible for upholding professional standards and implementation. Finally, leadership and political will are critical to determine policy and enforce it. In a medium as dynamic and changing as the web, the process must be ongoing. Success requires on-going user input, accountability, and innovation.

BACKGROUND

Definitions and Standards: Accessibility and Usability

In terms of e-governance, two definitions of accessibility apply. The first, more commonly known as "universal access,' refers to available, affordable, reliable access to information technology (Hudson, 2002; Rice, 2002; Harrington, 2009). Barriers to universal access are often framed in terms of the digital divide, which includes not only IT infrastructure but also socio-economic, physical, social, and intellectual barriers to access (Hudson, 2002; Rice, 2002; Harrington, 2009; Jaeger & Bertot, 2010). The second, more specialized connotation for accessibility refers to individuals with disabilities having access to and use of information comparable to that provided to those members of the public who are not individuals with disabilities. (29 USC Sec. 794d. 36 CFR 1194.22. 2000) This chapter will focus on the second definition.

Usability refers to how well users can learn and use a product to achieve their goals and how satisfied they are with that process. It is usually measured by users' ability to accomplish a task, or find information efficiently (HHS, 2010).

Accessibility and usability are achieved through adherence to standards and guidelines. Web content accessibility is governed by two protocols: one professional and one legal (Ellcessor, 2010). The web accessibility initiative (WAI) of the World Wide Web consortium (W3C) has developed web content accessibility guidelines (WCAG) establishing voluntary guidelines for accessible web development (Caldwell, Cooper, Reid, & Vanderheiden, 2008). The guidelines address making content accessible "to a wider range of people with disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited move-

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