

Chapter I

Establishing Identification in Virtual Science Museums: Creating Connections and Community

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Abstract

The concept of identification from the field of communication studies is used in this chapter to discuss the ways to, and the benefits of, develop(ing) identification with an audience through the design and arrangement of virtual science sites (i.e., aid in the comprehension of the new, and potentially difficult, content of the site; and help in the creation of regularly returning site visitors/users). The chapter concludes with checklists to aid Web site designers/managers and educators analyzing/using virtual science sites to maximize the benefits of identification.

Introduction

Museums are a culture industry that has evolved over time. Historically, museums have been the place of rare and often valuable collections, preserved and displayed predominantly for their aesthetic value, rather than for an educational goal. However, instead of

a collection as a museum's commodity, Eilean Hooper-Greenhill (1995) concludes that "[k]nowledge is now well understood as the commodity that museums offer" (p. 2).

It was modern science museums that took the lead in creating museums that were designed around the message they wished to espouse rather than a collection they wished to exhibit (Weinberg & Elieli, 1995, p. 50). As Bonnie Pitman (1999) chronicles, "The Museum of Science and Industry in Chicago, established in 1926 . . . [and] the New York Museum of Science and Industry (now defunct) represents (*sic*) the arrival of science technology centers, founded without collections, that focus on their role as educational institutions to promote an understanding of scientific principles" (p. 7). About this evolution of science and technology centers (as well as children's museums), which he calls "great pioneers in improving the process of learning by the young" (Skramstad, 1999, p. 118), president emeritus of the Henry Ford Museum and Greenfield Village, Harold Skramstad (1999) writes: "These new types of museums developed out of community concerns that more traditional, collection-focused museums were not meeting the learning needs of their audiences" (p. 118). Kenneth Hudson claims that "... the most fundamental change that has affected museums during the [past] half century . . . is the now almost universal conviction that they exist in order to serve the public" (as cited in Weil, 1999, p. 232). Not only did science museums take the lead in this change to serve the public, but according to many their change was also the most profound. Jorge Wagensberg (2000) writes in his essay, *In Favor of Scientific Knowledge: The New Museums*, "[i]t is the science centers and museums that have most changed their content, their methods, their role in society, and their attitude toward their public" (p. 129).

This evolution of modern museums, particularly science ones, as educational outlets to serve the public has continued to evolve with the advent of computer technology and the World Wide Web. As Pitman (1999) notes, "Museums have developed marketing policies to attract new audiences, to increase the access to their educational resources both at the museums themselves and through the World Wide Web" (pp. 13-14). Furthermore, Pitman (1999) continues, "The explosion of the World Wide Web has added yet another dimension to the role of museums as forums. Museums are becoming 'virtual museums' with beautifully produced pages that summarize their offerings, take you on a virtual tour of their galleries, and provide access to the collections and exhibitions with images and audio" (p. 23). Considering the change that the World Wide Web has brought to the relationship of communities and their museums, Pitman (1999) continues, "... we are not required to go to museums to see certain objects, hear lectures, conduct research, or participate in discussion" (p. 26); users can experience much from the comforts of their own home or classroom through the use of virtual science centers. San Francisco's *Exploratorium* (<<http://www.exploratorium.edu/>>), Philadelphia's *The Franklin Institute Online* (<<http://sln.fi.edu/tfi/welcome.html>>), and London's *Science Museum* (<<http://www.sciencemuseum.org.uk/>>), which will be discussed later in this chapter, are three of many science museums that have become impressive virtual centers, as complementary outreach centers on the World Wide Web; however, other "centers" are entirely virtual, residing wholly in cyberspace with the intention of educating their audience about scientific concepts and thinking. The final virtual center that will be discussed here, *Leonardo: Interactive Virtual Science Museum* (<<http://www.ba.infn.it/~zito/museo/leonardoen.html>>), is one such virtual-only center. Common to all four of these sites are the centers' attempts to meet public need toward educational goals in science.

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