

Digital Storytelling For Cross-Cultural Communication In Global Networking

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Abstract

In global networking the human-computer interface is the crucial communication link between the author and the user. In website design it is important to recognize cultural differences and understand how the design of the computer interface can reflect the culture of a particular audience. Digital storytelling is a design technique that can reflect cultural differences and engage the user. Modern technology creates opportunities to use storytelling to inform diverse audiences about cultural differences. This paper presents research in intercultural communication theory and shows how storytelling can improve cross-cultural communication in global networking.

Intercultural Communication

Global networking eliminates geographic distances and facilitates communication with different cultural groups. The Internet presents an opportunity to highlight cultural differences and promote an understanding and awareness of diverse cultural perspectives. For many years researchers have recognized the role that cultural differences play in intercultural communication. More recently, researchers have recognized the significance of this research in user interface design. Cultural differences in interface design extend beyond the cultural meaning of symbols, colors, data (time, date, currency) formats, etc. User interface designs can also reflect underlying social structures that define how individuals and organizations interact and communicate with each other. The research of Edward Hall (1959, 1973, 1976), Geert Hofstede (1980), Harry Triandis (1995), and Aaron Marcus (2005) provides important background information for understanding how cultural differences impact intercultural communication in interface design.

Hall, the “founder of intercultural communication,” defines three important cultural dimensions that impact interpersonal relationships and communication—time, space, and context. In *Silent Language* (1959, 1973) Hall describes two non-verbal aspects of intercultural communication: time (chronemics) and space (proxemics). He points out that cultures are characterized by either monochronic or polychronic time. Monochronic time is evident in Western cultures where time is perceived as a linear sequence of events with determinant connections between past, present, and future. People in these cultures prefer to focus on one task at a time. Asian, Middle Eastern, and indigenous cultures are characterized by non-linear, polychronic time which emphasizes simultaneous actions and events. Hall also identifies the role that space (proxemics) plays in defining relationships in different cultures. He points out that in addition to the formal designations of space created by physical and architectural forms, there are informal spatial relationships defined by the proximity and arrangement of objects, events, and people. These relationships determine status, relationships, and group orientation.

In *Beyond Culture* (1976) Hall identifies context as an important cultural dimension in intercultural communication. In high-context societies (e.g., Asian and indigenous cultures), meaning is derived from the context of a particular event or situation. Messages are fluid because the interpretation depends on the current situation and personal relationships. In low-context societies (e.g., Western cultures) people rely heavily on verbal communication and messages with fixed meanings.

Hofstede (1980) conducted research on intercultural communication at IBM from 1968 to 1972. In his research he created indices to rank societies according to the following five cultural dimensions:

- Power Distance: the degree of equality or inequality that exists between people in a society.
- Individualism: the extent to which society values individual achievement or group achievement (collectivism).
- Uncertainty Avoidance: the extent to which people tolerate uncertainty or ambiguity.
- Long-Term Orientation: the extent that a society focuses on long-term goals and tradition.
- Masculinity: the extent to which a culture adheres to traditional masculine models of achievement, control, and power (a high masculinity ranking indicates a culture with significant gender differentiation).

Triandis (1995) reaffirms Hofstede’s research on the importance of individualism and collectivism as cultural dimensions of intercultural communication. He shows how individualism and collectivism are integrated into Hofstede’s concept of power distance. Gould (2005) summarizes his research as follows:

To Triandis, Horizontal (low power distance) individualism deals with the power to define and pursue personal goals, while Vertical (high power distance) individualism leads to competition and accomplishment. Horizontal collectivism deals with

interdependence and sharing while Vertical collectivism deals with service and social mores. (p. 97)

Marcus (2005) shows how a computer interface design can reflect Hofstede's cultural dimensions. The chart in Figure 1 summarizes his interpretation of the cultural dimensions of interface design based on Hofstede's research.

The application of intercultural communication theory to website design can improve communication in global networking. In addition to the research cited, digital storytelling presents an opportunity to expand the cultural dimensions of interface design by introducing a design element that engages the audience and helps users understand different cultures.

Digital Storytelling

Stories create engaging experiences that transport the audience to another space and time. Stories establish a sense of community and identity. For these reasons, storytelling is a powerful design element that can enhance global networking by increasing the awareness and understanding of cultural differences.

Storytelling is an integral part of indigenous cultures. For centuries indigenous peoples have used stories and images (beginning with early petroglyphs) to communicate historical events and cultural traditions. It is no surprise that indigenous peoples have found creative ways to use new media technology to tell their stories. Leuthold (1998) concludes that indigenous peoples have a history of incorporating technical innovations into their cultures as a means of survival in harsh environments. Silko notes that "Europeans were shocked at the speed and ease with which Native Americans synthesized, then incorporated, what was alien and new" (as cited in Leuthold, 1998, p. 74).

Indigenous peoples began using film and video to preserve cultural identity and improve cross-cultural communication. The Alaska Native Heritage Project and the Video in the Villages Project (in South America) documented native cultures. Canada has taken the lead in the use of mass media for Aboriginal communication and networking. The first Aboriginal broadcasting company, the Alberta Native Communications Society (ANCS) was formed in the 1960s (Rupert, 1983). In 1980 the Inuit Broadcasting Corporation (IBC) was established. In 2000 the Aboriginal Peoples Television Network (APTN), the first Aboriginal television network in the world, was formed. Baltruschat (2004) points out that the APTN has become a model for other indigenous groups throughout the world, including the Maori of New Zealand who launched the Maori Television Service in 2004. This service followed the creation of the Aotearoa Maori Television Network, a pilot service

that ran from 1996-7 (Te Puni Kokiri Publication, 2004). Quoting one of the APTN board members, Catherine Martin, Baltruschat (2004) notes the significance of new media technology for storytelling: "The media is a powerful tool to help our nations heal and bring understanding through the telling of our own stories" (p. 5). Baltruschat (2004) also quotes Dana Claxton, producer of one of the APTN children's programs, on the importance of an Aboriginal peoples network: "The mainstream media can never tell our stories. They can try, but in terms of really knowing the interior of a culture, it's got to be the people who speak for themselves" (p. 6).

Indigenous communities walk a fine line between their traditional cultures and dominant Western cultures. Niezen (2005) notes that this condition is "sometimes awkwardly referred to as 'bi-culturalism,' a state of 'in-betweenness,' or a condition of 'diaspora,' but with the added poignancy and complexity that arise from their cultural positions at the opposite poles of human experience" (p. 3). Indigenous television networks provide an opportunity to inform other cultural groups, including dominant Western cultures, about indigenous cultural values. Indigenous peoples have learned how to bridge cultural differences. The programs on the APTN blend "traditional forms of storytelling with contemporary genre adapted from mainstream media" (Baltruschat, 2004, p. 4). Referring to a cultural affairs program produced by the Inuit Broadcasting Corporation, Madden points out that indigenous peoples know how to "retain one's cultural identity while dealing with people who do not share it" (as cited in Leuthold, 1998, p. 74).

Computer technology has given indigenous peoples the opportunity to strengthen their voices in a society dominated by economic powers. They use global networking to create online communities that establish an international presence which, in turn, preserves their cultural heritage and creates a strong sense of identity. Computer networking enables them to reshape the "status hierarchies, resistance strategies, and conceptions of collective self of many so called traditional societies" (Niezen, 2005, p. 2). Indigenous groups began using the Internet to form collective communities in the late 1990s (Neizen, 2005). Since then they have learned how to merge cultural traditions like storytelling into powerful website designs that create an effective platform for cross-cultural communication.

Digital storytelling provides an opportunity to merge the traditional art of storytelling with interactive technology and create cultural narratives that immerse the audience in a new cultural experience. An interesting website that uses storytelling for this

Figure 1
 Aaron Marcus Applies Hofstede's Cultural Dimensions To Interface Design

Hofstede's Cultural Dimension	Interface Design Characteristics ¹
High Power Distance	Formal organization; emphasis on government or corporate objectives; images of buildings, leaders, and symbols of authority. e.g., University of Technology in Malaysia website http://www.utm.my
Low Power Distance	Informal structure and navigation; images of people and groups; focus on activities. e.g., Skidmore College website http://www.skidmore.edu
High Individualism	Images of individuals; customizable interfaces; overall emphasis on individual choices and goals. e.g., Amtrak Railway website http://www.amtrak.com
Low Individualism (Collectivism)	Images of organizations; official messages that emphasize group efforts; fixed interface options. e.g., East Japan Railway website http://www.jreast.co.jp/e
High Uncertainty Avoidance	Formal structure; familiar references; precise detail; explicit communication. e.g., Coca-Cola in Africa website http://www.africa.coca-cola.com
Low Uncertainty Avoidance	Unusual design; exploration; abstraction and ambiguity. e.g., Pepsi website http://www.pepsi.com
High Long-Term Orientation	Focus on tradition and social responsibility; emphasis on long-term commitments. e.g., East Japan Railway website (see above)
Low Long-Term Orientation	Emphasis on immediate actions or results; task or action-oriented objectives. e.g., Amtrak Railway website (see above)
High Masculinity	Fast-paced graphics; bright colors; loud, fast music or sounds. e.g., McDonald's website for Austria http://www.mcdonalds.at
Low Masculinity (Femininity)	Curved edges in lines and graphics; soft colors and music or sounds. e.g., McDonald's website for Sweden http://www.mcdonalds.se

¹ All the websites are the author's examples (not those of Aaron Marcus) except the McDonald's website examples from Austria and Sweden. These sites were cited by Marcus and Baumgartner (2004) as examples of the masculinity cultural dimension.

purpose is *Us Mob* located at <<http://usmob.com.au>>. *Us Mob* is a website about the Australian Aboriginal culture. While the target audience is children, the website is engaging for other age levels because it effectively communicates the cultural differences and socioeconomic boundaries between Aboriginal culture and the dominant white Western culture in Australia. The website uses different forms of narrative to engage the user. Videos show Aboriginal children participating in various activities. The children in the videos act as the narrators, and they invite visitors to the website into their communities. They speak directly to the users, and engage them in their thoughts and emotions. In some cases, the user may choose what actions the children should take in a particular situation, resulting in different outcomes for the stories. The user can look through scrapbooks that belong to some of the children. The scrapbooks, which contain images and comments, are updated with additional information as the user moves through the website and selects videos of the children participating in new activities. These scrapbooks include comments that express the children's personal feelings about their relationships to family and friends. The children's comments are both written and spoken. The voices add an expressive quality to the personal feelings that help the user identify with the children. The scrapbooks also include close-up photographs of family members and friends as well as hand-drawn sketches. These design elements create an immersive environment and enable the user to relate to the narrator's experiences.

Children from all over the world can upload their own stories. They comment on the website and share personal narratives. These narratives reinforce the concepts in the website and help the children relate to new cultural experiences through online discussion. The website is a unique approach to communicating cultural differences to a global audience. The website creates a community of participants. The significance of "community" involvement is reflected in the email address itself: community@usmob.com.au. The discussions create a bridge that helps the visitors relate Aboriginal cultural perspectives to their own lives.

The *Us Mob* website celebrates and preserves the identity of the Aboriginal culture. It does not attempt to blend or merge different cultures. The site highlights cultural differences and the cultural and social boundaries between cultures. The interface design visualizes these boundaries. To enter the site, a user must apply for a permit, just as a visitor to an Aboriginal community must apply for a permit. In addition, the videos are displayed in a "window" that appears in an illustration of a rock wall. The visual message is clearly one of cultural differences and boundaries. These boundaries also appear in one of the videos where some Aboriginal children ask for water

from tourists who are driving through the desert. After reluctantly giving the children something to drink, the tourists close the car window and proceed to take photographs of the children through the window. These cultural boundaries are echoed in the children's scrapbooks where they talk about the white man's ways. One child states that he doesn't like to talk to tourists because they don't understand his native language, and they make him feel "shame" when he speaks improper English. Such cultural boundaries are poignantly expressed throughout the website.

An interesting website that incorporates a different type of cultural narrative is *Ashes and Snow* located at <<http://www.ashesandsnow.org>>. This website showcases the work of award-winning Canadian photographer Gregory Colbert. Colbert visualizes a culture that emphasizes the close relationship between humans and animals. In *Ashes and Snow*, digital technology presents an opportunity to create a different type of audiovisual narrative that results in an immersive cultural experience for the user. Visual anthropologist Roderick Coover (2001) believes an audience should experience a culture through different forms of sensory input. A montage of images, text, sound, rhythm, action, light, and color can create a holistic, multi-sensory environment that *suggests* a particular cultural experience and leaves the viewer to interpret the relationships and cultural values. A very good example of this design concept is found in *Ashes and Snow*. This website presents a particular cultural perspective, the interrelationship between humans and animals. To enter this site, you must first select either the enhanced or basic *Experience*. The word *Experience* sets the tone for the site. Upon entering the site, the first screen presents a traditional interface design—a list of links for navigation. This traditional design disappears when you select the *Explore* link. The cultural experience begins here as you leave your present world and enter an ethereal, sensory space. The *Explore* section features photographic compositions of people and wild animals (elephants, cheetahs, monkeys, birds, whales, etc.). The photographs are staged poses of humans and animals in close proximity that visualize an integrated, dependent relationship. In addition to the photographic images, there are poetic reflections in text and voice overlays. Moving the mouse over the screen creates a trail of thumbnail images that fade in and out of view—emphasizing the concept of integration and continuity. These images link to other audiovisual essays. This navigation design differs from traditional interface designs because the links are not in static positions on the screen. The viewer becomes an integral part of an interactive, cultural experience that is created by a holistic, multi-sensory environment. The user must form the connections and experience the cultural narrative on an

emotional and intuitive level. The intuitive nature of this narrative space leads the viewer to accept the audiovisual information without conscious, critical analysis. The viewer is quickly suspended in another cultural space.

In *Ashes and Snow* the first person perspective in the voiceovers is an important dimension that adds to the viewer engagement. The voice establishes immediacy and reality in a space that defies stability. The dreamlike space is flexible and fragmented, but at the same time it is an integrated, immersive experience. This website design is a very good example of Hall's definition of high-context communication where messages are fluid, and connections are based on the current moment and context. The presentation of the information in the *Explore* section supports the concept of fluid messages. Because the viewer must form the connections between the audiovisual elements, the website immerses the viewer in the cultural narrative. The viewer must feel and experience the relationships the photographer is conveying—not just read about them.

Conclusion

Research shows that intercultural communication theory is an important dimension in website design. We can expand the foundational work of Hall, Hofstede, Triandis, and Marcus by using digital storytelling to communicate cultural perspectives to local and global audiences. Storytelling is an effective communication technique that creates a sense of community and identity for users who have similar perspectives, experiences, or interests.

The art of storytelling was perfected by the indigenous peoples of the world who still use storytelling to communicate ancestral stories and cultural traditions. These groups now use digital storytelling to create a sense of community that preserves their cultural heritage. Indigenous peoples also know how to use new media technology to communicate to other cultural groups and bridge cultural differences. As Leuthold (1998) points out, "Native cultures' adoption of new communications technology reflects efforts at self-determination but also at intercultural communication—of educating the wider community about contemporary Indian life" (p. 74). Indigenous peoples can teach us how to use storytelling to improve cross-cultural communication by engaging users in different cultural experiences.

Creating a sense of engagement and identity in online communication is an important concept in interface design that has broad implications for a wide range of applications in education, business, marketing, and e-commerce. In education, constructivist learning theory and case-based reasoning underscore the

importance of teaching students how to apply knowledge in various contexts so they can transfer information from the classroom to everyday life. Stories are a good application for information transfer because narratives help students relate general principles to specific contexts and personal experiences (Edelson, 1993). By sharing stories, students use personal narratives to create a community of users who learn from each other's experiences.

Stories also play an important role in business and marketing. Businesses determine what new products or services to develop by creating detailed stories that outline the user's tasks or activities (Gruen, Rauch, Redpath, & Ruettinger, 2002). Corporations also use storytelling to improve organizational communication, motivate workers, instill corporate values, foster collaboration, and build brand identity (Denning, 2005). The latter concept is especially important in marketing. Advertisers use narratives to build trust in products. They communicate to target audiences through stories that describe experiences the audience can relate to. Sharing stories is also an important aspect of marketing. Users discuss personal experiences in online forums and product reviews. These stories help consumers match their needs to a particular product or service.

Digital technology presents an opportunity to use storytelling in website design to build online communities of users. These users may share cultural traditions, or they may share similar experiences or interests in education, business, or marketing. In global networking, digital storytelling can be a powerful design element that improves cross-cultural communication. Storytelling is a new dimension in interface design that extends beyond established research in intercultural communication theory. Because narratives enable users to relate ideas and events to personal experiences, stories create a sense of engagement, identity, and community that helps users understand cultural differences.

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