DISSERTATION

A QUALITATIVE RESEARCH ANALYSIS OF POST-SECONDARY ACADEMIC ADVENTURE EDUCATION ORGANIZATIONS' WORLD WIDE WEB HOME PAGES

Submitted by

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WE HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER OUR SUPERVISION BY MICHAEL D. GOULD ENTITILED A QUALITATIVE RESEARCH ANALYSIS OF POST-SECONDARY ACADEMIC ADVENTURE EDUCATION ORGANIZATIONS' WORLD WIDE WEB HOME PAGES BE ACCEPTED AS FULLFILLING IN PART REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.

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ABSTRACT OF DISSERTATION

A QUALITATIVE RESEARCH ANALYSIS OF POST-SECONDARY ACADEMIC ADVENTURE EDUCATION WORLD WIDE WEB HOME PAGES

Whereas organizational culture traditionally has been associated with members affiliated with an organization, the World Wide Web (WWW) projects cultural information internationally to individuals with Internet access to an organization's web site. WWW sites may be understood as omnipresent cultural symbols that are potentially available to web users on an "any time" world wide basis. As a cultural artifact, the WWW has the potential to inform and influence organizational web page cultural participants.

The goal of this qualitative research was to evaluate WWW home pages from a multimedia / multi-disciplinary perspective. Print publications and WWW home pages were the 2 mediums reviewed to research organizational program content and web page design disciplines. Using a basic interpretive inductive methodology, 25 post-secondary adventure education (AE) home pages, 5 AE publications, and 9 WWW page design publications were reviewed to identify and evaluate emergent cultural themes.

The research objective in the first phase was to identify and describe cultural themes from (a) AE publication program content (b) AE home page program content (c) AE web page technical design and (d) WWW publication web page design literature. The purpose of the second and third phases was to evaluate the similarities among the AE home pages based on inclusion of the multimedia and multi-discipline cultural themes.

The results of the research indicated that there were numerous dissimilarities among the AE home page cultural themes, the AE publications program content themes and the WWW page publication design themes. Group activity was the only program content culture theme found in both mediums and the text-background contrast theme was the only similar theme for web page design.

Based on the findings of this research, the cultural messages projected on the 25 adventure education organizations' WWW home pages may cause communication conflict for potential participants. Incorrect messages may negatively influence viewer's interpretation of acceptable organizational behavior. To project a consistent organizational culture, adventure education web pages should be based on professional standards and integrated with other internal and external communication mediums.

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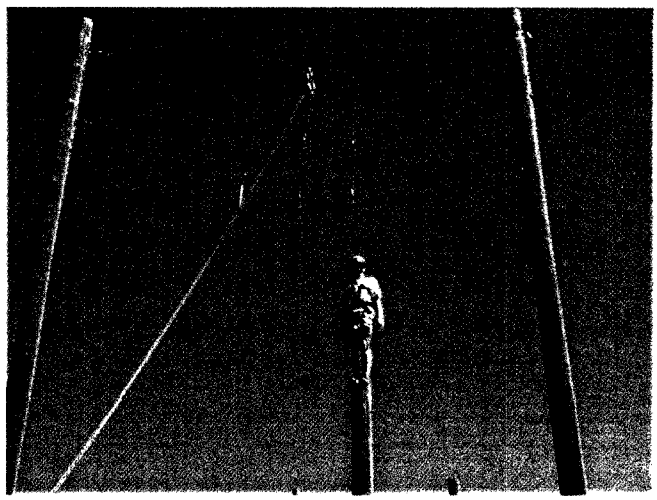
Fear and disappointment

As I reviewed the memo regarding participation in an adventure education program, I became frustrated. The workgroup I was with were being sent to a local ropes course to improve our communication skills and team work abilities. The memo noted that attendance and participation was mandatory; and I wasn't being asked for feedback regarding my concerns or suggestions. It seemed like another top down, quick fix to organizational problems that weren't openly discussed or communicated. But, at that moment, the organizational problems weren't my major concern.

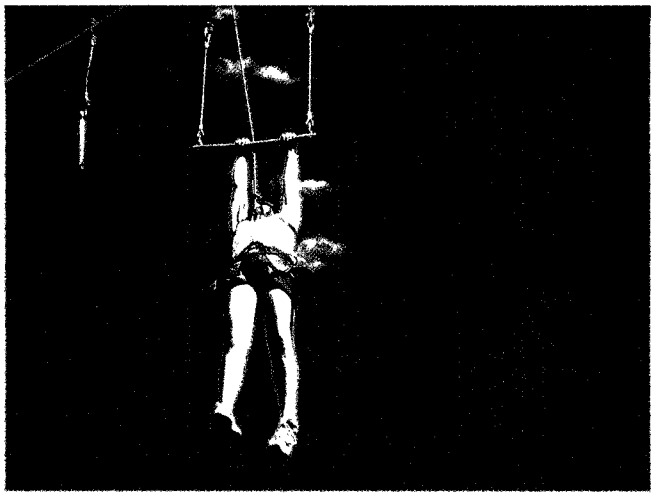
I had participated in an adventure education ropes course a few years ago and it was a personal and professional disaster. I still remember my embarrassment from spending 20 minutes sitting nervously on top of a 30 foot tall pole while the facilitator encouraged me to jump in the air to grab a trapeze bar. It didn't matter that I was wearing a safety harness and rope; I was just too frightened to make the "leap of faith." If any professional teambuilding occurred prior to my pole fiasco, I certainly don't remember the benefits. Furthermore, I didn't feel like our group communication had improved.



What made current matters more frustrating was my visit to the ropes course web site. One of the first things I saw as the web site downloaded on my computer monitor was a picture of a person standing on top of a pole preparing to jump for a trapeze bar. It was a 4 by 5 inch graphic that frightened me, and took so long to appear on my monitor that I considered leaving the web site before it finished downloading.

After reviewing the adventure education web site I became even more frustrated and irritated. My personal frustrations were that the web site displayed numerous pictures of people on "high activities" but very limited, if any, information on teambuilding or the staff's credentials for teambuilding and professional communication development. In addition, I was professionally irritated with the design of the web site. I work with computers every day and I could have done a better job than their designer. The pages weren't linked well and didn't have consistent design elements. The web site didn't seem to be professionally developed. If this was normal behavior for the organization, my day at the ropes course was going to be another personal and professional disaster. Perhaps it was time to begin thinking about another job.

Challenge and appreciation



This was going to be great! After I read the memo stating that our workgroup was going to an adventure education ropes course for teambuilding, I visited the organization's web site. What a rush! The site had a number of graphics showing individuals doing challenge activities on elements 30 or 40 feet off the ground. What really excited me was the graphic of a person grabbing a trapeze bar after jumping from a 30 foot high pole. The site noted that the person was wearing a climbing harness tied to a safety rope, but it still looked challenging.

The ropes course would really be great! I love new challenges and perhaps I could show my co-workers that I have more than computer skills. I'm stoked! I think I'll send an email to tell the web designer how great I think the site is.

CHAPTER ONE: INTRODUCTION

These dichotomous hypothetical vignettes address the necessity of considering the meaning-making cultural attributes projected on a single symbolic organizational artifact -- the adventure education (AE) web site. What is important to recognize is that neither of the interpretations focused on the beliefs, values, behaviors and norms of the learning culture of post-secondary academic adventure education organizations.

Adventure education training programs provide the opportunity for individuals and groups to experiment outside of the daily environment (Cain & Jolliff, 1998) and the program activities should focus on challenging participants based on the group's desired outcomes and goals (Garvey, Leemon, Williamson, & Zimmerman, 1995). Benefits of

challenge education are the ability to work as a group, improve communication, problem solving, conflict resolution, learning skills, time and resource management, and transfer of learning to other situations (Cain & Jolliff, 1998). To accomplish the AE program goals, certain functions are necessary. Bonney (1992) identified processing the adventure activity, participant-based changes, and participant active involvement in choosing the type and level of their experiences, as important. Brackenreg, Luckner, and Pinck (1994) noted that facilitator skills such as fostering a caring environment, general communication skills, questioning skills, feedback, communication strategies and properly sequencing the activities are critical to successful programs. For an AE web site to successfully communicate the appropriate cultural message the web site must be designed and developed based on an understanding of organizational culture and how it is manifested via the World Wide Web (WWW).

Overview

If "a picture is worth a thousand words," then what is the potential value of an organization's web site? Although it is a relatively new communication medium, the WWW is a major source of organizational and individual information dissemination. The results of an http://WWWGoogle.com search on WWW domain types on August 22, 2002 indicated a total of 1,346,000,000 web pages indexed for review under the ".com" (896 million), ".net" (202 million), ".org" (159 million) and ".edu" (107 million) domains. Although the search probably didn't capture every web site, this was a representation of the tremendous amount of archived information that potentially projects organizational culture on the WWW at that point in time.

Organizational web sites are digital communication artifacts available to cultural participants (web viewers) via an Internet hypertext transfer protocol (HTTP). The WWW has extended many organizations' abilities to communicate and project cultural beliefs, values and norms to a large audience. The 2000 U.S. Census Bureau projected that 42 percent of U.S. households have Internet access (Yax, 2002). If we factor in public and private enterprise access, a majority of the U.S. population have an opportunity and ability to view information posted to public oriented web sites.

The research design of this dissertation was a basic interpretative qualitative study of organizational culture manifested on World Wide Web pages. This study included aspects related to organizational culture, cultural artifacts, meaning-making, mediated communication, Internet use, cultures of on-line groups, the WWW as a cultural transfer medium and adventure education cultural themes. To effectively project an accurate correct organizational culture, web designers need to understand various aspects of cultural manifestation and the symbolic meaning-making nature of this relatively new communication medium. Grunig's (1982) "theory of publics" stated that individuals seek information to solve problems based on their level of involvement relative to their perceived ability to resolve an issue. Grunig emphasized that organizations need to be conscious of the effects their communication has on individuals, groups, and other organizations. How viewers interpret the information on AE web sites will affect their attitudes regarding the organization as well as their behaviors in future AE activities.

Organizational Culture

An initial challenge of organizational cultural research is to define culture. Ott (1989) noted that 164 definitions of culture had been identified in 1952 and Schultz

(1994) stated that culture is difficult and cumbersome to understand. The multiple definitions of culture that have been noted by numerous scholars (Beyer, Hannah, & Milton, 2000; Hoecklin, 1995; Mark, 2000; Martin, 2001; Rosseau, 1990; Sackmann, 1991) initially make it a seemingly impossible task to identify a definition that would fit a specific research model.

Weick (1989) noted that individuals in organizations don't always share the same specific beliefs, values, and organizational norms. At various times, cultures may be in harmony, conflict, or ambiguity (Martin, 2001). Organizations have been identified as mini-societies (Morgan, 1997) and Van Maanen and Barley (1989) noted that organizational behavior is only partially prescribed by a collectively created and sustained way of life. Although the concept of culture has a long and complicated history, numerous researchers (Frost, Moore, Louis, Lundberg, & Martin, 1985; Greenberg & Baron, 2000; Morgan, 1997; Siehl, 1985; Smircich, 1985) agree that culture usually describes assumptions, shared beliefs, meanings, and values that develop as norms and patterns of behavior. For this research, culture is defined as acceptable beliefs, values, norms and behaviors that describe how activities are accomplished within various organizations.

This definition evolved from the perspective of "synthesized cultural themes that were exemplified as accepted beliefs, values, norms and behaviors projected on multiple post-secondary adventure education organizations' WWW home pages." Schultz (1994, p. 81) stated "culture consists of the organization members' socially defined and meaningful realities, which reflect the organization's special way of life." Organizational culture consists of values and beliefs that members come to share (Louis, 1985) through a

meaning-making process (Weick, 1985) of actions and experiences projected through a variety of symbolic artifacts.

The Symbolic Meaning-Making Nature of Artifacts

As the values, beliefs, meanings, and shared sense making evolve as a culture, accepted behaviors and norms exert influence throughout an organization. The values, beliefs and norms are manifested through symbolic organizational artifacts. Manifestation refers to the demonstration of an idea or object in which information is revealed (Louis, 1985).

Sackmann (1991) identified artifacts as generic constructs that reflect the underlying nature of culture. Gagliardi (1990) noted that artifacts exist independently of the producer and are perceived based on their own physical or mental representation. These constructs are represented as symbols that may be ascribed independent meanings by the producer as well as the receiver. Physical and mental symbols such as behaviors, verbal communications, pictures and/or objects are important in the study of organizational culture (Schultz, 1994). Symbolic artifacts are among the general category of cultural manifestations (Louis, 1985). Examples include linguistic -- storytelling (Jones, 1996), physical objects -- office furnishings, layout, and building architecture (Gagliardi, 1990), written information -- such as reports, documents, publications, and visual symbols such television and film (Altheide, 1996).

Symbols connote meanings and express much more than their intrinsic content (Ott, 1989). In addition, they cause people to associate conscious or unconscious ideas and meanings to the artifacts. The ideas and meanings may affect perceivers' attitudes and influence subsequent behaviors in organizational interactions (Grunig, 1982).

Artifacts help create, maintain, and transmit shared meaning-making perceptions and realities within organizations (Ott, 1989). As artifacts are shared, a routine is established and a mental structure is formed (Weick, 1985) that imposes coherence, order, and meaning.

Understanding the symbolic construction of organizational culture via artifacts requires a shift to understanding the realms of meaning and interpretation (Smircich, 1985). Schultz (2001) noted that we need to make a distinction between the creation of a message and the construction of meaning by the receivers. The meaning-making nature of cultural artifacts allows people to see events, actions, objects, or situations in distinctive ways. As a mediated communication form, the Internet has been identified as a meaning-making technological artifact that transmits group and organizational culture beliefs, values, behaviors and norms (Baym, 1995; Hine, 2001).

Mediated Communication and the World Wide Web

Although there are numerous types of processes to transmit organizational culture (Thompson, 1999), communication mediums have distinguishing characteristics. Some mediums are two way (telephone, radio, email, etc.) and others are essentially one way (television, broadcast radio, newspaper, film, etc.). Thompson (1999) contends that certain electronic mediums are better described as mediated forms of communication rather than mass communication because, even though there may be a large audience, they are not a collective mass in one physical location. Whereas previous technology was oriented toward mass communication (Crowley, 1982), current Internet software has the capacity to satisfy a technological version of interpersonal communication.

The Internet was developed to provide a two-way communication medium much more extensive than any technology available at that time. In Internet use, recipients may be geographically apart, yet actively involved in the mediated communication process (Thompson, 1995).

The Internet doesn't have a specific creation date; it began at the Advanced Research Projects Agency (ARPA) and was titled ARPANET around 1962 (Hauben, 2002). The goal was to interconnect communities of researchers and scientists via networked computers with an emphasis on assisting human communication to enable resource communication in a timesharing system. It was noted in ARPA draft, III-24 (Hauben, 2002) that, "The ARPA theme is that the promise offered by the computer as a communication medium between people, dwarfs into relative insignificance the historical beginnings of the computer as an arithmetic engine."

As the Internet evolved, computer hardware, software and networking protocol were created that expanded the capacities of communication mechanisms. The software began with functional programs such as email, file transfer protocol (FTP), listservs, bulletin boards, and evolved into online group environments. Internet software games such as Multi-user Dungeons (MUD's), Multi-user Dungeons Object Oriented (MOO's), Avatars were created and numerous listservs and bulletin boards were dedicated to the discussion of a variety of topics. From an anarchistic beginning, standards were developed. As the use of the Internet increased, standards of beliefs, values, and norms evolved in cultural forms. General Internet "Netiquette" and group specific standards evolved as acceptable behaviors. The Internet was both a culture of computer technology and a conglomeration of online group cultures.

The most recent cultural phenomenon associated with the Internet was the advent of graphical user interface (GUI) World Wide Web browser software. The initial hypertext transfer protocol (HTTP) based WWW software was developed in 1989, but was limited to a text based interface that was not extremely user friendly. After the introduction of the "Mosaic" and "Netscape" web browser software programs, commercialization of the Internet operations in 1995 and increased computer hardware capabilities, use of the Internet system increased exponentially (Hoffman, Novak, & Chatterjee, 1995).

Organizational web sites proliferated and the reified organizational cultures were available to anyone with client web browser software and an Internet connection. Organizations' boundaries expanded from a physical location to a virtual reality and organizational membership evolved from an employee relationship to a cultural participant. Individuals no longer needed to travel to or be directly affiliated with an organization to experience the depth of an organization's culture(s).

Although other mediums such as company brochures, annual reports, newspaper ads, and television have projected organizations' cultures, none have achieved the depth and breadth of the potential cultural manifestations available on the WWW. Because of the capabilities of communication type (textual, audio, visual, interactivity, etc.), the web sites can offer a virtual tour on a continual basis. Also, dissimilar to newspapers, television, broadcast radio and commercial printing, the WWW information can be designed, developed and published without the constraints and limitations normally associated with mass media.

The aforementioned benefits of web site development, however, have had limitations associated with them. There has been a lack of understanding regarding the various aspects of the WWW medium. Non-professional individuals within and outside of organizations can create web sites, but a lack of substantive research and theory has left a void to guide professional web site development. Technical issues, graphic design standards, readability, and usability have been among a number of issues that confuse and perplex the web site mangers and web viewers. In addition to the previously stated disagreements and misunderstandings related to web site standards, there has been a lack of awareness pertaining to reification and manifestation of organizational culture via the World Wide Web.

Statement of the Problem

There has been no substantive research regarding the manifestation of organizational culture in the design, development and evaluation stages of World Wide Web sites. Incorrectly communicating organizational culture could create negative viewer impressions, attitudes and behavior in their interactions with the post-secondary academic adventure education organizations.

Purpose of the Study

The purpose of this basic interpretative qualitative study was to describe and evaluate post-secondary academic adventure education organizations' program content cultural themes and World Wide Web design cultural themes. The study was designed as a three phase process and included data collection from four sources. The focus of Phase I was an inductive process to identify and describe: (a) program content cultural themes projected on AE web sites, (b) program content cultural themes from AE print

publications (c) AE home page design cultural themes and (d) web page design cultural themes from WWW design print publications. Phase II utilized a matrix analysis to: (a) evaluate the similarities between the two types of AE program content cultural themes and (b) evaluate the similarities between the two types of web page design cultural themes. Phase III also employed a matrix analysis that identified the similarities between AE program content culture and web design culture for the individual web sites.

Research Questions

1. What are the adventure education program content cultural themes and web site design cultural themes projected on home pages and in the print publication literature?
2. What are the similarities among the AE home pages based on the inclusion of AE home page program content cultural themes and AE publication program content cultural themes?
3. What are the similarities among the AE home pages based on the inclusion of AE home page design cultural themes and WWW publication web page design cultural themes?
4. What are the similarities among the AE home pages based on the inclusion of AE home page program content cultural themes and the AE home page design culture themes?

Benefits of the Research

This interpretative qualitative research has been conducted to help organizations understand the dynamics of World Wide Web design based on a meaning-making interpretation of cultures manifested on organization web pages. The premise that a web site could affect a viewer's perception was based on Grunig's theory of publics. When

an individual downloads an adventure education organization's web site, it is imperative they view a consistent and professional projection of the cultural beliefs, values and norms. The results of this research are a model of organizational and web page "culture interconnectedness" and a process to describe and evaluate the similarities between program content and technical themes from AE web sites and print publications.

Definition of Terms

Adventure Education – a learning situation which usually includes an experiential component and sequences the activity prior to the theoretical learning situation. Traditional learning normally takes place in a classroom setting where the theoretical component is initially taught independent of any scheduled practical experience.

Organizational Cultural Artifact – something designed and created by human beings to symbolize or communicate beliefs, values, norms and acceptable organizational behavior.

Challenge Ropes Course – a type of adventure education where activities take place belay persons in a limited physical facility on the ground, on low obstacles and elements less than 15 feet off the ground and on high elements utilizing 30 to 40 foot poles, metal cables, and appropriate safety equipment.

Cultural Participants – members such as, customers, contractual partners, or individuals who observe physical or virtual manifestations of an organization's cultural artifacts.

Cultural Themes – cultural concepts that focus on specific beliefs, values or norms and appear as recurring information in print or electronic literature

Hypertext Markup Language (HTML) – an assortment of program tags which define formatting and hyperlink operations within the web pages files.

Hypertext Navigation Link – an HTML format embedded in a web page to enable objected oriented electronic movement within a web page or on the WWW

Hypertext Transfer Protocol (HTTP) – the transfer protocol that enables requests to the remote web server and file downloads to the local computer.

Internet – the system of Transfer Control Protocols/Internet Protocols (TCP/IP) standards used to transmit information packets between local and remote computers

Meaning-Making – the process of creating [meaningful] interpretations, and commitments and developing a sense of what is, what actually exists, and what is important (Drath & Palus, 1994).

Mediated Communication – a communication process that involves a process to deconstruct and reconstruct a one-way or two way message transfer and reception (Thompson, 1999). Books, billboards, television, and the Internet are forms of mediated communication.

Organizational Culture –values and beliefs that members come to share (Louis, 1985) through a meaning-making process (Weick, 1985) of actions and experiences.

Organizational Members – traditionally defined as individuals directly employed by an organization. An extended membership might be assigned to a stockholder who has a financial investment in the organization.

Remote Web Server Computer – a computer running web server software that a request is sent to for a web page download. The server may be in the same room as the local computer or as far away as the other side of the globe

Transfer Control Protocol / Internet Protocol (TCPIP) – electronic design standards to facilitate information transfer on computer networks. Software designed for Internet uses have specific "protocols" that enable information transfer between local and remote computers.

Uniform Resource Locator (URL) – the web site addressing system which enables communication to a file directory on a remote server to request a file download.

Web Browser Software – a computer program residing on a local user's computer designed to connect with remote computers to facilitate web page transfer.

Web Design Culture – the beliefs, values, and norms promulgated in the instructional literature which emphasizes WWW design standards.

Web Page – a file of number of files stored on a remote web server computer that are available to be downloaded and displayed on a local user's computer using web browser software.

Web Server Software – a computer program residing on a remote computer designed to "serve" up web pages for download to web browser software on local user computers.

Web Site – a series of web pages that comprise the entirety of an individual's or organization's WWW information stored on a remote web server computer.

World Wide Web (WWW / web) – is comprised of specific standards and protocols to facilitate information transfer between web browser software and web server software.

Limitations

I realize that specific findings of the adventure education program content cultural themes or AE home page design themes cannot be generalized to a broad organizational audience. Although I have had experience as an AE facilitator and web page designer, my interpretations and conclusions were based on themes developed at a specific point in time without input from the individuals who designed the organizations' web page.

CHAPTER TWO: LITERATURE REVIEW

Introduction

This chapter explores the literature to develop and establish a research protocol for evaluating adventure education organizations' web sites using a basic interpretative qualitative study method. To justify these research methods, I have documented the foundation for this study from a general perspective of organizational culture and transition to the concept of cultural artifacts and the meaning-making potential of organizational artifacts. After substantiating the general perspective, I will elucidate a specific framework of the potential for cultural reification in World Wide Web (WWW) mediated communication. The second section focuses on the evolution of Internet communication, Internet online group culture, and the development of the WWW as a system of cultural manifestation. I will close the review of literature chapter by evaluating the potential for AE organizations to develop web sites that project an appropriate reflection of their participant activities and operating culture.

Organizational Culture

Organizations have distinctive patterns of culture that become evident through various activities and symbols (Morgan, 1997) and the culture, has its own unique set of "themes" to explain a situation, induce cooperation, or control outcomes (Ott, 1989). Over time socially constructed realities are created and sustained that reflect the organization beliefs, values and norms (Frost et al., 1985; Gagliardi, 1990; Greenberg &

Baron, 2000; Siehl, 1985), which implies that human behavior is partially prescribed by a collectively created and sustained way of life (Van Maanen & Barley, 1985). Culture encompasses that which is learned and transmitted within an organization or group (Ruhleder, 1995) and these "cultural truths" are used to inform and influence how people behave (Rosseau, 1990).

Culture may be unconscious actions (Hatch & Schultz, 2002; Hoecklin, 1995) or taken-for-granted assumptions that shape a background for specific activities (Smircich, 1985). It may be layered in more tacit than explicit symbols and members may not be aware of the influence on their behavior (Rosseau, 1990). Although it might be perceived as fairly stable, organizational culture is usually not univocal. Culture is composed of realities which guide - but it is also guided by member behavior (Geertz, 1973). Cultural realities exist throughout the organization's social and psychological structure (Schultz, 1994) and are reflected in an assortment of tangible and intangible symbols. Beyer, Hannah, and Milton (2000 p. 337) noted that culture tells how things work, what is good or bad, what should or should not happen and Louis (1989) described it as a set of common understandings around which actions are structured. Organizational artifacts may be used directly or inadvertently to create member meaning and reinforce an underlying cultural structure.

Organizational Artifacts

A conception of organizational culture began to emerge in the 1940's and reoriented the study of culture towards the interpretation and analysis symbols as organization artifacts (Slevin, 2000). Symbols may be objects, images, buildings or the jargon that creates a specific style of communication. Individuals communicate with each

other and share their experiences, through symbolic forms and various kinds of artifacts. Artifacts clarify cultural rituals and guide participant behavior to enable participants to develop a framework of relationships and interactions (Geertz, 1973). Symbolic artifacts tell stories and define the organizational norms to existing and new participants (Sackmann, 1991).

Artifacts are processes of reality construction that allow people to see and understand particular events, activities, or situations in unique ways. Individuals and organizations produce objects in a social and historical context to express ideas and values. (Thompson, 1990) Although they are only representations of events, the messages conceptualize organizational culture to define collective norms of behavior (Bantz, 1993; Jones, 1996). Artifacts have become powerful managerial tools that are intended to produce normative and standardized behavior (Berg & Kreiner, 1990; Hoecklin, 1995) and create a particular way of understanding the organization (Denscombe, 1999; Henderson, 1995; Witkin, 1990). These symbols represent work process, values, and organizational standards and are usually separated across space and time from the producers (Hodder, 1993). Martin and Meyerson (1988) noted that artifacts are an obvious source of information to interpret cultural themes and artifacts should help viewers understand significant organizational issues and rituals (Brewer, 2000; Kreps, Herndon, & Arneson, 1993).

The study of artifacts considers culture from a system of shared symbols and meanings. Although artifacts are attempts to manifest organizational culture (Williams, 1995), it is critical to note that the ultimate production of meaning will be determined by the viewer. Artifacts have the potential to convey meanings (Pratt & Rafaeli, 2001), but

the symbols only serve as abstract representations of organizational reality. As Gagliardi (1990) stated, artifacts have an existence independent of their creators and the final interpretation will be based on the viewer's conception. To comprehend the significance of artifacts, we need to shift our attention to viewer meaning-making and interpretation.

The Meaning-Making Nature of Artifacts

Organizations create multiple types of communication artifacts –publications, art, buildings, etc. to negotiate and manage meaning for various organizational activities (Hinings & Greenwood, 1989). Material artifacts reflect the physical manifestations and products of cultural activity to help individuals and groups develop an organized view of the world (Rosseau, 1990). Every organization has activities, norms of behavior and ways of operating that are not formally prescribed and artifacts are created to attribute meanings to events and activities. The artifact can be the viewer's means for finding out what organizational behaviors are normal and explain how activities are accomplished. Meaning-making may be a simple or complex process which will be influenced by a variety of factors (Sackmann, 1991).

Some aspects of language may be peculiar to specific organizations or industries (Dansereau & Alutto, 1990) and the construction of organizational reality is a complicated, holistic process (Sackmann, 1991). Individuals may agree upon the meaning of an artifact or it may be peculiar to one person (Morrison, Haley, Sheehan, & Taylor, 2002). At the same time, a single meaning may be inferred from different artifacts (Slevin, 2000). Although artifacts are created to symbolize truths and realities within organizations (Ott, 1989), Martin (2001) proposed that physical manifestations may be viewed as integrated, differentiated or ambiguous. Patterns of cultural meaning may be

inconsistent or incongruent within or outside of an organization. Based on the perspective that meaning is subjective and multiple, there may be a variety of perspectives and interpretations associated with a single phenomenon.

Viewer Meaning-Making

The meanings of the artifacts are not fixed or absolute, but are reified when individuals process the information through there perceptions and mental filters (Dougherty & Kunda, 1990). Understanding an artifact is an active process, and the meaning is the outcome of the individual's interpretation of what is presented (Atkinson, 1992). Meaning-making is a process of reality construction that allows people to see and understand particular events and objects in distinctive ways (Morgan, 1997) and the sense-making mechanisms are critical in the evaluation of artifacts (Cheney & Christensen, 2001). Individuals respond to stimuli in terms of their stored mental representations and the significance the situations have for them (Beyer et al., 2000). The meaning-making nature of artifacts is based on the viewer's previous actions and experiences and the individual's contextual framework will influence what is looked for and what meaning is attached to an artifact (Ott, 1989; Scholz, 1990).

Organizational culture may be created as a public artifact, but culture is conceptualized in terms of viewer interpretation (Geertz, 1973; Martin, 2001). The meanings of the artifacts are not fixed or absolute, but are reified when individuals process the information through there perceptions and mental filters (Dougherty & Kunda, 1990). This variability in perception creates a challenge for information exchange and meaningful interaction in organization activities. Preston and Kerr (2001) described this as a process of creation and interpretation to place an artifact into existing social and

cultural practices. Cultural representations may be in harmony or conflict depending on the viewer's contextual perception and interpretive meaning-making conception of the organization's reality. When participants view artifacts, they attempt to unravel various layers of meaning (Thompson, 1990; Wright, 1995), but artifacts do not produce generalized meaning when they are created (Rusted, 1990). As Rock (2001) and Rosen, Orlikowski, and Schmahmann (1990) noted, reality construction is constrained by previous outcomes. Culture may be socially constructed and transmitted by verbal and nonverbal communication, but it is made meaningful and relevant in the context of the participant (Smircich, 1985). Meaning-making is a continual process (Schein, 2000) and producers of artifacts need to communicate a coherent and consistent culture to the multiple and varied audiences. How the artifacts are perceived may be influenced by but is not controlled by the producer.

Producing Meaning-Making Artifacts

Various forms of mediated communication artifacts have been developed to present facets of organizational culture. Weick (1989) noted that individuals do not understand all concepts of the culture and the challenge in the development of artifacts is to create a shared description of the organizational culture. A fundamental part of this process in the production of artifacts is to create a set of understandings or meanings shared by a group of people (Hoecklin, 1995; Louis, 1985). Humans seek to find meaning from artifacts (Wright, 1995) but artifacts do not produce generalized meaning when they are created (Rusted, 1990). How the artifacts are perceived may be influenced by but is not controlled by the producer. The meaning(s) are shaped when they are viewed by groups or individuals. During the creation and projection of artifacts, it is always

necessary to keep a distinction between the construction of a message and the interpretation of the receiver's meaning (Atkinson, 1992; Schultz, 2001).

The symbol or artifact needs to be designed in a context focused on understanding what the receiver values (Galvin & Ahuja, 2000). Producers need to make connections between ideas and context (Altheide, 1996) to help the viewer understand relationships and cultural themes (Tilley, 2001). To create successful artifacts, the producers must consider differences in individual's experiences, attributes, and the social context in which perception takes place (James, James, & Ashe, 1990). What the producer intended to communicate may be unclear or confusing. A well designed and structured artifact can affect perception, evoke emotions, and influence actions (Jones, 1996)

Altheide (1996) noted that print and electronic artifacts are used to help members comprehend the process and meaning of social activities and visual information reveals what is significant to an organization (Ball & Smith, 1992). Although artifacts may have been created to influence the traditional organizational members (i.e. employees, stockholders, etc.) certain types of productions (buildings, publications, electronic communications, etc.) are available for viewing by nontraditional organizational members that have been referred to as "cultural participants" (Rafaeli, 1996). These cultural participants may be customers, contractual partners, or casual observers who assign meaning to information (Schultz, 1994) and their personal characteristics affect the nature of their interpretation associated with organizational artifacts.

Cultural Participants as Organizational Members

Organizations are constantly changing and the tenuous nature of culture complicates the relationships among individuals and organizations (Major, 2000; Pratt &

Rafaeli, 2001). The traditional notion of culture has focused on the premise of influencing member behavior and the dilemma of the conventional approach is the limiting notion of membership (Rafaeli, 1996). Historically, affiliation has been based on employee status and activities conducted within the organization's physical facilities. This view failed to embrace the notion of customer interaction and temporal group membership. Pratt and Rafaeli (2001) stated that employees may spend more time with customers than co-workers and suggested the customers should be viewed as organizational members.

Cultural activities and artifacts have the ability to influence employees and customers in a variety of exchange situations. Although students at colleges, participants in adventure education activities, volunteers and contract labor personnel may not have employee status, the organizational culture affects their behavior and their behavior affects the organizational culture (Rafaeli, 1996). Organizational interactions among participants may or may not be recurring and may be functional, social or a combination of the two forms. Vilnai-Yavetz and Rafaeli (2002) noted this hybrid form as the most frequent type of interaction in organizations. The relationships that develop from these interactions may be communal or exchange oriented. Based on the notion of interaction and relationship, organizational membership is more a function of cultural participation rather the limiting concept of wage earning employees. These "cultural participants" are influenced by organizational norms and the desire for social affiliation.

Cultural participation is a shared process and may be accomplished in a physical or virtual environment. As Major (2000 p. 356) noted "changes in organizational development and function are replacing the traditional notion of organizational structure

and membership." The adoption of new computerized technologies has created a new kind of place, generating virtual organizations. As organizations adopt new media types to project their cultural message, the boundaries between public and private become blurred (Chandler, 2002). The inclusive nature of the Internet can eliminate boundaries and confuse the relevance of organizational membership (Mitra & Schwartz, 2001). Numerous organizations have developed web sites as virtual artifacts that have the potential to project their culture to a myriad of potential viewers.

From a virtual organization perspective, there is no simple resolution to membership. The only boundary of the WWW is limitation to access the Internet. There are a multitude of "cultural meanings" that may be interpreted from the manifestations on the web pages. Beyer, Hannah and Milton (2000) noted that people may never physically meet, but they may share a culture in their minds. When web sites are created, production is isolated from the viewer and there may be no actual considerations for viewer participation. Individuals interpret organizations' cultural on WWW pages and the information may influence their behavior and interactions with the organization. As Virtanen (2000) noted, behavior is a function of commitment, and organizations need to develop cultural commitment in the reified projections on their web pages.

Mediated Communication

Thompson (1990, 1995, 1999) defined mediated communication as a limited social and institutional technical process. Many organizational forms of mediated communication are one-way and the transmitted messages are produced independent of the receivers. The productions usually involve a technical process in an institutional setting and there may be a time difference between the production and transmission of the

information. Traditionally, mediated communication has been referred to as "mass communication" (Crowley, 1982). As Thompson (1999) also noted, the term "mass communication" may be misleading since communication exchange usually refers to a two-way interactive process. Williams (1974) clarified the inappropriate use of the term "mass." He stated that broadcast radio and television were developed for transmission to individual homes, not a mass of people in a single location. Williams (1974) further noted that, mass broadcasting would be comparable to ordering public listening groups in the streets during World War II in Nazi Germany. Contemporary forms of mediated mass presentations might be satellite downlink workshops or entertainment forms such as movies.

Thompson (1999) stated that the concept of mass communication is inseparable from the development of the media industries. He referred to the one-way "transmission or diffusion" of information as the "mediazation" of modern culture which emerged through the development of the media industries. As Gitlin (1995) noted, media organizations, in the United States, have become more concentrated in ownership since the Second World War. The control of the operations is more centralized, yet the information is internationally distributed and the organizations are more pervasive in presence.

A number of authors have noted the passive nature or the receivers in unidirectional mediated communication situations (Reinhard, 1999; Schultz, 2001; Wallace, 1999). The media industries utilizes various hardcopy forms (billboards, books, photographs) or technology (broadcast radio and television) to transmit a message between senders and multiple passive receivers (Agre, 1998). In contrast to many of these

commercialized mediums, the Internet offers a variety of mediated interactive communication opportunities. Individuals or groups can dialogue via chat sessions, email listservs, bulletin boards, or web page communication sessions using available Internet mediated communication software.

Internet Mediated Communication

As a communication medium, the Internet is a relatively unique form that increased in popularity during the 1990's. Ruhleder (1995) stated that the shift to the Internet medium redefines how we think about our experiences and imposes structure on our social relations. The major difference between the Internet and other mediated forms of information distribution is the interactive nature and variety of mediated communication processes that are available via the Internet medium. Although telegraph, telephone and two-way radios are interactive, compared to the Internet, they have limited communication capabilities. A number of Internet software programs enable one-way or dialogic communication in an interactive environment. Two-way asynchronous, email, and synchronous Internet relay chat (IRC), bulletin boards, interactive games, and WWW software allow participants to communicate with each other and develop cultural groups in a mediated environment.

History of the Internet

The Internet was founded on intellectual and egalitarian values to enable a disaggregated and distributed population to collaborate and work together (King, Grinter, & Pickering, 1997). As noted in Chapter 1, the Internet known as ARPANET began around 1962 (Hauben, 2002) as a decentralized media system with a goal of on assisting communication between the research communities (Schultz, 2001). The Internet was

initially designed as a "distributed" and "adaptive" communication system that would operate without a central authority (Kedzie, 1997). Because of the independent nature and technical orientation of the primary users, the Internet remained in semi-anonymity until the 1990's.

The first modem communication protocol, to connect home and business computers with network servers, was developed in the late 1970's (Slevin, 2000) and modem speeds were 2400 baud compared to current 56000 (56K) information transfer speed. Contemporary Integrated Services Digital Network (ISDN) connections and cable networks were not available; and, the email, FTP and telnet software applications were text based and awkward to use. Although the development and dissemination of the personal computer in the 1980s and the introduction of the Apple produced the term "user-friendly," the Internet remained a technical dilemma. Until the 1990's, the "information superhighway" might better have been compared to a semi-private, technical, toll road. The price of usage was the necessity to learn the appropriate Internet terminology and develop adequate technical proficiency. Relative to current usage and knowledge, there was limited public awareness of the Internet prior to 1993.

In 1990 the U.S. portion of the Internet was managed by the National Science Foundation (NSFNET) and an effort was undertaken to include commercial and nonprofit organizations as Internet partners. Public use and popularity of the Internet increased with the introduction of the Mosaic "graphical user interface" (GUI) web browser in 1992 (King et al., 1997; Lemay, 1996) and the increased involvement of commercial enterprise in 1993 (Morrison et al., 2002). By the middle of 1993, there were more than three million commercial Internet users and that number was growing at a rate of 10 to 20

percent a month. In 1994, the number of sites with commercial domain addresses (.com) surpassed the number of sites with educational domain addresses (.edu) (Reddick & King, 1996). Around 1994, Internet use was increasing exponentially (Kahin, 1995) and in April 1995, the NSFNET completely relinquished control of the Internet operations to commercial vendors (Kehoe, Pitkow, & Rogers, 1998). In 1995, WWW usage dominated Internet activity and the Internet as a communication medium became recognized as a global information provider.

From its inception as a limited access network, the Internet has grown to a global multifaceted medium with a variety of public and private organizational users. The 2000 U.S. Census Bureau report indicated that 42% of United States households had Internet access (Yax, 2002). This report also noted that 43 million adults used the Internet from home, school, or work and 14 million children used the Internet from school or home. Nowak, Shamp, Hollander, and Cameron (1999) estimated that 57 million U.S. households are expected to be online by 2002 and more than 400 million people worldwide have Internet access with usage increasing every day (Morrison et al., 2002). Wallace (1999) noted that the Internet explosion happened so rapidly that researchers have not had an opportunity to systematically study the medium's effects on our behavior.

Internet Operations

The Internet began as a multifaceted medium that eventually provided different configurations of information sharing capabilities (Gackenbach & Ellerman, 1998). As Reddick and King (1996) noted, the Internet functions in a client-server computing environment and understanding client-server functionality is crucial to comprehending

Internet operations. The client is the local user's computer and the server is a remote-based computer. The server may be in the same room as the client or on the other side of the globe. The client-server operation consists of local user requests and electronic information delivery from the remote server. Initially, a request is made for specific information or a process to be completed; subsequently, if the user is successful, the request is completed and displayed on the local computer. Whether synchronous or asynchronous communication happens on the Internet, a remote server is involved in the information transfer.

Unlike commercial television, broadcast radio and telephone facilities, there isn't a distinct identifiable Internet location and information transfer is based on user request and a fragmented delivery system. The basis of the Internet is a "transfer control protocol/Internet protocol" (TCP/IP) that routes electronic digital data (email, ftp, web page requests, etc.) in manageable information packets between client and server computers (Slevin, 2000). Internet file transfer could be compared to a team of persons traveling from Los Angeles, CA to London, England. Although the team (computer file) leaves within the same time frame from a central location, each of the team members' (information packets) travel itineraries and routes might be different. Eventually, the members (data packets) would arrive at their destination and reunite as a team (original file) in the proper order and sequence to complete their original function. At any given moment, the Internet is actually the sum of the computers that are connected to remote servers using the TCP/IP connection language (Hine, 2000).

Internet Software

The Internet has been described as one of the most important communication tools in our society (Morrison et al., 2002). People use the Internet for a variety of professional and personal functions. From inception of the Internet, free email, FTP, and listserv programs have provided incentives for Internet communication (Berst, 2001). Internet software also encompasses bulletin boards, Internet Relay Chat (IRC), electronic zine (E-zine) software and the World Wide Web (WWW) (Bell, 2001; Cresser, Gunn, & Balme, 2000; Hine, 2000; Wood & Smith, 2001). In addition, specific academic endeavors have included Internet based education programs to expand the traditional classroom and increase availability to remote learners (Haythornthwaite, Kazmer, Robins, & Shoemaker, 2000; Riel, 1995; Schlosser & Kanfer, 1999; Star, 1995).

Usenet discussion groups such as the "WELL" (Whole Earth Lectronic Link) (Rheingold, 1999) and American day-time television soap operas (Baym, 1997) offer the opportunity for participants to voice their opinion and become involved in the culture of online groups. Depending on the individuals' inclination toward communication, they can be active or passive participants in the discussion groups. Another type of software that enables interactivity and encourages communication is Internet games. The MUD's (Multiuser Dungeon), MUSES (Multiple User Social Environments), MUSHes (Multiple User Social Hosts), MOOS (Mud Object-Oriented) and Avatars are popular and provide long distance social opportunities to the players (Turkle, 1997). The Internet accessible, multi-participant, software enables virtual social gatherings where many of the usual socio-cultural mechanisms operate to influence member behavior (Curtis, 1997).

Internet Social Technology

The Internet provides a technical system for cultures to develop and grow through information exchange (Schultz, 2001) and a number of authors have noted the techno-cultural aspects of the Internet (Hales, 1995; Jordan, 2001; Kramarae, 1998). Bell (2001) proposed that the Internet is a combination of technical (machines, wires, electricity, programs, screens, etc.) and sociocultural communication dimensions (email, websites, chat rooms, MUDs). At one level, the computer is a tool (Turkle, 1999); but, Jones (1999) noted that the Internet is more than just a technology. When a computer network connects individuals and groups, it is also a social network that influences cultural relations (Garton, Haythornthwaite, & Wellman, 1999; Ruhleder, 1995). The Internet connects people who are looking for affiliation and support (Sproull & Faraj, 1997) and this technology allows people with common interests to locate each other and develop social groups.

The Internet can be understood and analyzed as an emergent technological system that has real cultural attributes similar to our lived experiences. From this perspective, the Internet can be viewed as a social technology (Sproull & Faraj, 1997). The Internet is a public space where individuals with common goals communicate and develop cultural norms via online bulletin boards, mailing lists, chat rooms, and Web spaces (McLaughlin, Osborne, & Ellison, 1997) yet, dissonance is welcome (Fernback, 1997). The Internet may affect the group social behavior and the medium has influenced the changing spatial relationship and the role of the culture (Preston & Kerr, 2001), creating a paradigm shift from traditional definitions of bounded cultural groups and physical community (Wellman, 1997). Publicly networked computers have provided a medium for

communication and social interaction (Sudweeks & Simoff, 1999) that create new patterns of normative behavior and social relations in cyberspace (Fernback, 1997).

Haythornthwaite, Wellman, and Garton (1998) noted that communication richness exists in computer mediated communication (CMC) and a recurring theme is the ability of computer-mediated communication to support social relations (Spears, Lea, & Postmes, 2001; Stone, 1995). The medium enables individuals to explore a cultural context, interact, and participate with social groups. In education situations, students use virtual connections to reinvent the physical classroom proximity for socialization or work with people they may or may not have met on-campus (Haythornthwaite et al., 2000). Individuals and groups from around the world have personal and intimate relationships, but may never physically meet (Turkle, 1997). By creating a shared space, the Internet fulfills the condition of proximity to others (Webb, 2001) enabling the development of a virtual culture and group consciousness (Schultz, 2001). As Liu, Clark, Anderson and Stamper (2002) stated, the virtual is essentially real and you can see manifestations of the participant's social reality in various on-line activities.

Internet Culture

Although (Tepper, 1997) referred to the activities on the Internet as "cooperative anarchy," the medium is not without language and cultural norms. Harmon and Jones (2000) noted that online chatting requires formal rules and informal guides to avoid chaos. Players using MUD's may be gagged by another player who doesn't want to receive their postings (Curtis, 1997). New members may be "trolled" on the alt.folklore.urban discussion group as a response to a joke or "flaimbaited" if someone wants to provoke an angry response (Tepper, 1997). A variety of communication

techniques have also been developed to facilitate an appropriate "Netiquette" for different modes of Internet communication (Baym, 1998; McLaughlin et al., 1997; Sharf, 1999).

A variety of cultural behaviors are acknowledged on the Internet. MUDs have parties (Curtis, 1997), participants have relationships and weddings (Baym, 1998; Moore, 1995), and the group cultures are embedded in the technological networks (Jones, 1998). A number of benefits have been identified with online groups. Teams engage in virtually collocated employment (Mark, 2000) and Rheingold (1999) noted that people feel passionate about their electronic friends. Internet communication tends to eliminate the imbalance of power between leaders and members and the Net eliminates dependence on physical stature and impressions (Moore, 1995). In some instances, individuals are experimenting with multiple identities and gender masking to encourage virtual gender-free environments to sustain equality and balance (Danet, 1998; Jones, 1997).

Facial expressions known as "smiley face'" emoticons **:-) ;o ;-(** have been designed to convey emotions. In addition, acronyms such as "LOL" (laughing out loud) and "ROFL" (rolling on the floor laughing) are normative communication techniques in text based messaging. "THE REPEATED USE OF CAPITAL LETTERS" is construed as loud or negative communication and is discouraged or to be used with caution. Other negative behavior such as flaming (insulting responses and language), ranting in chat groups (unnecessary and extended complaining), and spamming (sending unsolicited bulk email messages) have been discouraged and evoke retribution from discussion groups. In research settings, "lurking," which involves reading and copying Internet

postings with the intent of unauthorized publishing, has been identified as an intrusive behavior.

Some Internet groups post rules or frequently asked questions (FAQ's) pages to inform participants of cultural norms (Wallace, 1999; Wood & Smith, 2001). In some instances, "newbies" or first time intruders may be forgiven their initial affront to accepted group behavior, but continued errors or negative activities can result in reverse spamming. When a discussion group of 1000 participants all send email to an offending individual, it overwhelms the offenders private email account and encourages a change in online behavior. Although the implied and enforced norms may seem restrictive to some individuals, when persons visit online groups with questions and show respect for the cultural standards, they will probably receive help and support (Wallace, 1999).

The ability to engage in cultural activities via Internet software has expanded to a different level with the introduction of web sites. Web pages provide a unique opportunity to reify the organizational culture to a potential worldwide audience. The WWW expands the ability for cultural participants to view a rich, thick description of the beliefs, values, and norms which influence and guide organizational behavior.

Organizational Culture and the World Wide Web

The World Wide Web and The Internet are not synonymous (Leshin, 1996). The Internet is the system of TCP/IP standards used to transmit information packets between local and remote computers. Web pages are computer files delivered via the Internet. The web content is distributed on different servers (Lemay, 1996), and the World Wide Web is comprised of specific standards and protocols to facilitate information transfer between web browser software and web server software. The browser software resides on the local

computer and requests information from the server software which is located on a remote host computer (Reddick & King, 1996).

The WWW didn't begin as a user friendly GUI oriented software system. Initially it was a text based system which utilized a hypertext transfer developed in the 1960's (Sanders, 2001). Instead of moving sequentially through a series of objects, hypertext was designed to move from a specific object (text or graphic) to another designated object. Each object (information source) can be linked to an indefinite number of other web sites. Text and graphic links permit users to meander seamlessly from one location to another information source. The hypertext link process is similar to the movement of a helicopter compared to an automobile. Whereas the automobile is restricted to the sequential constraints and limitations of a system of streets and intersections, the helicopter can go directly to its location. Although the hypertext process was designed for desktop computer software applications, the process wasn't widely recognized until it was integrated in text based WWW applications.

History of the WWW

The World Wide Web was developed in 1989 at the European Particle Physics Laboratory (CERN) in Geneva, Switzerland (Roscoe, 1999). The WWW was initially developed for retrieving and communicating text based research information. After the introduction of the Mosaic web browser software in 1992 and subsequent introductions of Netscape and Internet Explorer browser software the web became the driving force for the phenomenal increase in the use of the Internet system. There were approximately 100 home pages in 1993. In April, 1995, WWW information transfer via the Internet had surpassed all other data transfer modes and the percentage of World Wide Web traffic

had more than tripled from the previous year (Rimm, 1995). By 1996, the WWW had increased to 4 million home pages (Reddick & King, 1996). Two advantages that increased the popularity of the WWW were the ability to access information via hyperlinks (Roehm & Haugtvedt, 1999) and the ability to use the system without the necessity to learn a technical computer language (Mckeown & Plowman, 1999).

WWW Technical Operations

The WWW is based on a three-part operating foundation (Alexandar & Tate, 1999; Reddick & King, 1996). The major functions of the WWW are comprised of Uniform resource locator (URL), hypertext transfer protocol (HTTP) and hypertext transfer markup language (HTML) codes and tags. A web site may be a single page or a collection of web pages interconnected by hypertext links (Alexandar & Tate, 1999). Every web page available for downloading has its own, unique URL and all the web pages are stored on computers called web servers. The URL is the web site addressing system which enables communication to a file directory on a remote server to request a file download. When you type a URL in your web browser software, it sends a web page request to the remote web server for the file(s) associated with the web page you specified. The server serves up the file(s) for your browser to download (Sklar, 2000). It is important to realize that the user does not need to call up the home page to access other pages associated with the web site. Each web page has a URL which identifies it as a distinct entity and the pages on the Internet are accessible from any computer with web browser software. When you select a navigation link within a web page, the URL imbedded in the hypertext link automatically directs your request to the appropriate web server and initiates the file download process.

Each specific type of Internet software operates via an individual transfer protocol to control the information transfer or download process. HTTP is the transfer protocol that enables requests to the remote web server and file downloads to the local computer. The hypertext transfer may be initiated by a entering a URL or an automated HTML request. The hypertext markup language is an assortment of program tags which define formatting and hyperlink operations within the web pages files. The hyperlink operations may control movement within a web page, make requests for external web pages, control communication via email, submit forms, or a number of other functions. Slevin (2000) described the WWW as one of the most innovative and comprehensive applications for the exchange of information on the Internet. Although the major function of web browser software is to locate and display information from web servers, most browsers incorporate capabilities for other Internet services such as electronic mail, FTP, IRC, and newsgroups (Leshin, 1996; Slevin, 2000). These software functions help maintain multiple interactive communication activities on the Internet.

WWW Communication

The WWW offers opportunities for participant exploration and discovery beyond the boundaries of traditional media (Reid, 1998). McChesney (2000) noted that the radical claim of the web's ability to change society is not a new or unprecedented technological argument, but he also stated that the WWW is the most radical and sweeping of these new communication technologies. The functional capabilities exceed earlier technology, and Fortin (1999) claimed that many researchers believe the interactive nature of the Web has created a new communication environment. The web is

supported by user friendly software that is being taken advantage of by millions of individuals and organizations worldwide.

Although there is no broadcast mechanism on the WWW (Kehoe et al., 1998) and it has been described as fragmented and multiple (Kolko & Reid, 1998), you can do things that are not possible with television or any other medium (Levine, 2000). The accessibility of information on the WWW improves and augments user capacity (Gackenbach, Guthrie, & Karpen, 1998) and users have the option to view information and contribute feedback or decline interactive involvement without the necessity of interpersonal expense (McLaughlin et al., 1997). The web is a new medium to project our ideas in a prepackaged format where physical reality can be transformed into visual information and saved in electronic or print format. Roscoe (1999) noted that the ease of production, transmission and reception of information has facilitated the creation of an "audience" for the World Wide Web. This "ease of production" and proliferation of WWW sites pervades sections of society and enables just in time projections of organizational culture to a wide and varied audience (Dede, 2000).

Web Sites as Cultural Artifacts

Organizational web pages can be accessed and instantaneously distributed anywhere on the Internet (Gackenbach et al., 1998). The web enables individuals to communicate internationally and web sites have created new opportunities for traditional media professions (Huesca, 2000; McChesney, 2000). Representations of the organizations physical space and cultural norms are reinvented and exist in cyberspace (Jordan, 1999) and symbolic artifacts have the potential to help new and existing members adjust to standards of organizational culture (Galvin & Ahuja, 2000). Web sites

may be understood as omnipresent cultural symbols since they are potentially available to web users on an "any time" world wide basis. As reified physical symbols, web pages can express a rich set of organizational ideas in specific contexts and the information extends the knowledge of an organization's culture well beyond the physical facilities. Similar to the importance of textual and graphic print media, (Pratt & Rafaeli, 2001) placement of information on web pages implies the importance of specific processes and acceptable behaviors. Visual manifestations on the WWW enable individuals to develop concepts and awareness of the agencies values and practices prior to visiting the physical facility.

Hatch and Schultz (2002) noted that an implication of this increased access is that organizational culture is now more open and available to the public. Whereas cultural awareness was previously limited to individuals affiliated with an organization, the WWW projects culture to members, potential members and random visitors to an organization's web site. Web pages appear on the screen as a unity (Slevin, 2000) and affect our social reality more directly than ever before (Sudweeks & Simoff, 1999). Web sites have been created to teach culture in academic environments (Haythornthwaite et al., 2000; Mason, 1996), for public relations (Mitchell, 1998), and to test the potential for development of community culture (McLauglin, Goldberg, Ellison, & Lucas, 1999). An organization's use of Internet technology can play a major role in shaping the group culture (Mark, 2000) and Gant (2000) noted that a web page can be an effective tool for managing relationships to satisfy normative expectations.

Just as the physical setting communicates culture, the organizations web site is a virtual representation of the actual physical setting and organizational activities. As

symbolic artifacts, web pages can assimilate or dissimilate acceptable participant behavior and Cheney and Christensen (2001) noted that internal and external communications need to be consistent to communicate with the many and different audiences. Web site information should be interrelated with other organization communications mediums to maintain a consistent sense of organization culture. If confusing or conflicting information is projected, it can lead to communication conflict and influence how participant meaning is constructed.

Meaning-Making Capabilities of the WWW

The WWW can be utilized to project and attempt to manage the meaning-making process of an organization's culture (Hatch & Schultz, 2002) but web pages don't convey universal meaning. Web objects appear in virtual configurations, but these inscriptions are not fully virtual (Poster, 1998). The organizational cultures viewed on the WWW are reified computer-generated files that influence assumptions and behavior (Markus, 2000). Both text and graphics can represent numerous concepts and messages. Users interpret the information individually and it is the viewer's perception that converts the information into meaning. Web pages are socially shaped and made meaningful in the contexts of user experience and the environment for viewing the technology (Hine, 2000; Scholz, 1990).

Online resources are created in and based on complex offline worlds and the WWW reconfigures the reproduction of knowledge, and the practices of writing and reading (Hine, 2000). Web pages are symbolic artifacts produced by agents situated within a specific social-historical context, but the producer is not there to elaborate or to correct possible misunderstanding (Mitra & Cohen, 1999; Thompson, 1999). Executing

and implementing what one intended to convey is a challenge and web designers should not expect the projected message to convey the same meaning to everyone. The WWW enables organizations to re-create aspects of the organizational culture for viewers to explore and gain an in-depth understanding of activities and norms without ever visiting an organization's physical facility. Depending on the web designer's perspective and priorities, web page presentations can be cohesive and consistent or fragmented and confusing for site visitors (Reid, 1998). Meanings carry across the interface through symbols (Hales, 1995) and web designers can only attempt to provide the correct information necessary to reconstruct the organizational culture meaning (Stone, 1995).

Web Site Design

The web site design literature was segmented by user friendly capabilities and technical design features. The user friendly capabilities and design features overlap, but the design features had specific information that could be categorized as technical design and academic standards. Although the technical and academic categories also had integrated themes, there were distinct concepts that emerged to support each category.

User Friendly Capabilities

Defining audience characteristics was a prevalent theme in a number of publications (Agre, 1998; Fortin, 1999; Hine, 2000). User issues focused on who visits the site, what the viewers are looking for, why they are downloading the web page, and how the pages cam be made more accessible to the viewer. In a similar context, Wilson (1995) noted that the web sites are continually changing and designers need to question why the site is being created and the necessity to make the "site structure" clear to the visitors. Fortin identified the difference between casual visitors (browsers) and

individuals searching for specific information (seekers) and the need to satisfy both groups of web visitors. Web designers need to consider viewer relationship with the organization (Wood & Smith, 2001) and make certain the quality of the web site equals the quality of an organizations products or services (Williams & Tollett, 2000).

"Scanability" or "page skimming" is a popular user feature (Sprool, Scanlon, Schroeder, Snyder, & DeAngelo, 1999). When readers are searching for information, paragraph and sentence structure aren't as important as the time spent locating information on the web page. Sprool et al. noted that readability measures such as the Gunning Fog Index and Flesch-Kincaid Grade Level scale had inverse relationships to the user's satisfaction and ability to use the site. Since the readability formulas are based on the average number of syllables per word and words per sentence, the higher the site scored on "readability" the more time it would take to review and locate information. The longer it took to locate information, the less useful the viewers rated the site. Improving web page interface and interactivity to optimize participant usability were critical themes cited in a number of publications. (Coupey, 1999; Kotamraju, 2002; Reddick & King, 1996; Thorson, Wells, & Rogers, 1999; Willard, 2001; Wilson, 1995). Because of the lack of interactivity, Levine (2000) noted that brochure style web sites should be avoided.

Design features

Technical design and academic standards were categorical topics emphasized in the literature. The design features focused on the importance of technical aspects integrated in the web site development process. Web page download time was cited as a critical factor by numerous authors (Hedberg & Berger, 2001; Hine, 2000; Sanders, 2001; Whittaker, 2000) and web site navigation is important in two related areas. Creating a

consistent navigation style is necessary to aid customer transition within and between web sites (Alexandar & Tate, 1999) and hypertext links must work properly to maintain quality and web site success (Lemay, 1996). Other technical issues were: contrast between text and background color, opportunities for disability access to WWW sites, viewer monitor size, and the ability for viewing the information on a Windows, Macintosh or UNIX computer operating system. Issues such as, spelling, page development or design date, and graphics were mentioned in both the technical design and academic standards literature.

Academic standards were reinforced in a variety of electronic publications produced by individuals directly affiliated with colleges or universities. The topics focused on professional qualifications and specific information that should be included to substantiate the credibility of the web site information. Web page author, date of design and organizational information source were required as basic indicators for quality consideration (Alexandar & Tate, 1999; Beck, 1997; Jacobson, 1996; Kovaks, 1995; Wolinsky, 1999). Objectivity and lack of bias (Beck, 1997; Brandt, 2001; Harris, 1997) were mentioned as prerequisites for usefulness and trustworthiness and web pages need to be grammatically correct and accurate to convey academic credibility. To be successful, a balance between appropriate content, technical design and academic standards needs to be considered in the production of web pages (Hedberg & Berger, 2001)

Web Page Design Challenges

One of the benefits that have been identified with the WWW media is the ease of design and development of web pages (Whittaker, 2000). Web pages have been produced

without the need for expert design specialists (Hine, 2000; Hine, 2001; Stern, 2000) or assistance from the media industries. This benefit may also be interpreted as an organizational detriment. The constant changing technology continually creates new design processes, but the processes are not based on established web site design theory (Kotamraju, 2002). Out of necessity, a variety of instructional books, semi-professional groups and design elements from other media (that don't fit in the web environment) have evolved to guide web page design efforts. Many organizations lack a clear understanding or reasoning for their web site orientation development (Hine, 2001). As the web design features proliferate, an increase in learning new tools will require the professional development of web designers (Dede, 2000). Professionals trained in human computer interaction (HCI), communication and psychology need to be involved in the design process to facilitate successful web site development (Kotamraju, 2002). To create meaningful artifacts, the design experts will also need to consider what culture will be projected via the organizational web page.

Unlike web pages that present personal interests, statistics or biographical data (Chandler, 2002) and rely on hit counters or feedback from other web developers (Hine, 2000), organizations need to utilize new technologies effectively to communicate culture with a potential worldwide audience (Hanna, 2000). The WWW is made meaningful primarily through understandings of the audience that it can reach, but managing the interpretation of symbols is central to an organization's culture (Ott, 1989). Successful web sites need to be transmitters of shared meanings and perceptions of organizational realities. In a review of university web sites, Banning, Davies and Quick (2000) noted that web pages need to be an accurate reflection of the real environment; but it was more

of a reference to the physical campus rather than the organizational culture. In order to communicate the appropriate message to the web site participants web designers need to need to reify reality based on the organizational cultural.

From my perspective, a major issue exists relative to organizational culture and the meaning-making nature of web pages. In a review of nineteen web page electronic and print design publications, not a single document identified projecting organizational culture as a consideration or critical element for web site design. Web designers cannot assume that the site user will be the same as the user of the company's product or service (Sprool et al., 1999). Web site users may be unfamiliar with the organizational jargon and culture. This lack of familiarity may create confusion and misinterpretation of the information projected on the web page.

Web Pages and Adventure Education Organizations

The vignettes at the beginning of this paper emphasize two diverse interpretations and cultural perceptions of a hypothetical adventure education organization's web page. It is interesting to note that the interpretations focus on specific activities and challenge elements that may not represent the fundamental goals of AE. In a perfunctory review of AE print publications (Auvine, Extrom, Poole, & Shanklin, 1977; Garvey et al., 1995; 1998; Priest & Gass, 1997; Smith, 1994), group processing, facilitator qualifications, activity planning and experiential education were emphasized as the primary organizational concerns and functions. The Association for Experiential Education member's web page listed approximately 575 member web site URL's at http://www.aee.org/member/memorgs.php?action=10 web site. To successfully communicate an organizational culture, AE information mediums need to project

consistent themes to influence the viewer meaning-making process. If the primary cultural themes on the web sites project a conflicting or dissonant meaning from other AE publications, the participants and staff may be confused or frustrated. As Grunig (1982) noted, individuals inside and outside an organization are subjected to a variety of communication information which may impact their current and future behavior. This interpretative qualitative study focused on describing and evaluating program content cultural themes and web page design culture themes associated with post-secondary academic adventure education organizations.

CHAPTER THREE: METHODOLOGY

Introduction

The key aspects of the research methods are described within this chapter. Initially, my research background design is presented to qualify my academic and practical experience relative to this research project. Next, the research concept is developed to ground the study in the literature and describe the interconnectedness of the of adventure education program content cultural themes projected on web pages, AE publication program content cultural themes, AE web design cultural themes and web design publication cultural themes. After an explanation of the research design methods, a three phase research model is introduced to guide the data collection and analysis. The research data section evaluates using web pages and documents as sample data, notes the benefits and ethical consideration of WWW research and explains the data collection procedures. The subsequent sections explain Phase I, II and III data analysis, includes a pilot study of descriptive data, tables and a data matrix. The final section identifies possible research biases and summarizes the benefits of the research.

Researcher Background

My interest and expertise in this research emanated from involvement as an AE participant (four sessions), a trained AE challenge ropes course facilitator (Spring 2000) and a facilitator of adventure education courses for two and one-half years. I also have designed web sites since 1994, instructed web site design courses and consulted on web site productions since 1995. Finally, as a graduate student and AE facilitator interested in

improving my knowledge and skills, I conducted an extensive literature review of adventure education publications between spring 2000 and summer 2001. I believe my prior experiences and academic research enabled me to design a basic interpretative qualitative research study (Merriam, 2002) to evaluate adventure education web pages from an emic perspective (Ball & Smith, 2001; Craven, 2002; Dowling, 2001; Manning, 1987; Sackmann, 1991).

Research Concept Development

At the initiation of this qualitative research project, I felt strongly about studying some aspect of adventure education; but, there was an uncertainty about what research methodology or specific topic area to pursue. During my initial review of the literature, the project orientation changed from leadership education (currently, more than 9000 publications (Buckingham & Coffman, 1999)) to the importance of AE activity processing (interesting, but quite a bit of prior research exists (Brackenreg, Luckner, & Pinck, 1994; Cain & Jolliff, 1998; Gass, 1985; Luckner & Nadler, 1997; Nadler & Luckner, 1992; Priest & Gass, 1997)). Finally, I decided to focus on adventure education organizational culture. Similar to the majority of my life experiences and various descriptions of emergent qualitative research design (Altheide, 1996; Bantz, 1993; Geist & Dreyer, 1993), the specific topic concept emerged with my continual immersion in adventure education activities and the review of related literature. Relative to my background designing web sites and facilitating adventure education activities, I finally decided to evaluate the organizational culture projected on post-secondary academic organizations' adventure education web sites.

As I reviewed the literature, I began to appreciate the concept that organizations may not have a single integrated culture (Martin, 1992, 2001; Martin & Meyerson, 1988). Organizations are comprised of multiple cultures that do not operate in isolation and may be integrated, differentiated or fragmented. Organization cultures are reified in a variety of symbols and the technical cultural themes of the artifact designers may affect how the manifestations appear to the viewer. From this perspective, I realized that numerous themes influence an organization's web site cultural projections. The technical design culture of "how to produce" web sites has been well developed in a variety of electronic and hard copy publications and potentially influences the AE organization culture projected on the web site. In addition, an AE organizational operations culture has guided adventure education beliefs, values, norms and behaviors for more than twenty years (Auvine et al., 1977; Cain & Jolliff, 1998; Cousineau, 1978; Garvey et al., 1995). Thus, a single media focus would not suffice to explain the culture projected on AE organizations' web sites. As Sterne (1999) noted, cultural studies scholars create problems when conceptualizing the Internet like a sealed container. Organizational culture doesn't exist solely on WWW pages and needs to be considered in both an on-line and off-line context. The model in Figure 3.1 illustrates my perception of the interconnectedness of WWW mediated AE organizational cultural.

Research Design

This project was a basic interpretive qualitative research study to develop a holistic understanding of the program content cultural themes and web design cultural themes associated with adventure education web "home pages." The goal of this research was to describe and analyze post-secondary academic AE organizations' cultural themes

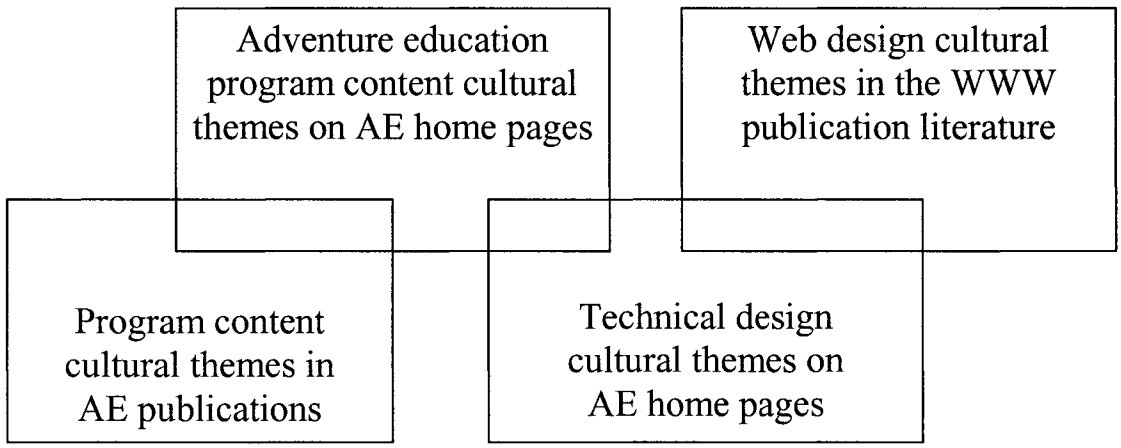


Figure 3.1. Interconnectedness of AE program content and technical design cultural themes

and WWW design cultural themes. I believed the program content themes communicate what beliefs, values, norms and behaviors were important to the AE organization and the web design themes indicated the beliefs, values, and norms that guided the technical design of web sites. Based on the assumption that cultures are complex, interrelated and contextually oriented (Fleitas, 1998), the research method fits Stebbins' (2001) and Taylor and Trujillo's (2001) description of qualitative exploration as an inductive study designed to identify and evaluate generalizations about a group activity or process. The AE web sites and printed publications are analogous to an organization's "running commentary" (Schultz, 1994), which offer interpretations of an organizations symbolic culture.

Similar to Schultz's (1994) interpretation of the symbolic perspective and Martin and Meyerson's (1988) emphasis on content themes, this research was intended to

analyze the meanings and concepts among the various cultural themes and understand the interrelationship of the four components in Figure 3.1. The challenge was to gather rich, descriptive data (Kreps et al., 1993; Mann & Stewart, 2000) and create detailed accounts to explain the AE organizational culture contexts in a "thick description" (Geertz, 1973; Martin, 2001). Although I wanted to unravel a part of the complexity of organizational culture, I was also aware that, at best, this research would barely "touch the tip" of the proverbial iceberg. Analyzing web sites as manifestations of organizational cultural is a new concept; but, as Miles and Huberman (1994) noted, qualitative research may be conducted in a variety of ways with each new perspective adding meaningful layers of information and methods of analysis.

To accomplish these research goals, I reviewed WWW and print publication media and analyzed the following four data sources: AE home page program content culture, AE printed publication program content culture, AE home page design culture, and web site design literature. I also compared (a) the culture themes that were manifested among web and print media types and (b) AE home page design themes and web publication media themes. Candib, Stange and Levison (1999) described the multi-method process as a "transdisciplinary" research approach that requires a tolerance for ambiguity. Bell (2001) noted that this type of multi-site approach demands an "itinerant methodology" to connect online and offline elements. I have created a three phase research process in Figure 3.2 as a guide for sample selection, data collection and the multiple evaluation processes.

In Phase I, I analyzed the information from the media types (AE home pages and print literature) associated with adventure education and home page design. The goal was

to identify the cultural themes associated with the following four information sources: AE home page content, AE publication content, AE home page design criteria and the published web site design criteria. The Phase I evaluation enabled me to develop rich, thick descriptions of the major cultural themes from the four information sources. These descriptions were utilized in Phases II and III to conduct matrix analyses recommended by Miles and Huberman (1994) to illustrate the strength of the similarities among the web site presentations. The description of the analytical processes has been provided in the data analysis segment of this methods section.

Phase II was a matrix analysis of the major program content and web design themes to determine print publications media types. The goal was to determine whether there was consistency in the AE home pages' information relative to (a) the similarities on the home pages between the AE web program content cultural themes and AE publication program content cultural themes and (b) the similarities on the home pages between the AE web design cultural themes and published web design cultural themes. I abstracted the major AE program content and web design cultural themes to create table matrices and scatter plots to determine the similarities of the major cultural themes of the four data sources. The analysis was based on redundancy of cultural themes and the major themes were abstracted and categorized to develop concise and specific matrix categories. Following the categorization of themes, a matrix analysis was completed to illustrate the similarities of the cultural theme patterns of the AE home pages.

The analytical processes developed for Phase II were utilized in Phase III to determine the similarities of the AE program content cultures and the AE web design

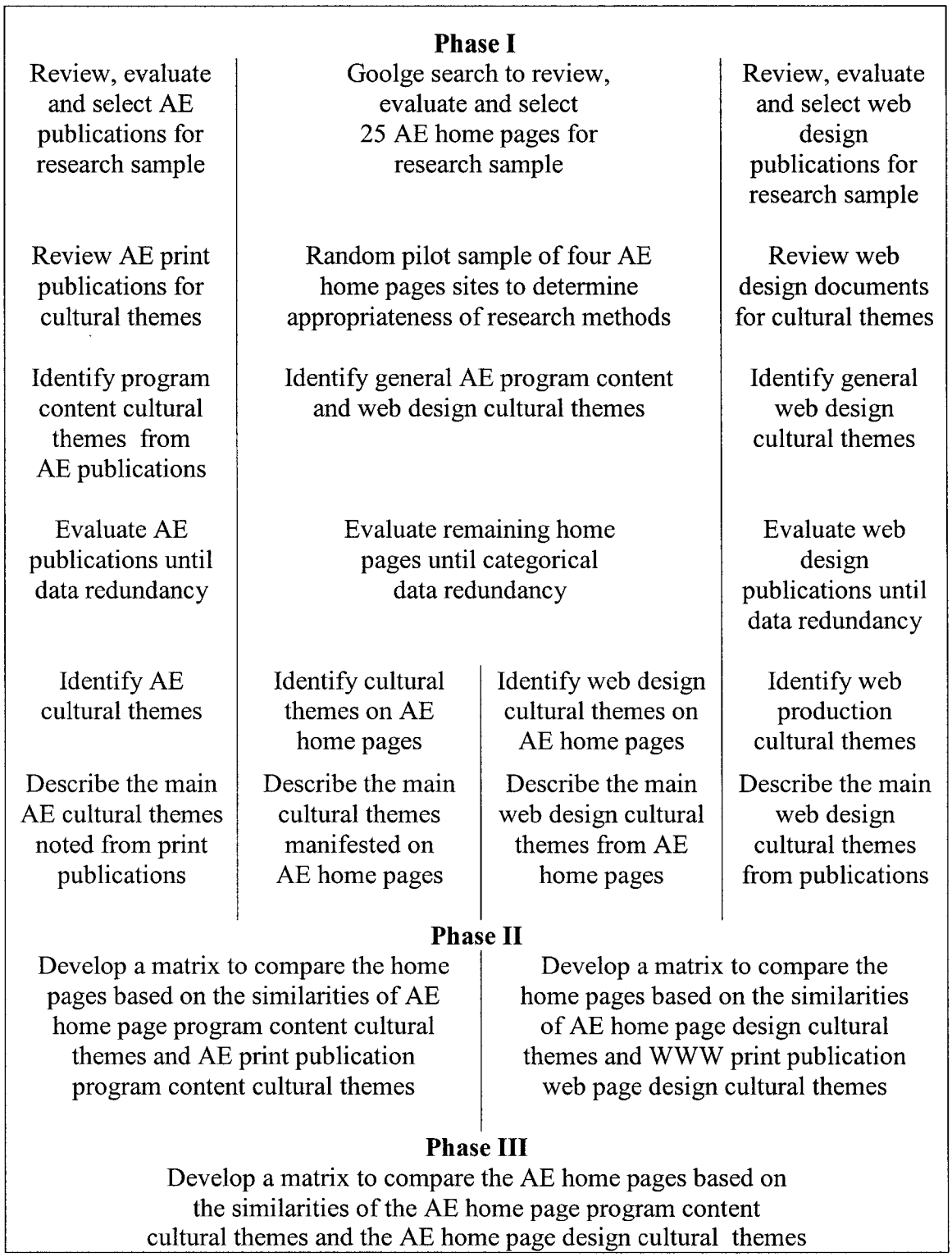


Figure 3.2. Three phase research process

cultures. I used table matrices and scatter plot to present these similarities. The ultimate goal of Phases II and III was to determine if there were similarities within and between the publication and AE home page cultural themes.

Research Data Selection and Collection

WWW Pages and Publication Documents as Sample Data

The concept of using web pages and print documents as sample data has been well supported in the research literature. Qualitative studies have evaluated the transmission of organizational culture via physical structures (Gagliardi, 1990; Rusted, 1990; Tilley, 2001), printed publications (Denscombe, 1999; Dougherty & Kunda, 1990), television (Altheide, 1996), photography, film and documentaries (Ball & Smith, 1992; Elderkin-Thompson & Waitskin, 1999; Harper, 1993; Winston, 1995), computers (Binik, Cantor, Ochs, & Meana, 1997; Fielding, 2001; Pollner & Emerson, 2001; Star, 1995), and the Internet in general (Kraut et al., 1998; Kraut et al., 2002; Slevin, 2000). There also has been an abundance of Internet research focused on computer mediated communication (CMC) (Gackenbach & Ellerman, 1998; Sproull & Faraj, 1997), generic WWW communication (Frazer & McMillan, 1999; Kluger & Rafaeli, 2000; McLauglin et al., 1999; Mitra, 1999; Osuna & Meskill, 1998), and individual WWW sites (Chandler, 2002; Cresser et al., 2000; Hine, 2001; Stern, 2000).

As indicated in the literature review section, however, the two voids in qualitative research of WWW artifacts have been (a) a lack of research on the reification of organizational culture manifested on web sites and (b) the lack of WWW research based on a "holistic" approach. To accomplish the research processes in Figure 3.2, sample data was collected from World Wide Web and print publication media sources and focused on

the following four cultural themes: AE home page program content, AE publication program content, AE home page design criteria and WWW publication web site design criteria. Mitra and Schwartz (2001) noted that Internet researchers need to evaluate more than the web page design and include a discourse analysis based on a holistic perspective and Ho (1997) suggested using a customer perspective to analyze web sites. The Internet has connected computer networks and cultural ideologies supporting the proposition that the new media researcher should consider alternative or even multiple research methods. As Altheide (1996) affirmed, if we are going to comprehend organizational culture, we need to increase our capacity to utilize and analyze current technological artifacts.

Benefits of Sample Methodology

Altheide (1996) stated that the availability to retrieve and evaluate documents using current technology has been the greatest contributor to cultural research and a number of benefits have been identified with the use of web sites and publications as data samples. Unlike studies where interaction between the researcher and participants affects the social setting (Bell, 2001; Elsbach, 2000), collecting sample data from web sites and documents is a noninvasive method to gather information on organizational cultures (Hodder, 1993). Documented information also allows the researcher to access information that participants may not share in an interview (Mann & Stewart, 2000).

Additional benefits include extended access to the sample data, a lack of gatekeepers, and the ability to access purposeful samples. Through the use of documents, the researcher has the ability to display the original data as a means of verification and trustworthiness. Behavior observed in images and graphics can be captured and analyzed relative to the original context created by the organizational participants.

Participant withdrawal, which is a critical issue, was avoided with correctly collected and stored data. Unlike intrusive interviews and observations that must be personally observed, data was collected relatively quickly (Morrison et al., 2002) and unobtrusively (Stern, 2000) from web pages all over the world without schedule and time constraints. The information was copied and saved for later recall and/or printed as hard copy for future analysis. As Sharf (1999) noted, these features facilitate data collection in a naturalistic setting that is beneficial for researchers.

WWW Research Ethical Considerations

A number of researchers have identified several key ethical issues associated with qualitative on-line research (Ball & Smith, 2001; Eysenbach & Till, 2001; Stern, 2000). Delorme, Zinkhan and French (2001) noted that there should be a common ethics code to cover issues related to Internet research. Issues pertaining to anonymity, confidentiality, intrusiveness, perceived privacy, potential participant harm, tracking Internet protocol (IP) addresses, and the ability to purposefully disguise identity (researcher and participant) have been but a few of the ethical concerns surrounding Internet and WWW research. Lurking (observation without notification) in Internet chat rooms or online group activities has been a concern regarding online communication and Craven (2002) noted the ethical issues raised by the examination of online conversations without the consent of the groups' members. Bell (2001) stated that lurking is not acceptable since it puts the researcher in a powerful position. Recording interactions has raised issues and some researchers have felt that individual privacy has been compromised by recording online communications even when fair notice has been given (Stone, 1995).

After reviewing the concerns for ethical Internet and offline qualitative research, I concluded that viewing and analyzing AE organizational web pages was appropriate. Since the information was available to download via the Internet and listed with Google and other search engines, I proposed that these communications were acceptable for public research. My main concerns were with data archives and accessing organizations' home page information. In the event that there was a need to replicate the study, I have maintained an archived copy of the data sites and URL's. Although public web sites have been developed to increase visibility, each research home page was assigned an alternate identification to limit researcher bias. As Delorme et al. (2001) stated, the Internet blurs traditional research boundaries, but I believe I established and followed ethical guidelines for this specific research project.

Data Collection Sources

Adventure education web "home pages," AE publications and web design publications were the data sources. Although there were numerous types of adventure education organizations' web pages (college, therapeutic, private business, religious, youth camps, etc.), this research project focused on adventure education organizations that were directly affiliated with post-secondary academic institutions (colleges and universities). The premise for the specific sample criteria was to make a qualified analysis of home pages that represented organizations with similar focuses and goals (not for profit, education component, similar staff, etc.) that had reasonably convenient access to academic resources on a regular basis. As Morgan (1997), Rafaeli (1997) and Schein (2000) have noted, organizations within the same industry have similarities that can create unity of purpose and activities.

WWW data sites were selected by creating a search for "challenge ropes course" using the "Google" database search engine. Initially, I used a Google search on "adventure education" but the information was too generic and the search result produced a selection of 1,010,000 web pages. A pilot search of "challenge ropes course" produced a more focused and limited number of web pages for sample review and selection. Based on a final search result, I selected those adventure education organizations that are directly affiliated with post-secondary academic institutions. After reviewing the home pages for the appropriate post-secondary adventure education organization research criteria, the selected home pages were added to a specified "favorites" subdirectory on the local computer for future evaluation.

Although, 25 initial home pages were selected, the final data collection process was to be based upon saturation of cultural themes that emerge from the home pages. The actual number of sites that were to be reviewed was based on redundancy of cultural information. If more home pages had been required, I would have used the original bookmarked Google search result URL and located additional post-secondary academic AE organizational home pages. No human subjects' interactions were involved in this research project.

Print publications were the data source for information pertaining to adventure education activities and programs. The web site design information was derived from print publications and electronic documents. Relative to my previous research of adventure education and prior experience with web site production literature, I was confident that the necessary information was available to gather appropriate sample data. Similar to the sample selection process for the AE home pages, the function of sampling

was to provide thick descriptions of the topics and develop categories that represented the cultural themes of AE web organizations and professional web design. The final sample sizes were determined by cultural redundancy and thematic concept saturation.

I provided lists of the AE home pages data sites, AE print publications and web design publications to my primary research advisor for evaluation to determine the appropriateness of the data sources. The data sources are listed in the Appendix. The data collection methods are explained in the following sections.

Web Site Data Collection Process

The data collection was completed from AE home pages with a Hewlett Packard OmniBook Pentium III notebook computer containing an internal 56K modem. The main web browser software was Microsoft Internet Explorer (IE) 6.1 running on Microsoft Windows XP operating system. Since home page download time was a web site technical feature, a generic desktop Pentium III computer with a 56K modem using Netscape Navigator 4.6 with Microsoft Windows 98 operating system was used to download backup verification copies of the home pages.

After locating the acceptable home pages and prior to data collection, the files in the "Temporary Internet files" directory saved on the notebook computer and the files saved within the Netscape "cache" directory on the generic desktop computer were deleted. Deleting the temporary and cached files on the local computers was necessary because of the storage and download processes designed in the local computer web browser software programs. When connected to a remote web site, the necessary web page files were transferred to the local computer and the web page information was displayed on the monitor. At the same time, copies of all the files associated with the web

page (text, graphics, audio, etc.) were automatically stored in a temporary Internet files directory on the local computer hard drive to minimize future download times. When the URL would be accessed in the future, the local web browser software would compare the current remote computer web page file information (date, time and file size) with the file information saved on the local computer to determine if changes have been made to the requested file. If the file information on the remote and local computers was the same, the requested web page files would be loaded from the local computer hard drive to expedite download time and minimize Internet bandwidth consumption. If the file was loaded from the local computer, the increased speed of the file download process would distort the "download time" measurement and evaluation processes. Deleting the locally stored files guaranteed that the initial measured file download time on the local computer was accurate and that the initial remote home page information was current and correct.

The second step was to access the selected adventure education home pages and measure the download time on the computer used for data transfer. The primary site visit was completed on the specified computers from the same physical location via a Qwest phone system with a dial up connection to the Colorado State University modem pool. A phone modem was used to duplicate access time of the majority of users who connect to the Internet and WWW from home computers. Sklar (2000) noted that the majority of home users access the Internet via modems and 64% of the respondents who replied to the Graphic, Visualization, & Usability Center's (GVU) 9th WWW User Survey (Kehoe et al., 1998) indicated problems with slow web page download speed. The modem transfer speed, date and time of initial web site access was noted for future study replication.

After measuring home page download time, the home page information was saved on the notebook computer hard drive for future content analysis. This process utilized an option of Internet Explorer to save the index or default files (commonly referred to as the home page) and the necessary support files that were associated with the web page when it was being viewed. Saving the files expedited future access to the web page information and assured availability to analyze the original home page information in the event that the remote server was down. Since this WWW research was based upon the "specific snapshot" (Bell, 2001) of the initial home page access, this procedure avoided having to deal with potential changes in the home page format and interruptions in the research process.

The fourth step was to determine if the navigational links worked on the web site home page and whether there were convenient and consistent return links to the AE organizations' home page. Hypertext navigation has been noted as one of the primary benefits of the WWW (Alexandar & Tate, 1999; Hedberg & Berger, 2001; Kotamraju, 2002) and as one of the major problems when dealing web sites (Bell, 2001). Since the navigation has been noted as a critical factor in the usability of web sites, navigation testing was completed by implementing a "direct comparison" process. The comparison process I designed involved concurrently viewing the remote home page information on monitor # 1 and the locally stored home page information on monitor # 2 on the notebook computer. This direct comparison navigation testing procedure guaranteed that the home page information had not changed since the initial web page download process.

Publication Data Collection

This process involved reviewing publications and documents that were associated with AE program content cultural themes and web site design cultural themes. I reviewed the appropriate literature and focused the data collection on cultural themes that emerged to signify beliefs, values, norms and behaviors common to adventure education program content and web page design. The relative importance of the themes was determined by the repetition of specific information in the literature. Dissimilar to the requisite number of home pages selected, I did not specify an apriori number of publications to facilitate sufficient secondary data collection. Based on my knowledge of the literature pertaining to AE organizational program content culture and web site design culture, I was confident that an adequate number of publications were available to facilitate appropriate thematic construction.

Data Analyses

Unlike quantitative research, there are no specific analytic processes that have been required carte blanche in qualitative data analysis. A fundamental attribute of qualitative research has been to avoid apriori data categorization (Creswell, 1998) and to allow the themes and categories to emerge from the raw information. Creswell described qualitative analysis similar to Borkan's (1999) immersion/crystallization process in which the categories and themes appeared after numerous readings and persistent reflection on the data. The central data analysis process focused on Wolcott's (1994) three step approach (description, analysis, interpretation) in conjunction with Altheide's (1996, p. 16) emphasis on "recursive and reflexive movement between concept development-sampling-data, collection-data, coding-data, and analysis-interpretation."

The emphasis was on a systematic but flexible process that supported a simultaneous collection and analysis process.

Analytical Methods

To create a holistic research focus, the three phase research process also guided data analysis. During Phase I, the AE home pages and AE publications information were analyzed to identify AE program content cultural themes and note specific design and technical features of each organization's home page development culture. Also during Phase I, AE home pages and WWW design publications were analyzed to identify the web site design cultural themes that emerged from the AE home pages and web site design publications. Analysis of data from web site design publications and AE publications were conducted concurrent with the review of AE home pages. The functions of document analysis were to review the information and label segments as thematic concepts to represent organizational beliefs, values and norms. The cultural themes were compared for similarities within and among the web pages using table matrices and scatter plot analysis in the second and third phases. A pilot study was conducted that supports the three phase data collection and analysis methodology. From the pilot study of AE home pages, topics such as high elements, low elements, challenge by choice, etc. emerged in the textual discourse and graphic images on several sites. In addition, the review of AE publications produced thematic concepts that described the program content cultural themes.

Pilot Study Sample Data Analysis

During a pilot study, I extracted the cultural themes from: (a) AE home page program content and (b) AE publications program content to complete Phases I and II of

the data analysis process. Four AE organization home pages were used for the web page program content culture pilot study and the AE publication program content culture pilot study included four print documents to create examples of Phase I descriptive data analysis and Phase II matrix analysis. The pilot study AE home page program content cultural themes have been described in the next section.

Phase I Pilot Study Descriptive Information

Ten program content cultural themes emerged from the web page evaluation. The AE home page program content cultural information had to be mentioned in at least three of the four pilot web pages to be included in the data analysis. Although qualitative information normally has been supported by "rich, thick descriptions," some of the program content cultural themes were supported with limited textual information. In many instances, designers for the WWW medium have utilized formatting techniques to create a page that can be scanned quickly and have included hypertext links to more descriptive information. It is critical to note that the AE home page pilot study evaluation and analysis was limited to the AE organizational web "home pages." The following section lists the 10 abstracted theme headings, the coded organization AE home page number and the specific documentation that supported the individual cultural theme.

Pilot Study: Adventure Education Program Content Cultural Themes

<u>Web Theme 1</u> – Challenge by choice or challenge themes was highlighted in 4 of 4 home pages

> Site A – Completion of each element to the best of the group's ability ("Challenge By Choice"). Introducing a group to artificial stressors and challenges in a controlled and safe environment…

Site B – Organization name followed by the word challenge is noted with larger font, different colored font, all capital letter font and shadowed font in two sections of the page.

Site C – expand your limits with the …Challenge Course. What is a Challenge Course? Also known as a ropes course, a challenge course is a fun and exciting way to work towards various goals with a group. Through a variety of elements and team-building activities, a challenge course takes particpants [*sic*] to new heights.

Site D – Organization name followed by the word challenge is noted with larger font, different colored font, all capital letter font and shadowed font in two sections of the page. Learn to work as a team, solve problems, and overcome obstacles at organization's Leadership Challenge Course! The Leadership Challenge Course is designed to benefit groups of all kinds.

Web Theme 2 – Group work / individual emphasis themes – 4 of 4 home pages

Site A – The group feels a strong impact from Team Works!, achieving cohesion and cooperation with surprising speed. The individual develops clearer insights and a fuller appreciation of self.

Site B – Personal Empowerment… Come Unlock Your Potential (larger font and bolded) he [*sic*] emphasis is on individual as well as group discovery.

Site C – But the Challenge Course is not a measure of individual strength--it maximizes the group's cohesiveness.

Site D – The Leadership Challenge Course is designed to benefit groups of all kinds… Each program is customized to meet a group's specific needs and to address certain themes which they deem important

Web Theme 3 – AE activity oriented cultural content visual image themes – 3 of 4 home pages

Site A – three images on the home page – There was a 1¼ inch wide by 1½ inch long picture of a person jumping through the air in the upper left corner of the screen. A 1½ inch by 3 inch picture of an individual being lifted and pulled up over a wooden wall (approximately 12 feet high) was in the middle right side of the screen and a 1¼ inch by 1½ inch picture of a person doing something behind a tire was in the lower right section of the screen.

Site B – A 2¾ inch by 1¾ inch picture was in the middle section of the screen of one individual bending over to the side and behind and a second individual. The second individual appears to be blindfolded and the first individual is holding the other person's right arm. Although they are near a tree limb, it doesn't appear that either of the persons is attached to any safety ropes, which might indicate they are walking on or close to the ground.

Site C – A 2½ inch by 4 inch picture was in the upper center section of the screen. The picture showed three individuals standing on wooden platforms protruding out from a 50 foot wooden climbing tower and another individual holding on to a telephone pole while standing on a cable or rope at the same height or higher that the other three individuals. A series of wires, ropes or cables are also obvious in the picture. As a challenge course facilitator, I recognize the climbing harnesses

on all of the individuals and it looks like the person holding on to the pole has a safety rope. It isn't clear to me that the persons standing on the tower platforms have safety ropes attached to their harnesses.

Web Theme 4 – Trust yourself and others – 3 of 4 home pages

Site A – Develops trust in self and colleagues

Site B – Trust another...and go farther than you thought possible.

Site D – the word "trust" was used in a list of course benefits

Web Theme 5 – Having fun– 3 of 4 home pages

Site A – …and fun environment

Site B – We strive to maintain a fun and…

Site C – a challenge course is a fun…

Web Theme 6 – Safety– 3 of 4 home pages

Site B – We strive to maintain a … and safe

Site C – …safe learning environment throughout the day

Site D – …and safe environment

Web Theme 7– High element activities – 3 of 4 home pages

Site A – A blend of low and high ropes activities… The word high was mentioned twice on the home page.

Site C – …the high course adds the challenge of elevation and allows individuals to push themselves beyond their comfort zone and build self-confidence. While the centerpiece of the high course is the 50-foot wooden climbing tower, the majority of the course features a mulititude [*sic*] of cables and ropes - The word high was mentioned 12 times on the home page.

Site D – The word high was used as a hypertext link to high ropes elements information.

Web Theme 8 – Low element activities – 3 of 4 home pages

Site A – A blend of low and high ropes activities…

Site C – A mental challenge , [*sic*] the low ropes course emphasizes team-building and group cohesion.

Site D – The word low was used as a hypertext link to low elements information.

Web Theme 9 – Facilitator capabilities – 3 of 4 home pages

Site B – a hypertext link to "Our Staff"

Site C – Trained facilitators lead each group…

Site D –hypertext links were provided for "Facilitator Training" and Facilitator Testing.

Web Theme 10 – Educational / learning opportunities – 3 of 4 home pages

Site A – …approaches education, communication, leadership, development, conflict resolution, and team building in an engaging, active, challenging, and fun environment. Transference of experience to real-life situations.

Site B – This course is conducted in a "learn by doing" rather than lecture format. We strive to maintain a fun and safe learning environment throughout the day.

Site D – …for potential growth through experiential education in the following areas…

Program Content Cultural Themes from the AE Print Publications

Five program content cultural themes emerged from the AE publications evaluation. The following information lists the abstracted theme heading, the coded

publication number and the specific documentation which supports the individual cultural theme. To be included in the pilot study, the AE publication cultural themes needed to be mentioned in at least three of the publications.

Publication Theme 1 – Processing – 4 of 4 publications

Pub A – "Processing." This means helping the group members work well together on an interpersonal level. This is often the most important part of the facilitator's role.

Pub B – Staff implement reflective processes into their participants' work to deepen the experiential process. Programs without reflection as a part of their process are not using experiential methodologies.

Pub C – Processing is an activity that is used to encourage individuals to reflect, describe, analyze, and communicate what they have recently experienced ... It is the cornerstone of an effective adventure-based learning experience.

Pub D – Facilitators can enhance transfer of learning by conducting processing activities after challenge experiences. ...states that a lack of transfer in adventure experiences the activity may become virtually meaningless.

Publication Theme 2 – Professional facilitator skills – 4 of 4 publications

Pub A – Being a facilitator does not mean that you are qualified to be a psychotherapist, either with a group of people or in a one-to-one situation...Please be careful. This is probably the strongest test of your own values--whether you reflect back to the group their need to take responsibility

Pub B – Professionals promote and conduct activities within the level of their competence. Staff conduct experiences with an appropriate level of competence based on education, training, supervision, experience and practice.

Pub C – Be clear about your role as a leader: to ensure safety, instruct, facilitate, observe, raise issues, and clarify.

Pub D – Facilitators should not prioritize their personal values and goals more than the participants, the learning opportunities may be minimized.

Publication Theme 3 – Concern for individual participant – 4 of 4 publications

Pub A – What may have worked for some of the participants, may not be successful for each group member…each success is temporal and situational.

Pub B – Individual emphasis…based on the participant's particular needs and abilities. The program content and the staff do not force participants into experiences

Pub C – Simultaneously you need to be clear about what it is not: to force people to change, to judge them, and to lay your own values on them.

Pub D – Facilitators need to be aware of participant needs and goals so they don't create negative experiences based on what we think people should gain from the challenge activity and processing sessions.

Publication Theme 4 – Group orientation – 4 of 4 publications

Pub A – A facilitator can fulfill different kinds of needs in working with a group. This is determined by the group's purpose for coming together.

Pub B – that this can be achieved in a number of ways, including… group discussions

Pub C – Be clear about where a group can have input and make choices…

Pub D – …that we all operate under certain assumptions… that our assumptions won't be realistic for adventure groups.

Publication Theme 5 – Experiential learning – 3 of 4 publications

Pub B – part of the experiential learning cycle…to enhance the internalization of change for the participant.

Pub C – While experiential learning models vary from theorist to theorist …specific experiences need to be planned and implemented. The structured experience sets the stage for learning.

Pub D – In order to have a productive learning experience…

Phase II Matrix Analysis of Abstracted AE Home Page and Publication Pilot Data

I abstracted the program content cultural themes from the AE home pages and AE publication pilot data to present a table matrix and scatter plot analysis format that will be used in Phases II and III. To facilitate a transition from Phase I descriptive data, I have created table matrices to illustrate the number of home pages that included each AE home page program content cultural theme and the home pages that included specific AE publication program content cultural themes. Table 3.1, illustrates the AE home page program content cultural themes included on the home pages and Table 3.2 illustrates the home pages that included AE publication program content cultural themes.

A scatter plot has been used in Figure 3.3, to illustrate the number of web page program content culture themes and publication program content culture themes that

Table 3.1

Adventure Education Web Page Program Content Cultural Themes Identified on the Pilot Study Home Pages

	AE organization web page that included cultural theme on web page			
AE home page program content cultural themes	**Site A**	**Site B**	**Site C**	**Site D**
1. Challenge by choice or challenge	yes	yes	yes	yes
2. Group work / individual emphasis	yes	yes	yes	yes
3. AE activity image	yes	yes	yes	
4. Trust	yes	yes		yes
5. Fun	yes	yes	yes	
6. Safety		yes	yes	yes
7. High element activity text	yes		yes	yes
8. Low element activity text	yes		yes	yes
9. Facilitator capabilities		yes	yes	yes
10. Educational / learning	yes	yes		yes

Table 3.2

Adventure Education Publication Program Content Cultural Themes Identified on the Pilot Study Home Pages

	Web page that included the AE publication program content cultural theme			
AE publication program content cultural themes	**Site A**	**Site B**	**Site C**	**Site D**
1. Processing activities	yes			
2. Professional facilitators				
3. Experiential education				yes
4. Concern for individual participants	yes	yes		
5. Group orientation	yes	yes	yes	yes

were represented on each pilot study home page. The "alpha characters" within the scatter plot indicate the specific code for each individual web page. For example: Web page Site "C" included eight AE home page program content cultural themes and one of

the AE publication program content cultural themes from the Phase I analysis. Web pages Sites "B" & "D" each included eight AE home page program content cultural themes and two of the AE publication program content cultural themes. Web page Site "A" included eight AE home page program content cultural themes and three of the AE publication program content cultural themes from the Phase I analysis. It is coincidental that the web pages each contained eight AE home page program content cultural themes.

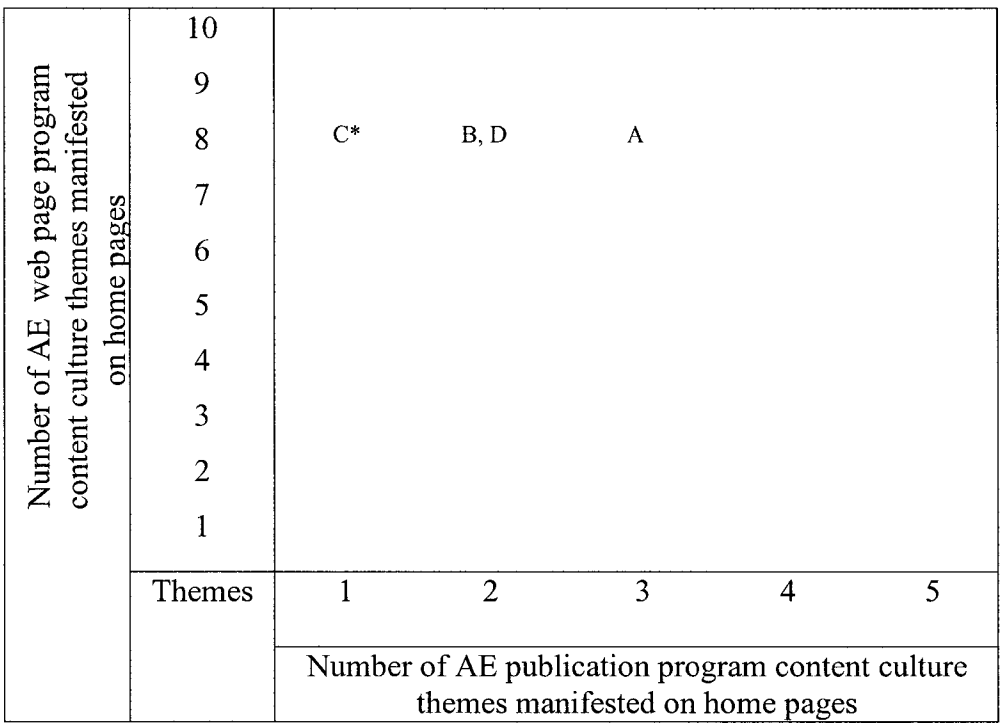


Figure 3.3. AE cultural fit matrix of web pages (* Indicates the coded home page designation).

Reflectivity and Potential Researcher Bias

It was imperative to avoid biasing the data analysis based on previous site and publication evaluation as well as my experience with adventure education and web site design. After the pilot study, it was also critical to avoid limiting the potential for

additional cultural themes to emerge because of researcher bias. As I reviewed the remaining home pages and publications, I needed to avoid a reflective process that would reinforce a specific perspective and overlook new and emergent categories of data. As Denscombe (1999) noted, the relationship between the researcher and the study environment would eliminate the prospect of a bias free objective process. While my academic research and practical experience may have been beneficial from an emic perspective, it would have become a bias and detriment if I had restricted the data gathering and analysis to a limited number of topics. I needed to be constantly aware that my selection of this research topic and process had been influenced by my prior association with adventure education, web site design and academic research.

The emphasis was to approach each home page, printed publication and electronic document with a fresh perspective and as an independent entity. Although innovative categories and themes might not have continually emerged, evaluation needed to be based upon what information was presented in the context of the specific home page or publication. To minimize bias, I reviewed each home page and publication multiple times to absorb and comprehend the subtleties of the information. It was critical to attempt to identify and support prior themes, but to avoid focusing on previously identified themes that were absent from home pages. An important concept to emphasize is that, during Phase I, the sites were not being evaluated from a dichotomous (e.g. good/bad) perspective. As a method of trustworthiness, I invited my advisor(s) and/or other individuals to review the data and research information throughout the evaluation process to contrast or confirm my findings.

Benefits of the Study

The results of this study were expected to produce a conceptual model to illustrate the interconnectedness of organizational culture media types and cultural transmission, a research process to evaluate multi-site, multimedia cultural themes, and a process to evaluate the organizational culture themes relative to distinct attributes. The research processes would be applicable to any organization that projects their culture via the WWW and other media types.

CHAPTER FOUR: RESULTS

Introduction

The results of this research are presented in descriptive, analytic and interpretive formats, which provide the three basic ingredients of qualitative research (Wolcott, 1994). This methodology supported the three phase research process model described in Figure 3.2 of the methods chapter. The goal of chapter 4 was to answer the following research questions.

1. What are the adventure education program content cultural themes and web site design cultural themes projected on AE home pages and in the print publication literature?

2. What are the similarities among the AE home pages based on the inclusion of AE home page program content cultural themes and AE publication program content cultural themes?

3. What are the similarities among the AE home pages based on the inclusion of AE home page design cultural themes and WWW publication web page design cultural themes?

4. What are the similarities among the AE home pages based on the inclusion of AE home page program content cultural themes and the AE home page design culture themes?

The first section of the chapter describes the major cultural themes from the four information sources in figure 4.1. The emphasis was to answer the first research question:

What are the adventure education program content cultural themes and web site design cultural themes projected on AE home pages and in the print publication literature? Although the model implied a potential interconnectedness among the four thematic areas, the focus of this research was to describe, analyze and interpret similarities of the cultural themes. The research was not meant to imply causality between the publication themes and the AE home page cultural themes.

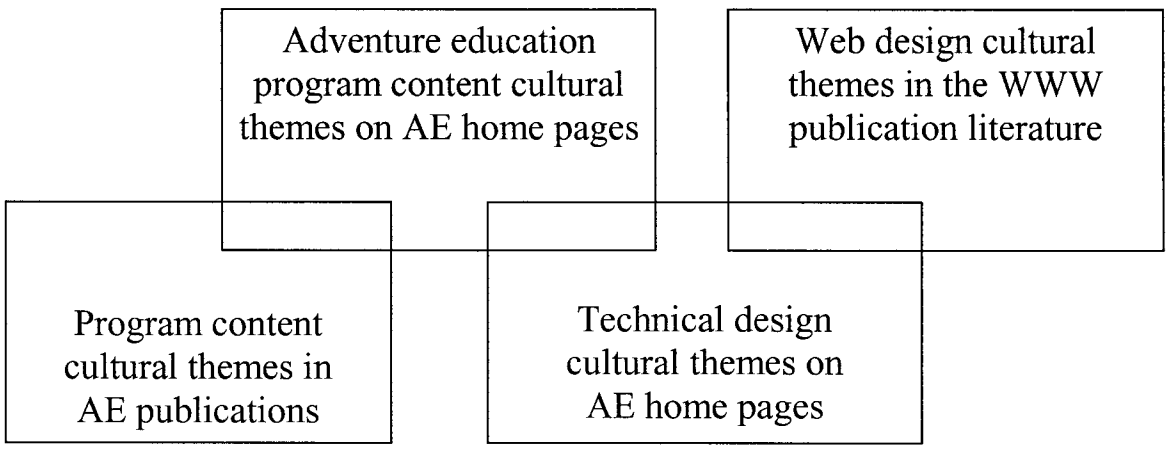


Figure 4.1. AE program content and technical design cultural themes.

The emphasis of the second section was to analyze the AE home pages relative to the information that was included on the web pages. The purpose was to analyze the degree of similarities among the: (a) program content of the AE home pages and AE publications, (b) web page design themes from the AE home pages and the WWW publication web page design literature, and (c) AE program content information and AE home page design themes. Throughout the results and discussion chapters, "alpha" characters were used to identify the AE web home pages and "numerics" designated the specific AE and web design publications. The following section identifies and describes the adventure education and web page design cultural themes.

Descriptive Cultural Themes

Concepts that emerged from inductive qualitative analysis of AE publications', on AE web home pages, AE home page design and WWW page design publications are presented in the descriptive section. The cultural theme descriptions are presented in the order (from left to right) that they are illustrated in figure 4.1. The order of presentation was meant to develop a process of continuity, but does not imply categorical importance or priority. Since the intent of the descriptive section was to provide an overview of cultural themes, a limited number of descriptive qualitative examples were presented to support the cultural themes from the each thematic category.

Adventure Education Publication Program Content Cultural Themes

There were five themes that emerged from the adventure education publication literature and each of the themes occurred in all of the publications. The program concept themes were well supported in the literature and have been developed over a period of more than 25 years. Each publication was identified with a numeric ID generated from the bibliographic database program that contained the original data. A list of the AE publications has been provided in the Appendix. The five emergent concepts emphasized (a) the importance of processing the adventure activity, (b) focusing on the goals of experiential education, (c) providing professional facilitators, (d) developing a group orientation, and (e) prioritizing the needs of individual participants. The AE publication cultural themes have been described more thoroughly in the next section.

The importance of processing the adventure activities

The AE publications identified activity processing as a critical aspect of adventure education. Processing was also referred to as debriefing or reflecting. Processing was

described as a learning situation for the group to discuss what happened during the activity sessions. One of the goals of processing is the transference of the learning process to the participants' daily activities. Processing may also be used in therapeutic, team building or specific group development situations. Examples from the AE publications included:

AE publication 277 - "Processing" This means helping the group members work well together on an interpersonal level. This is often the most important part of the facilitator's role. (p. 32)

AE publication 281 - Processing is an activity that is used to encourage individuals to reflect, describe, analyze, and communicate what they have recently experienced ... It is the cornerstone of an effective adventure-based learning experience. (p. 1)

AE publication 284 - Debriefing challenge activities appears to be a critical ingredient in the Challenge Education process. By merely facilitating a group through an activity and then immediately moving to another activity makes the program recreational and diversionary. Challenge Education facilitators concur that group discussion needs to follow most activities. (p. 156)

Focusing on the goals of experiential learning

In the AE publications, experiential education was described as reversing the order of traditional classroom learning by beginning with an activity and closing with the education component. The emphasis was on active problem solving to empower participants to utilize cognitive knowledge and practical experience to deal with a challenge situation. After the activity, the group should discuss the problem solving and learning process to identify the theory that guided the group behavior. The literature

noted that active student/participant involvement is critical to the adventure education process. The following are descriptive examples of the AE publication experiential education cultural themes:

AE publication 275 - Experiential learning, however, reverses the four-step sequence of information assimilation, moving from substance to structure. It begins when the learner acts, then observes the causes and effects of the action. (p. 15)

AE publication 284 - Challenge education is one variety of experiential education. Experiential education implies that the student is actively involved in the learning sequence. The tradition of learning by experience is often tied to the educational theory of John Dewey. (p. 41)

AE publication 287 - If individuals are going call [*sic*] themselves adventure educators, then they should provide programs which offer educational value. ...adventure educators should be aware that "how they teach" can have just as much influence as "what they teach." (p. 9)

Providing professional trained facilitators

In the AE literature, professional facilitator skill was identified as a prerequisite to successful AE sessions. Facilitators should be skilled in group development, creating activity plans, understanding group dynamics. They should also have interpersonal training and be capable of involving the participants in planning the AE sessions. A professional facilitator needs a conscious understanding of his/her limitations and the ability to prioritize the values and judgment of each participant. Professional facilitation was described in the AE literature as:

AE publication 277 - Being a facilitator does not mean that you are qualified to be a psychotherapist, either with a group of people or in a one-to-one situation... Please be careful. This is probably the strongest test of your own values... (p. 5)

AE publication 281 - Be clear about your role as a leader: to ensure safety, instruct, facilitate, observe, raise issues, and clarify. Simultaneously [*sic*] you need to be clear about what it is not: to force people to change, to judge them, and to lay your own values on them. (p. 15)

AE publication 284 - Facilitators need to have sufficient knowledge and experience on the wide range of leadership approaches, including situation, trait, behavior, and shared function as well as leadership styles... (p. 153)

Developing a group orientation

According to what was found in the AE publications, AE staff need to focus on group goals and concerns to create a positive group orientation. The activities must fit the needs of the group and fulfill the purpose of the group's AE session. Objectives of group work are to improve member communication, increase group cohesion, develop trust and resolve group conflicts. The facilitator needs to design the sessions for each specific group and avoid using a template approach to minimize planning and implementation time. Descriptions of group orientation from the AE publications were:

AE publication 275 - The following are some of the many affective interpersonal (i.e. social and group) outcomes...enhanced cooperation, more effective communication skills, greater trust in others, increased sharing of decision making, new ways to resolve conflicts, improved problem-solving skills, enhanced leadership skills. (p. 20)

AE publication 277 - ...a facilitator's job is to focus on how well people work together. The purpose of this focus is to insure that members of a group can accomplish their goals for the meeting. (p. 2) A facilitator can fulfill different kinds of needs in working with a group. This is determined by the group's purpose for coming together and by what is expected of the individual who will act as facilitator. (p. 3)

AE publication 287 - ...and they work together in groups to overcome difficult tasks, which require cooperation. This process often results in a display of camaraderie and compassion. (p. 9)

Prioritize the needs and concerns of each participant

Each participant's needs and concerns must be considered during the AE sessions. Individuals should be encouraged to be responsible for their behavior and to be actively involved in the learning process. It is also critical to prevent individuals from dominating others or creating a negative learning environment. Personal growth and individual opportunity were identified as two critical aspects of adventure education. Examples in the AE publications that focused on individuals were:

AE publication 277 - Each member has something to contribute to the group and is provided a fair opportunity to do so (p. 2) But you can try to keep one person of a small group of people from dominating... (p. 31)

AE publication 284 - ...that for some clients a trust fall, or a drop over a cliff on a belay line, may be relatively easy, whereas eye contact, or the touching of another person's face might be filled with fear and anxiety. (p. 153) ...it is essential that each participant has an opportunity to increase or at least be on the edge of their own adventure threshold. (p. 154)

AE publication 287 - If adventure education's definition of personal growth includes a combination of emotional, intellectual, spiritual, and physical development, then programs should allow students and opportunity to grow on more than just one level. Yes, you'll learn some outdoor skills but you'll also learn a lot about yourself (p. 7)

Adventure Education Publication Program Content Cultural Theme Summary

The five previous program content cultural themes were considered primary to successful adventure education sessions. The concepts have been taught in post-secondary academic classrooms and organizational training situations to develop and improve facilitator skills and increase positive outcomes from the AE experiences. The next section describes the program content information that emerged from inductive analysis of 25 adventure education home pages.

Adventure Education Home Page Program Content Cultural Themes

Using Altheide's (1996) approach to document analysis, the web page data was reviewed approximately 25 times to determine the cultural themes. Since 13 home pages represented a majority, a concept was included as an AE home page program content themes standard if it had been adopted by the majority of the organizations.

Ten program content cultural themes emerged from the review of 25 AE home pages while the presentation of the specific concepts varied in numerical amounts and formatting styles. There were more than 50 pages of AE program content data and two examples are included to support each specific cultural theme. The emergent information focused on (a) the opportunity for challenge, (b) ropes, (c) team orientation, (d) high elements (text/pictures), (e) low elements (text/pictures), (f) problem solving, (g) safety, (h) physical activity, (i) fun, and (j) who can participate in the adventure activities.

The AE program content text was electronically copied directly from the downloaded WWW home pages in an attempt to preserve a degree of the original web page format. This method allows the reader to review the information most similar to the original context and appreciate the emphasis the organizations placed on the program content themes. There were also supporting pictures of various activities that weren't included in the AE home page program content section. I have included text descriptions that supported the applicable high and low element pictures.

Challenge

Challenge or some derivative of the word appeared on 23 of the home pages. The concept appeared as few as one time to a maximum of 23 entries on individual home pages. Challenge was used in the organization name, to emphasize the AE philosophy of "challenge by choice," in conjunction with high elements, ropes, low elements and with other concepts to describe the course activities. Challenge was also one of the terms that appeared highlighted, bolded, in an increased font size, and italicized for emphasis. Examples of the use of challenge on AE home pages are:

Home page A - **Challenge Ropes Course** - ...and challenge them to solve it... ("Challenge By Choice"). ...Challenge Experience:

Home page P - ...***Challenge*** Low Ropes Course

The...Challenge is held at the... Challenge Course in... The low ropes course and other challenging elements were made possible through

What is the...Challenge? The...Challenge is an educational adventure that leads participants to exciting discoveries about themselves and their roles as team members. Using a

challenge wall and other low-rope elements, facilitators tailor each challenge course to the established goals of a participating group.

Why Take the Challenge?

How do I take the...Challenge? To schedule the...Challenge... After you return the form to the...you will be contacted by the...Challenge Staff

Who Can Use the...Challenge Course? Many student organizations have taken the...Challenge,

Where is the...Challenge Course Located? Directions will be provided in your confirmation packet after your challenge date is scheduled.

All groups desiring to take the...Challenge must do so for a minimum of 2 hours. ***Please contact the...Challenge Staff at***

Who Leads the...Challenge?

In addition, the...Challenge Course is always looking for... If you are interested in joining the Challenge Team **...Challenge** (underlined text is a hypertext link)

Send a message to, or request information from, the ...Challenge Staff. (underlined text is a hypertext link)

Ropes

In many instances, the "ropes" theme appeared in conjunction with challenge, high elements and low elements. Though it might have been considered as an element of another theme or as a sub-theme, it was emphasized enough to be a prevalent AE home page program content cultural theme. Similar to challenge, the word was highlighted through the use of bold, italics, font style and size. The term "ropes" was identified between one and 13 times on various home pages and was imbedded in graphics and as

an element within hypertext links. The following examples illustrate the use of the ropes program content cultural themes on the AE web home pages:

Home page B - R.O.P.E.S. (in one graphics - hypertext links)

ROPES as a graphic The...**R.O.P.E.S. Course... What is a R.O.P.E.S Course?** The course is made up of various cables, poles, and ropes that are anywhere from one foot off of the ground to 35 feet in the air. Anybody who is interested can get a group together to attend the R.O.P.E.S. Course. Call the R.O.P.E.S Course...

Home page L - ...cutting edge high ropes course

This new classroom will take the form of a high challenge ropes course...In addition to a circuit high challenge ropes course...

But for those of you who still wonder, "what is a ropes course?" well in a nut shell, a challenge ropes course is a series of individual and group physical challenges that require a combination of teamwork skills and individual commitment. Challenge ropes courses are made of aircraft cables, nylon ropes, and lumber. They are normally identified as "low" or "high" challenge ropes courses. A low challenge ropes course also includes "initiative" activities that utilize the resources of the group to solve a problem together. "High" challenge ropes course elements are those that require a belay system. The belay system uses climbing ropes or short protection tethers to provide protection for anyone climbing higher than they can be safely spotted from the ground.

Customized workshops will be available to any group that is interested in using a powerful and fun developmental tool like the...challenge ropes course.

For further information regarding the construction or the application of the new challenge ropes course...

Team orientation

The third theme identified was team / teamwork / team building. Although team might be associated with group, I identified team orientation as a distinct AE home page

program content theme. A group may be individuals who have gathered together, but do not have a common goal. A team connotes a number of individuals with a specific goal. The "team" concept was included on 21 of the AE organization home pages, but it wasn't excessively repeated on any one of the home pages. Similar to previous cultural themes, "team" was emphasized by utilizing bold, italics, and different font sizes. "Team" was included in organization titles and in conjunction with the "challenge," theme, group-oriented activities, leadership, games, low ropes elements and other aspects on the adventure education web pages. Examples of team as a cultural theme were:

Home page J - **TEAM UP FOR GROWTH! ...and an introduction to teambuilding,**

If your goal is ongoing and progressive team building,... ...and that successful teams evolve by purposefully and continually working on each component of the human growth equation.

Home page W - ***"A group becomes a team when each member is sure enough of himself and his contribution to praise the skills of others." (Norman G. Shindle)***

Success in meeting these challenge activities does not depend on physical strength, but rather on your team's ability to creatively solve the tasks at hand.

Develop teamwork

The Adventure Challenge Course has made a name for itself [*sic*] **by providing...and team building workshops for many years. Any group with a**

positive intent to improve relationships and increase team performance will benefit from these programs.

Low Elements

Textual information and pictures of low element activities appeared on 21 web pages. A maximum of ten text references to low elements were noted on one page and another organization's home page had ten small pictures of low elements that were hypertext links to larger pictures. Although the pictures were not included in this dissertation, I have tried to describe the size and physical characteristics of the activities and the positions of the individuals in the pictures. In some situations, low elements' concepts were used in conjunction with high elements, ropes and group activities. The low element information was used in organizational titles, as hypertext links, to explain activities, and to identify specific group course fees. Examples of low elements themes were:

Home page C - ...the group involved moves through a series of low element initiatives that foster problem solving, trust, and cooperation. **Low Rope Elements.** The...facility is comprised of several utility poles connected with cables. Low elements are just inches off the ground and are set up to provide groups with intriguing problems requiring some physical effort but primarily the collective wit and cohesiveness of group members.

In a 3" x 2" picture, five persons in a line were holding onto each other while standing on wires approximately one foot off the ground between short telephone poles.

Home page M - **Providing both high and low ropes programs.**

A 2½" x 4" picture showed two individuals standing approximately four feet across from each other on two separate cables about one foot off the ground. The two

persons were holding each others hands and there were two persons between them with their arms outstretched and hands connected. A third person was standing near one of the persons on the cable and to the left side of the picture.

High Elements

High elements information was identified on 20 home pages and was mentioned between one and 11 times on various pages. The high element concept was associated with individual accomplishment, ropes, challenge, risk taking and low elements. The theme appeared in bold, italics, colored and different size fonts. It also was used as a hypertext link to additional high element web page information. In addition to high element textual references, pictures were included on 14 AE home pages that illustrated the high element activities. Initially, I considered using the high element pictures as a separate cultural theme, but I decided the pictures were similar to using various font styles and sizes as a method to emphasize the activity. Similar to the low elements, I described the size and physical characteristics of the activities and physical locations of the individuals in the pictures. The following examples of high elements themes were copied from the AE home pages.

Home page C - ...tackle the culminating experience, the high ropes elements.

This popular one-unit class meets one day on the ropes course for a complete experience in teamwork, trust, and high ropes. (All high elements are challenge-by-choice.)

A 2" x 3" picture displayed a person holding a rope while standing on a cable high in the air.

A 2" x 3" picture showed an individual holding two ropes attached to a wire above her/his head while walking sidewise across a cable.

A 2" x 3" picture exhibited a person sitting on a platform near the top of a telephone pole structure. There were two persons standing on a platform behind the individual.

A 3" x 2" picture showed an individual hanging by the hands and knees on a horizontal wood beam of an enlarged wood and wire ladder structure with a second person sitting on the beam to the right of the hanging individual.

Home page G - Composed of a low course and a high course... **High & Low Challenges**

...the **high course** adds the challenge of elevation and allows individuals to push themselves beyond their comfort zone and build self-confidence. While the centerpiece of the high course is the 50-foot wooden climbing tower, the majority of the course features a mulititude [*sic*] of cables and ropes. The course is designed to allow participants to climb, balance, swing, hang, jump, and walk high up in the air. Unlike the low course, the high course does not feature any group problem-solving activities. It focuses more on the individual.

Only one group can use the high course at any given time. We suggest that your group have at least 1/2 day of low course before attempting the high course.

Only one group can use the high course at any given time. We suggest that your group have at least 1/2 day of low course before attempting the high course.

A 3½" x 4 ½" picture displayed three persons standing on platforms attached to a wooden structure. There were numerous cables attached to the tower going in different directions. It wasn't clear if the individuals were attached to the structure with safety cables. There was another individual, in the background, standing on a cable and touching a telephone pole. It appeared that the individual was attached to another cable with a safety rope.

Problem Solving

Problem solving was included on 19 home pages, but was not used more than one time on any of the home pages. There were minor differences in the font styles, but there were no major increases in font size. Problem solving was used in conjunction with games, initiatives, and low elements. The theme also was associated with challenge, leadership, teamwork, communication skills, trust, overcoming obstacles, utilizing group resources, physical and mental activities. The majority of the text associated with problem solving was normal font style and size and the concept was not used excessively on the AE home pages. The following were examples of problem solving information.

Home page E - The biggest challenge today's leaders face is developing the kind of teamwork that fosters innovative problem-solving...

Home page I - ...with a series of problem solving activities requiring cooperation. The real challenge lies in communicating with fellow participants to figure out a solution and then actively solving the problem.

Who Can Participate

Participation was mentioned on 16 web pages. A variety of group types (youth, scouts, athletic, business, faculty, youth at risk, etc.) and group sizes (10 – 18 persons, 12 – 48 persons, arrange for larger groups, etc) were encouraged to participate. In two separate instances, "a willingness to try" or be "part of a group" was indicated as a prerequisite for participating. Although the theme was emphasized with a slightly larger or bold font on a number of the pages, the majority of the participation information font styles blended with the contiguous text. Examples of information from specific home pages were:

Home page A - Nearly anyone can participate to her/his level of ability and willingness to try.

Home page K - Who Has Used It (the underlined information is a hypertext link) Whether it be corporate groups, youth groups, college student leaders, community/civic leaders,... (the underlined information is a hypertext link) Click here to view a list of those who have used our course (the underlined information is a hypertext link)

Fun

Having fun was included on 15 of the AE home pages, but was referred to only once on each page. In all but one instance, the word "fun" was in a normal font size and style and coalesced with the adjacent text. The theme was associated with safe learning, excitement, recreation group goals, physical activity, as a developmental tool, taking risks and a number of other concepts. Instances where fun was used in home pages were:

Home page B - ...**Course** provides a fun, challenging, and interactive experience for groups...

Home page W - **It is a veritable playground where fun and excitement meet challenge and commitment.**

...individuals and groups have the opportunity to:... Have Fun!

Safety

Safety was identified as an important facet of adventure education on 15 AE home pages. Safety was related to facilitator's concerns, risk taking, a course priority, low elements, as an integral part of course guidelines and the necessity for the AE facility to meet safety standards. There were no unique font styles or sizes associated with the

safety theme and it was not excessively repeated on the AE home pages. Examples of the safety cultural theme were:

Home page J **- The course is one of few...facilities meeting the national safety and construction standards established by the Association of Challenge Course Technology (ACCT)...** ...facilitator education and safety training...

Home page S - ...utilizes a variety of elements and obstacles to present challenges to groups and individuals in a supportive and safe environment. ...is designed to provide a safe experiential learning environment. **Safety:** Physical and emotional safety are a top priority of the... All equipment and procedures conform to industry standards. it [*sic*] is important to note that the perceived risk is far greater than the actual risk. Even so, to maximize safety and the potential for learning, all...initiatives and activities are based on a "Challenge by Choice" philosophy.

Physical Activity

Physical activity was identified on 13 of the home pages. The information ranged from minimal physical effort to a suggestion for the potential participants to consult a physician prior to attending an AE session. The topic was related to mental and emotional safety, the opportunity for challenge, low elements, individual and group challenges, as essential for success, group cooperation, physical fitness, potential risks, dangerous and pre-activity discussions. Similar to the safety, physical activity wasn't distinguished by major changes in font style or size. There also was minimum repetition regarding physical activity on the AE home pages. Examples from the web pages were:

Home page F - The program challenges each participant mentally and physically... Since the high elements offer a mental and physical challenge... These activities and trips have risks associated with them and are potentially dangerous. you [*sic*] may suffer physical and/or mental injury from using

equipment in an outdoor setting. It is strongly recommended that all participants consult a physician and/or have a physical exam prior to participation.

Home page L - ...a challenge ropes course is a series of individual and group physical challenges...

Adventure Education Home Page Program Content Cultural Theme Summary

The adventure education web page program content cultural themes were well documented on the 25 AE home pages. Some of the concepts were highlighted with a variety of font styles and sizes. In addition to bold, italics, and larger font sizes, repetition and pictures added emphasis to the specific themes. The following section identifies the adventure education web page design concepts that were utilized on the AE organization home pages.

Adventure Education Home Page Design Cultural Themes

Eleven AE home page design themes emerged from the review of the 25 AE home pages. Similar to the previous section, if a web page design concept appeared on 13 or more home pages it was included as an AE home page design cultural theme. There were 11 themes divided into three main categories with common ideas identified within each group. The categories were *hypertext links* that included (a) the number of links on the page, (b) whether the links provided non AE information, (c) if there was a link to the current home page, (d) the location of the hypertext links and (e) the number of technical and graphic link styles, *screen display styles* such as, (f) inclusion of one or more pictures on the home page, (g) the use of color or texture in all or part of the home page, (h) partial use of the video screen to display information, and (i) utilizing a variety of font

styles and *organizational contact concepts* related to (j) email/phone information and (k) location of contact information on the home pages. The following information describes the AE home page design themes.

Hypertext links - The following five AE home page design cultural themes were associated with hypertext links.

Number of hypertext links on the AE home page - At least 18 hypertext links were included on more than half of the home pages with an average of 19 links on each page. It seemed as if maximizing the number of hypertext links was a criterion for designing AE home pages.

Majority of hypertext links provide non-AE-related information – On 22 home pages, more than 50% of the links didn't provide additional information related to the AE organization or activities. The links were directed to student organizations, school home pages, other recreational activities, weather, web page usage statistics and a variety of other information. A number of the AE home pages lacked any hypertext links to additional adventure education information.

Link to current home page - It was a popular practice to have a hypertext link on the home page that re-opened the current home page. Although this type of link didn't offer the viewer any new information, they were included on the majority of the home pages.

Link in more than one location - It was unusual for a home page to have a number of hypertext links in only one general location on the page. The standard practice was to have a number of links in two or more primary sections of the page such as: top and bottom area, top and left sections, left and bottom locations, top, left and bottom

positions, etc. This hypertext link location style occurred on pages regardless if they fit on one monitor screen or were longer than one monitor screen.

More than one style of hypertext link - There were varied hypertext link styles on 13 home pages. Underlining the hypertext links (the traditional method) was used in a combination with other link styles. Additional link styles included: the hypertext link or link background changing color when the cursor was over the link, the link was a graphic image/picture, or a series of links were designed as an image map.

Screen display styles - The following four AE home page design cultural themes were associated with screen display styles.

One or more pictures on page - At least one or more pictures were included on 20 home pages. The majority of the pictures were related to high and low elements, but no specific AE activity overwhelmingly dominated the picture theme. The pictures ranged in size from one square inch to four square inches. Pictures included high elements, low elements and a generic outdoor scene that changed with each download of the specific home page. Although the pictures were in a variety of locations on the home pages, there wasn't a dominant location on a majority of the pages.

Background color or texture - Fifteen organizations utilized a variety of background colors and screen textures to highlight different areas on the home page. In some instances, the entire page background was a non-white color and/or texture while other pages used background color and/or texture to highlight specific sections of the AE home page. A number of pages integrated pictures with graphic backgrounds in specific page sections and one home page utilized a picture image as a background for the complete page.

Partial screen width - Designing the web page to limit the percent of screen used for information display was a popular theme on 13 home pages. A number of the pages left two or more inches of screen blank on the left and right side of the screen page and other designers restricted the information display to the left two-thirds section of the screen page. Some of the AE home pages appeared crowded on the partial screens and other pages extended beyond one screen length to include the home page information.

Variety of font styles - All of the 25 AE organization home pages used more than one font style. Bold, italics, font size, colored font and a variety of font styles were used to identify page areas, emphasize hypertext links and emphasize the organization identity.

Contact information - The following two AE home page design cultural themes were associated with organization contact information.

Email and phone contact capability - Information to contact the AE organization by email and phone was included on 13 of the home pages. A number of the home pages had either phone or email contact information, but the standard for the majority of the AE organizations was to have both email and phone capabilities on the home page.

Location of contact information - The majority of the home pages located the contact information at the bottom section of the page. Although the left sidebar, top sections, and using multiple sections were popular, only the bottom section was preferred by a majority of the AE home page designers.

Adventure Education Home Page Design Cultural Theme Summary

The AE home page design cultural themes emerged after numerous reviews of the AE home pages. Although the themes focused on three main categories, the 11 web page design cultural themes were distinct and may affect viewer behavior during the home

page download process or when an individual is reviewing the web site. The following section identifies the WWW publication web page design themes and presents examples from the related literature.

WWW Publication Web Page Design Cultural Themes

Eight themes were identified within nine WWW publications that focused on web page design. The themes were (a) web page download time, (b) appropriate text / background contrast, (c) the ability to scan the page for information, (d) proper hypertext link operation, (e) ability to return to the AE home page, (f) necessity for consistent hypertext navigation style, (g) correct spelling and grammar, and (h) availability of the page creation date or update information. The following information describes each of the WWW publication web page design concepts.

Web page download time

Web page download time was cited as a critical web page design theme. Waiting to long for a web page to download was noted as the major complaint viewers have with web pages. If viewers are forced to wait for long downloads, they may select an available hypertext link on the partially downloaded web page, or simply cancel the download. The following examples were descriptions of web page design cultural theme information from WWW design publications.

Web design publication 103 – Web resources can take a long time to arrive. Waiting time is one of the most frequent complaints made by Web users (p. 100)

Web design publication 107 – If you ask most people how long they'll wait for a Web page to download, their answer is usually in seconds, instead [*sic*] minutes. Usability

experts agree you must grab the user's attention within the first five seconds she's visiting your site or you risk losing her. (p. 80)

Web design publication 115 – Plan your pages so that they are accessible at a variety of connection speeds. If your pages download slowly because they contain large, detailed graphics or complicated animations, your users will leave before they ever see your content. (p. 28)

Text/background contrast

According to the web page design publications, the designers should not overwhelm or confuse the viewer with background color, texture, pictures or animation. If the page is not "readable" the viewer will leave the page and probably not return. Good contrast between the text and background should be present. Also, animation and marquees that continually reload or refresh information should be limited. Initially, the animation or movement may attract attention, but eventually it becomes a distraction and annoyance. Some of text / background web page design publication supporting cultural themes were:

Web design publication 106 – Readability should be your main consideration when choosing a background graphic. Many sites have beautiful backgrounds that make the pages unreadable and thus annoying. Good contrast between the text and the background is the safest way to go. (p. 206)

Web design publication 113 – Animation makes it considerably harder for users to read or skim. Repeatedly, we saw users fight the distraction of the movement in order to concentrate on the content. Users first tried to scroll the animation off the page, and when

they couldn't, actually covered it up with their hands so they could read the rest of the text. (p. 89)

Web design publication 115 –The incorrect use of color in many Web sites creates unreadable text or navigation confusion for the user. Use color judiciously to communicate and to guide the reader, or to create branded areas of your site. (p. 171)

Scanability / ability to scan home page for information

Being able to scan home page information was referred to as a design standard. Viewers should not have to read through sentences and paragraphs to locate important information. Home pages should be like a table of contents. Information should be concise and succinct. Links should be provided to more in-depth pages or downloadable files. Too many sentences or paragraphs may overwhelm the viewer. Designers should use hypertext links on the home page to guide the viewer to necessary resources. The following were examples of "scanability" web page design statements from the WWW publications.

Web design publication 103 – Provide a clear table of contents or orientation page. Write succinct but lucid descriptions so that a reader has a clear sense of what awaits them in our site. Make each entry a hot link to that section. (p. 274)

Web design publication 106 – Avoid very long lines of text – never let your text spread out across the entire browser window. Long lines make it difficult for the reader's eye to find the beginning of the next line, especially on a screen. On the screen, shorter lines are better than longer line, but avoid very short lines of text. We read groups of words... (p. 220)

Web design publication 154 – The idea behind hypertext is that instead of reading text in a rigid, linear structure (such as a book), you can skip easily from one point to another. You can get more information, go back, jump to other topics, and navigate through the text based on what interests you at the time. (p. 4)

All links work properly

The web page design publications emphasized that hypertext links should be tested on an ongoing basis and described software packages available online to use for testing the links. The test should be completed more often if the web page includes links to external resources. The publications stated that it is extremely irritating to find links that don't lead to the implied information and there is no reason to have links that consistently fail.

Web design publication 107 – Do all links work? Run your pages through an online validator, such as the one offered by the W3C at validator.w3.org. A service like this tests your pages against the HTML specification and prints a list of errors, which makes locating problems easy. (p. 455)

Web design publication 112 –The following are questions to ask to make sure that your Web site is functioning properly. Do you test the functioning of external links when they are first added to your site? Do you test the functioning of external links on an ongoing basis to make sure they continue to link properly? ...have you been kept up to date? (p. 110)

Web design publication 115 – The look and feel is both the way your web site works...you must test your design against the variable nature of the Web. You want to ensure that the greatest number of users can navigate your site reliably. (p. 26)

Easy navigational return to web home page

Another issue addressed in the web design publications was that viewers should be able to return easily to the previous web page and the home page. Clinking on the "back" button two or three times is not considered user-friendly navigation. Designers should use caution when including navigation links that direct the viewer to different organization's web pages. If there are external links, consistent methods should be created for the viewer to return to the organization's home page or other pages on the organization's web site. The following were WWW publications web page design comments regarding the ability to navigate back to the home page.

Web design publication 106 – If you can find your way around a site and find your way back to the home page at any time from any page, the **navigation is well designed**. On the other hand, if the web site you've visited is vague in its presentation an organization of content and you get lost in the site, **the navigation is poorly designed**. (p. 132)

Web design publication 113 – Several users didn't use the Back button at all. We think they either didn't know about it or forgot it. They occasionally ran into trouble when they went to a page that had no links off it. To get unstuck, they used the bookmark we had created to the home page and started from scratch. (p. 30)

Web design publication 154 – Link back to home. Consider including a link back to the top level or home page on every page of your presentation. Providing this link allows readers a quick escape from the depths of your content. Using a home link is much easier than trying to navigate backwards through a hierarchy, or trying to use the "back" facility of a browser. (p. 315)

Consistent navigation style

Inconsistent hypertext navigation link structure was also noted as a design concept that caused viewer frustration. Organizations should use consistent text style, font/graphics/pictures size and locations for the web page navigation links. Viewers want to move seamlessly within and among the organization's web pages. The less time a viewer needs to spend understanding the hypertext link navigation structure, the more time she/he will have to review the web page information. The following publication web design cultural themes applied to the need for a consistent hypertext link navigation style.

Web design publication 103 – Provide grounding for the user by placing navigation elements in the same position on each page. Users will orient themselves quickly to your navigation structure. Use the same navigation graphics throughout the site to provide consistency… (p. 34)

Web design publication 112 – Consistent and Effective Use of Navigational Aids…are elements that help a user locate information at a Web site and allow the user to easily move to a desired spot in the Web site. They are necessary for two reasons: (a) they allow readers to "browse" easily through the site, and (b) they provide an orientation to the material at the site… (p. 50)

Web design publication 113 – More important than style, however, is the predictiveness of the link. The better users could predict where a link would lead, the more successful they were in finding information. (p. 10) Users could confidently predict where the link would lead. (p. 35) When people are searching for information, they pick links based on their expectations of the page the link will take them to. (p. 37)

Correct spelling and grammar

Even though spelling and grammar aren't technical concepts specific to web page design, the concepts were noted in the web page design publications. Spelling and grammar checking are traditional academic and publishing standards and computer error checking software has been available since prior to the introduction of the World Wide Web. Software also is available with HTML editors and word processing programs, including free spell checking software available on the WWW. It is critical to recognize that spelling and grammar reflect an organization's communication style and professionalism to the web viewer. Publication web page design cultural themes pertaining to spelling and grammar were:

Web design publication 107 – Remember to perform a spelling check on all text content before and after adding it to your web page. If your HTML editor doesn't have a built-in spell checker, many free ones are available online. (p. 368) ... bad grammar can destroy the professional effect... (p. 120)

Web design publication 145 – Bad grammar or misspelled words. Most educated people use grammar fairly well and check for spelling errors. Whether the errors come from carelessness or ignorance neither puts the information or the writer in favorable light. (p. 5)

Web design publication 154 – Spell checking and proofreading may seem like obvious suggestions, but given the number of pages I have seen on the Web that have obviously not had either, it bears mentioning. Proofread and spell check each of your Web pages. Poor writing may be irritating enough that your reader won't bother to delve any deeper than you home page, even if the subject you're writing about is fascinating. (p. 304)

Page Update Identified

According to the web page design publications, a date should be included on all of the organization's web pages, indicating when the information was created or updated to establish credibility. If the web page information is outdated, it reflects negatively on the organization's culture. Since the page is projected to a global audience, it was also suggested to use an internationally recognized date format. Examples of web page design "update" cultural themes were:

Web design publication 145 –...is to assure that the information is actually correct: up to date...even though a very credible writer said something that was correct twenty years ago, it may not be correct today. You must therefore be careful to note when the information you find was created, and then decide whether it is still of value... (p. 5)

Web design publication 150 – Currency – Is the page dated? If so, when was the last update? How current are the links? Have some expired or moved? (p. 2)

Web design publication 154 – When this page was last revised. This is particularly important for pages that change a lot. Include a date on each page so that people know how old it is. (p. 317)

WWW Publication Web Page Design Cultural Theme Summary

The previous section provided descriptive examples of the WWW publication web page design cultural themes. The themes were well documented in the supporting literature and provide standards for creating user-friendly, professional web pages. The section was the final descriptive segment of chapter four. The next section focuses on analyzing the AE publication program content, AE home page program content, AE

home page design and the WWW publication web page design cultural themes to answer research questions 2 through 4.

Analysis of AE Home Page Similarities Based on Cultural Theme Usage

The goal of this section was to answer the second, third and fourth research questions: A series of table matrices and scatter plots have been included in this section to illustrate the answers to the following questions.

2. What are the similarities among the AE home pages based on the inclusion of AE home page program content cultural themes and AE publication program content cultural themes?

3. What are the similarities among the AE home pages based on the inclusion of AE home page design cultural themes and WWW publication web page design cultural themes?

4. What are the similarities among the AE home pages based on the inclusion of AE home page program content cultural themes and the AE home page design culture themes?

In the first analytic section, the degree of similarity of AE home pages relative to the various AE program content cultural themes was evaluated. The first set of cultural themes focused on the 2nd research question.

2. What are the similarities among the AE home pages based on the inclusion of AE home page program content cultural themes and AE publication program content cultural themes?

The matrix tables and scatter plot illustrate the degree of similarity among the AE home pages based on the cultural themes that were included on the specific AE organization home pages.

Five publication program content cultural themes and ten web page program content cultural themes emerged from the inductive evaluation of the AE literature and AE home pages. An overview of the AE home pages that included the publication program content concepts has been presented in Tables 4.1 and 4.2. Each table provides a different perspective of the information that was included on the individual AE home pages. Together the tables captured the essence of the AE publication program content cultural themes relative to inclusion or exclusion on the AE organizations home pages

In Table 4.1, the publication program concepts were identified with each home page. The table provides the reader an opportunity to: (a) locate or isolate a specific home page and identify the AE publication program content themes on the page or (b) select a cultural theme and identify the organizations that included the theme on the home page.

Table 4.1

AE Publication Program Content Cultural Themes Included on Home Pages

AE publication program content theme	Adventure education home pages that included publication program content themes																							
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
Activity Processing	✓		✓			✓				✓									✓	✓					
Experiential education	✓	✓	✓	✓							✓								✓				✓		
Professional Facilitators		✓				✓				✓				✓		✓	✓								✓
Group orientation	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Individual concerns	✓	✓	✓			✓				✓		✓				✓	✓		✓	✓					

An overview of the organizations that included the AE publication program content themes on the home page is provided in Table 4.2. A "big picture" summary of the information has been created in the table to enable the reader to review the analysis from a group orientation. A cursory review of table 4.2 revealed that "group orientation" was included on 24 of the 25 home pages. Prioritizing the needs and concerns of individual participants appeared on ten home pages and the remaining three themes each appeared on seven home pages. Even though the program content concepts were strongly supported in the AE literature, the majority of the organizations did not include more than two of the AE publication program content concepts on the home pages. This indicates there was a high degree of AE home page similarity on group orientation, but a low degree of similarity based on inclusion of the remaining four themes.

Table 4.2

Overview of AE Publication Program Content Cultural Themes Included on Home Pages

AE publication program content culture theme	Home pages that included the program content information	Home pages that did not include the program content information
The importance of processing the adventure activities	A, C, F, J, S, T	B, D, E, G, H, I, K, L, M, N, O, P, Q, R, U, V, W, X, Y
Focusing on the goals of experiential education	A, B, C, D, K, S, W,	E, F, G, H, I, J, L, M, N, O, P, Q, R, T, U, V, X, Y,
Providing professional trained facilitators	B, F, J, N, P, Q, Y	A, C, D, E, G, H, I, K, L, M, O, R, S, T, U, V, W, X
Developing a group orientation	A, B, C, D, E, F, G, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y	H
Prioritize the needs and concerns of each participant	A, B, C, F, J, L, P, Q, S, T	D, E, G, H, I, K, M, N, O, R, U, V, W, X, Y

A concise and comprehensive illustration of the AE organizations that included the specific AE home page program content cultural themes on the agency home page is presented in Tables 4.3 and 4.4. The tables provide an individual and group view of the program content themes. In Table 4.3, each AE home page has been identified and the specific AE home page program content cultural themes were associated with the individual home page. Similar to table 4.1, the table enables the reader to: (a) locate or isolate a specific home page and identify the AE home page program content cultural themes on the page or (b) locate a cultural theme and identify the organizations that included the theme on the home page.

Table 4.3

AE Home Page Program Content Cultural Themes Included on Home Pages

AE home page program Content theme	Adventure education home pages that included AE home page program content themes																							
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
Challenge Course	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Physical activity	✓		✓				✓		✓	✓	✓	✓			✓		✓			✓		✓	✓		✓
Mention ropes	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
High Elements	✓	✓	✓		✓	✓	✓		✓		✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓
Low Elements	✓	✓	✓	✓		✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
General Safety	✓		✓	✓		✓				✓	✓	✓			✓	✓		✓	✓	✓		✓	✓		✓
Problem Solving			✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
Team Orientation	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
Have Fun	✓	✓		✓		✓	✓			✓		✓	✓	✓	✓	✓	✓		✓	✓			✓		
Who can Participate	✓	✓	✓			✓	✓		✓		✓	✓				✓	✓	✓		✓		✓	✓	✓	✓

The AE home pages that included the AE home page program content cultural themes are identified in Table 4.4. Similar to Table 4.2, the table is a compilation of the AE home pages and enables a "big picture" perception of the information. A brief review of Tables 4.3 and 4.4 illustrates that each of the ten cultural themes were included on a majority of the home pages.

The scatter plot in Figure 4.2 illustrates the degree of similarity among the AE home pages relative to the AE publication program content themes and the AE home page program content themes. The degree of similarity is based on the level that the AE home pages included the specific cultural themes. The majority of the AE home pages were somewhat similar relative to the low level of inclusion of AE publication program content cultural themes. Sixteen of the sites were in the low to low/moderate range, two AE organizations were in the moderate range. As a minority group, seven of the home pages were in the moderate/high range.

In contrast, the majority of the AE home pages included moderate/high to high levels of AE home page program content concepts. Nineteen of the organizations were in the moderate/high range based on the number of AE home page program content concepts included on the home pages. Six of the home pages were in a minority group with rating levels in the low to moderate range.

The final analysis of Figure 4.2 identifies the extent to which the AE home pages included both the AE publication program content cultural themes and the AE home page program content cultural themes. A review of the scatter plot indicated that the home pages were grouped in three categories.

Table 4.4

Overview of AE Home Page Program Content Cultural Themes Included on Home Pages

AE home page program content culture theme	AE home pages that included the program content information	AE home pages that did not include the program content information
Challenge	A, B, C, D, E, F, G, I, J, K, L, N, O, P, Q, R, S, T, U, V, W, X, Y	H, M
Physical activity	A, C, G, I, J, K, L, O, Q, T, V, W, Y	B, D, E, F, H, M, N, P, R, S, U, X
Mention ropes	A, B, C, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, V, W, Y	D, U, X
High elements	A, B, C, E, F, G, I, K, L, M, N, O, Q, R, S, T, V, W, X, Y	D, H, J, P, U
Low elements	A, B, C, D, F, G, I, K, L, M, N, O, P, Q, R, S, T, U, V, W, Y	E, H, J, X
General safety	A, C, D, F, J, K, L, O, P, R, S, T, V, W, Y	B, E, G, H, I, M, N, Q, U, X
Problem solving	C, E, F, G, I, J, K, L, M, N, O, P, Q, R, S, T, V, W	A, B, D, H, U, X
Team Orientation	A, B, C, E, F, G, I, J, K, L, M, N, O, P, Q, R, S, T, V, W, Y	D, H, U, X
Have fun	A, B, D, F, G, J, L, M, N, O, P, Q, S, T, W	C, E, H, I, K, R, U, V, X, Y
Who can participate	A, B, C, F, G, I, K, L, P, Q, R, T, V, W, X, Y	D, E, H, J, M, N, O, S, U,

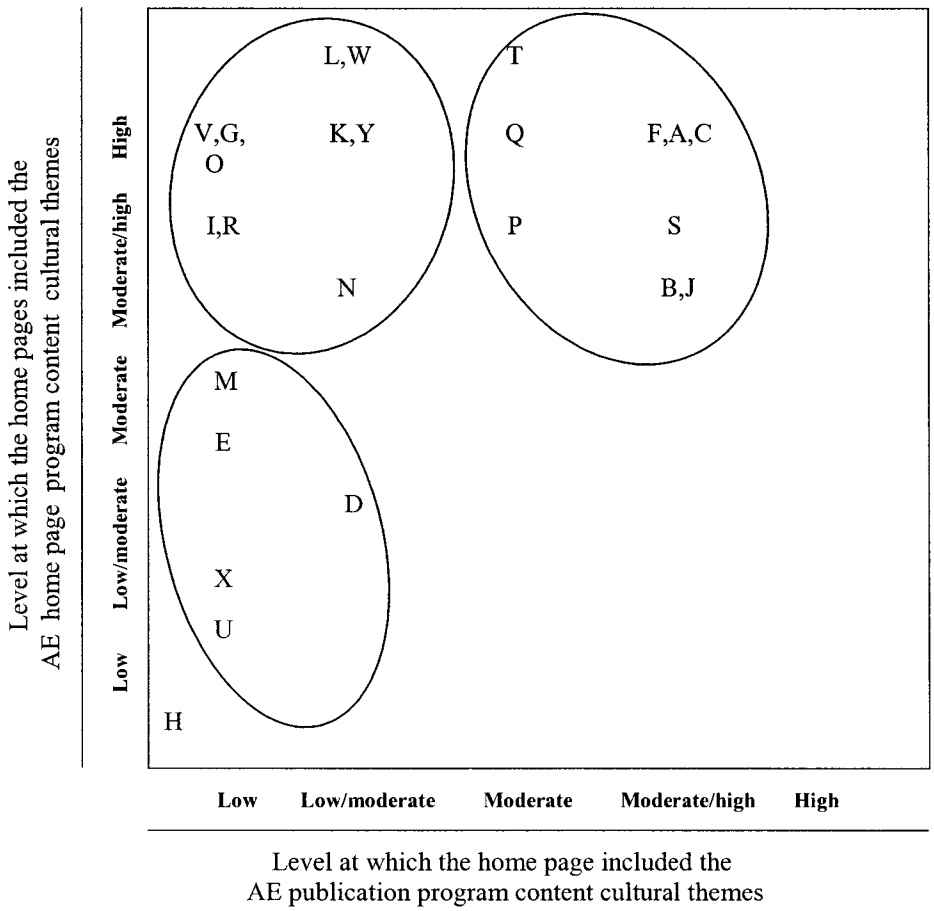


Figure 4.2. The scatter plot illustrates the similarity among home pages based on inclusion of program content cultural themes.

- Nine home pages included moderate to moderate/high levels of AE publication program content themes and moderate/high to high levels of AE home page program content themes.
- Ten home pages included low to low/moderate levels of AE publication program content themes, but moderate/high to high levels of AE home page program content themes.

- Six home pages included low to low/moderate levels of AE publication program content themes and low to moderate levels of AE home page program content themes.

Although the tabular evaluations implied a degree of similarity for the AE home page program content cultural themes, the scatter plot indicated a lack of similarity based on inclusion of information from the AE publication and AE home page program content cultural themes. Relative to the levels of cultural themes illustrated in Figure 4.2, the AE homepages included dissimilar thematic concepts.

In the second analytic section, the degree of similarity of AE home pages relative to the various web page design concepts was evaluated. The section focused on research question three.

3. What are the similarities among the AE home pages based on the inclusion of AE home page design cultural themes and WWW publication web page design cultural themes?

Eleven AE home page design themes and eight WWW publication web page design concepts emerged from the evaluation of the home pages and WWW publication information. The following matrix tables and scatter plot illustrate the degree of similarity among the AE home pages based on the web page design information included on each organization's home pages. Overviews of the specific concepts included on the individual home pages has been presented in Tables 4.5 and 4.6. The degree of similarity based on the level of thematic inclusion on the organizations' home pages has been graphically illustrated in the scatter plot of Figure 4.3.

In Table 4.5 the association of individual home pages with specific AE home page design themes has been illustrated. Table 4.5 enables the viewer to: (a) locate or isolate a specific home page and identify the associated AE home page design concepts on the page or (b) select a web page design concept and identify which organizations included specific information on the home page.

Table 4.5

AE Home Page Design Cultural Themes Included on Home Pages

AE home page design cultural theme	Adventure education home pages that included AE home page design themes																							
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
18 or more hypertext links		✓	✓	✓		✓		✓			✓				✓	✓	✓	✓			✓	✓		✓	✓
50% of links not AE related	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓		✓	✓	✓	✓	✓
Link in more than one section	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓		✓			✓	✓		✓			✓	✓
Links to current home page		✓	✓	✓	✓	✓	✓	✓	✓		✓		✓		✓	✓			✓		✓		✓	✓	
Multiple link format on page			✓	✓		✓	✓	✓	✓		✓				✓			✓	✓	✓		✓		✓	
Picture(s) on home page	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	
Background texture or color areas		✓	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓				✓					✓	✓
Partial screen usage		✓	✓	✓			✓	✓		✓	✓		✓	✓	✓				✓	✓	✓			✓	
Variety of font styles and sizes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Email and phone contact info	✓	✓			✓	✓	✓		✓		✓			✓		✓		✓	✓		✓				✓
Contact info on bottom of page	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				✓	✓		✓			✓	✓	✓		✓

Table 4.6 creates a "big picture" assessment and enables the reader to review the information from a group orientation. The table identifies AE home pages that included

Table 4.6

Overview of AE Home Page Design Cultural Themes Included on Home Pages

AE home page design culture themes	AE home pages that included the AE home page design information	AE home pages that did not include the AE home page design information
18 or more hypertext links on page	B, C, D, F, H, K, O, P, Q, R, U, V, X, Y	A, E, G, I, J, L, M, N, S, T, W
Greater than 50% of links do not pertain to AE activities	A, B, C, D, F, G, H, I, J, K, L, M, O, P, R, S, U, V, W, X, Y	E, N, Q, T
Links located in more than one section on page	A, B, C, D, F, G, H, I, K, L, M, O, R, S, U, X, Y	E, J, N, P, Q, T, V, W
Link to current page	B, C, D, E, F, G, H, I, K, M, O, P, S, U, W, X	A, J, L, N, Q, R, T, V, Y
More than one hypertext link format on home page	C, D, F, G, H, I, K, O, R, S, T, V, X	A, B, E, J, L, M, N, P, Q, U, W, Y
One or more pictures on page	A, B, C, D, E, F, G, I, K, L, M, N, O, P, R, T, U, V, W, X, Y	H, J, Q, S, Y
Color or texture background on page or section(s) of page	B, C, D, E, F, H, I, K, L, M, N, O, S, X, Y	A, G, J, P, Q, R, T, U, V, W,
Used partial screen width for page information	B, C, D, G, H, J, K, M, O, S, T, U, X	A, E, F, I, L, N, P, Q, R, V, W, Y
Variety of font styles used on page	A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y,	
Email and phone contact information on page	A, B, E, F, G, I, K, N, P, R, S, U, Y	C, D, H, J, L, M, O, Q, T, V, W, X
Contact information at bottom of page	A, B, C, D, E, F, G, I, J, K, O, P, R, U, V, W, Y	H, L, M, N, Q, S, T, X

the AE home page design themes. A cursory review of the table showed that a variety of font styles were included on all of the web pages and the remaining AE home page design themes were included on the majority of the home pages. For example, the three following AE home page design concepts were included on more than eighty percent of the home pages: (a) the majority of the links were not AE related (b) there were pictures on the home pages and (c) the designers used a variety of font styles and sizes. The remaining eight themes were used on more than fifty percent of the home pages.

In the next thematic section, the web page design concepts that emerged from inductive evaluation of the WWW design publications have been presented from two perspectives in Tables 4.7 and 4.8. In Table 4.7, each home page has been identified relative to the specific WWW publication web page design concepts that were included on the individual web page. The table provides the reader an opportunity to: (a) locate or

Table 4.7

WWW Publication Web Page Design Cultural Themes Included on Home Pages

WWW publication web page design cultural theme	Adventure education home pages that included WWW publication web page design themes																							
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
Less than 20 second download		✓	✓	✓			✓	✓	✓		✓	✓				✓	✓	✓	✓	✓	✓			✓	✓
Good text / background contrast	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Easy to scan for information		✓		✓	✓			✓			✓		✓								✓	✓		✓	
All link work properly				✓	✓		✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓			✓
Navigation easy to return home			✓		✓										✓			✓	✓	✓					
Consistent navigation style	✓	✓	✓	✓	✓	✓			✓			✓					✓	✓	✓	✓	✓	✓	✓	✓	✓
Correct spelling and grammar		✓	✓		✓			✓						✓		✓				✓	✓			✓	
Page update identified							✓	✓	✓					✓				✓				✓		✓	

isolate a specific AE home page and identify the WWW publication web page design information on the page or (b) isolate a thematic concept and quickly identify the AE organizations that included the theme on the home page. For example, all but one home page had good text/background contrast, but none of the pages had all of the eight WWW publication web page themes.

A comprehensive overview has been developed in Table 4.8 of the WWW publication web page design cultural themes included on the AE organizations' home pages. The table creates a "big picture" overview of the information that allows the reader to review the information from a group orientation. As indicated in the table, text/background contrast was acceptable on 24 of the 25 home pages. Three of the remaining WWW publication web page design themes, were supported on the majority of the home pages, but four thematic concepts were only included on a minority of the home pages.

The scatter plot in Figure 4.3 was based on the level at which the home pages included the AE home page design information and WWW publication web page design information. The scatter plot illustrates the degree of similarity within each web page design category and the degree of similarity based on the inclusion of both web page design categories for the individual home pages.

As shown in by the scatter plot, the majority of the AE home pages were somewhat similar relative to the level of inclusion of the AE home page design cultural themes. Sixteen of the home pages were in the moderate/high to high range and nine of the home pages were in the low to moderate range. In contrast, the majority of the AE home pages included low to moderate levels of WWW publication web page design

cultural themes. Thirteen of the AE home pages were in the low to moderate range while 12 of the pages were in the moderate/high range.

Table 4.8

Overview of WWW Publication Page Design Cultural Themes Included on Home Pages

Publication web page design culture themes	AE home pages that included the WWW publication web page design information	AE home pages that did not include the WWW publication web page design information
Home page downloads on Internet Explorer web browser in 20 seconds or less	B, C, D, G, H, I, K, L, P, Q, R, S, T, U, X, Y	A, E, F, J, M, N, O, V, W
Text / background contrast is good	A, B, C, D, E, G, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z	F
Page can be scanned easily	B, D, E, H, K, M, U, V, X	A, C, F, G, I, J, L, N, O, P, Q, R, S, T, W, Y
All links work properly	D, E, G, H, I, K, L, M, O, P, Q, R, S, T, U, V, Y	A, B, C, F, J, N, W, X
Easy navigation return to web home page	C, E, O, T	A, B, D, F, G, H, I, J, K, L, M, N, P, Q, R, S, U, V, W, X, Y
Consistent navigation style*	B, C, D, E, F, I, U, X, Y	G, H, J, K, M, N, O, P,
Spelling and grammar are correct	B, C, E, H, N, P, T, U, X,	A, B, D, F, G, I, J, K, L, M, O, Q, R, S, V, W
Page update identified	G, H, I, N, R, W, X	A, B, C, D, E, F, J, K, L, M, O, P, Q, S, T, U, V, Y

*Home pages A, L, Q, R, S, T, V and W didn't have navigation links to additional AE information pages and were excluded from this specific theme evaluation.

In Figure 4.3, the extent to which the AE home pages included both the AE publication web page design concepts and the WWW publication web page design concepts was evaluated. A review of the scatter plot indicated that the home pages were grouped in four categories.

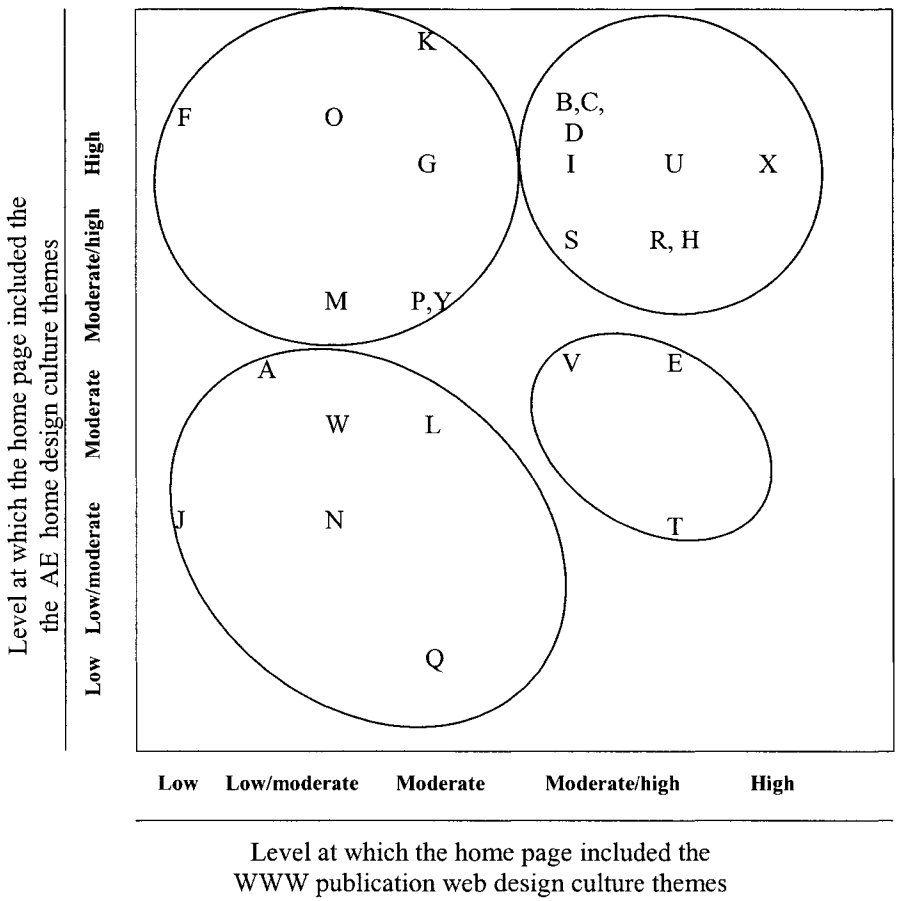


Figure 4.3. The scatter plot illustrates the similarity among home pages based on inclusion of web page design cultural themes.

- Nine of the home pages included moderate/high to high levels of AE home page design themes and moderate/high levels of WWW publication web page design themes.

- Seven of the home pages included moderate/high to high levels of AE home page design themes, but low to moderate levels of WWW publication web page design themes.
- Three of the home pages included low to low/moderate levels of AE home page design themes, but moderate/high to high levels of WWW publication web page design cultural themes.
- Six of the home pages included low to moderate levels of AE home page design themes and low to moderate levels of WWW publication web page design cultural themes.

Based on the varying levels at which the AE home pages included the AE and WWW publication web page design themes, there didn't appear to be a high degree of web page design similarity for a majority of the AE home pages. Similar to the analysis of program content themes, the high degree of cultural theme similarity was within the thematic categories, and there was a lower degree of similarity among the categories. The final analytical section focuses on the fourth research question:

4. What are the similarities among the AE home pages based on the inclusion of AE home page program content cultural themes and the AE home page design culture themes?

The similarity of the home pages relative to the inclusion of the AE home page program content and AE home page design themes has been illustrated in the scatter plot of Figure 4.4. The degree of similarity between the program content and web page design categories was based on the level at which individual home page included themes from both cultural categories. Based on the level that the concepts were included, there was not

a majority of organizations with similar themes. The home page similarities fit in the following five groups.

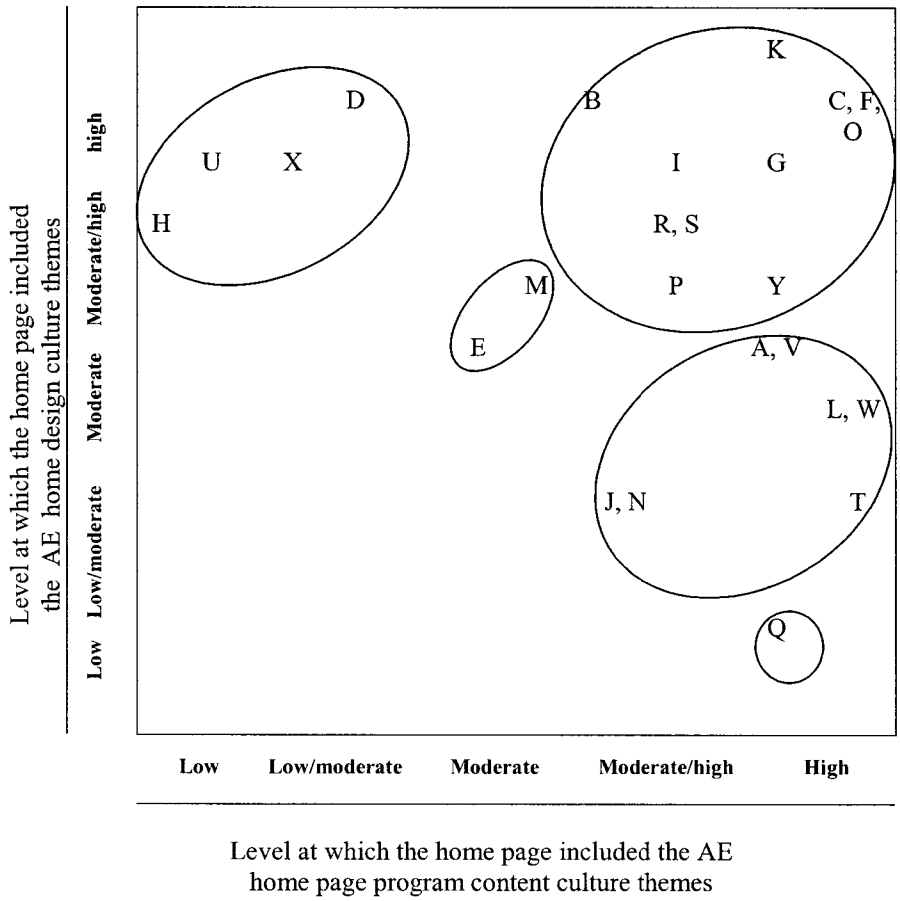


Figure 4.4. The scatter plot illustrates the similarity among home pages based on inclusion of AE program content themes and AE home page design cultural themes.

- Eleven home pages included moderate/high to high levels of AE home page program content themes and moderate/high to high levels of AE home page design themes.

- Four home pages included moderate/high to high levels of AE home page web design themes, but low to low/moderate levels of AE home page program content themes.
- Two home pages included moderate to moderate/high levels of AE home page design themes and moderate levels of AE home page program content themes.
- Seven home pages included low/moderate to moderate levels of AE home page design cultural themes, but moderate/high to high levels of AE home page program content cultural themes.
- One home page included a low level of AE home page design cultural themes, but a high level of AE home page program content cultural themes.

None of the groups identified in the scatter plot of Figure 4.4 included a majority of the home pages. Although the majority of the home pages included moderate/high to high levels of themes from at least one of the categories, the pages didn't include similar themes based on inclusion of both AE web program content themes and AE home page design cultural themes.

Summary of Descriptive and Analytic Results

The intent of this section is to summarize the results for the four research questions. A separate response is provided for each question to identify specific information relative to the multimedia, multi-discipline cultural themes.

Research Question 1

What are the adventure education program content cultural themes and web site design cultural themes projected on AE home pages and in the print publication literature?

In response to research question one, the cultural themes and the number of home pages that included each specific theme that emerged in the Phase I descriptive research evaluation have been provided in Table 4.9. Five program content cultural themes were identified in the adventure education publication literature. The emphasis of the themes was a philosophical academic and professional approach to adventure organization. The literature indicated that these themes are the foundation of adventure education programs. As indicated in Table 4.9, "group orientation" was included on a 24 of the 25 AE home pages while the remaining themes were included on a minority of the AE home pages. Even though the program content concepts were strongly supported in the AE literature, the majority of the organizations included two or less of the program content cultural themes on the home pages.

There were ten AE program content themes identified on the home pages. Information that was identified on a majority (13) of these pages was included as an AE home page program content theme. Unlike the AE publications' themes, the emphasis of the home page program content cultural themes was activity or operations.

Five of the themes, "challenge course," "ropes," "low elements," "team," and "high elements" were included on 20 or more of the home pages while the remaining themes were included within a range of 13 to 16 home pages. Some of the concepts were

Table 4.9 *Summary of Descriptive Theme Usage on AE Home Pages*

***Five* AE publication program content themes**	***Ten* AE home page program content theme**	***Eleven* AE home page design cultural themes**	***Eight* WWW publication web page design cultural themes**
Group orientation (24)*	Challenge course (23)	Variety of font styles and sizes (25)	Good text / background contrast (24)
Individual concerns (10)	Mention ropes (22)	50% of links not AE related (21)	All links work properly (17)
Experiential education (7)	Low elements (21)	Picture(s) on home page (20)	20 second or less download (16)
Professional facilitators (7)	Team orientation 21)	Link in more than one section (18)	Consistent navigation style (9)
Activity processing (6)	High elements (20)	Links to current home page (16)	Correct spelling and grammar (9)
	Problem solving (19)	Contact info at bottom of page (17)	Easy to scan for information (9)
	Who can participate (16)	Background texture or color areas (15)	Page update Identified (7)
	General safety (15)	18 or more hypertext links (14)	Navigation easy to return home (4)
	Have fun (15)	Email and phone contact (13)	
	Physical activity (13)	Multiple link format on page (13)	
		Partial screen width usage (13)	

* Denotes the number of home pages that included the specific cultural theme

emphasized with a variety of font styles, colors and sizes. In addition to bold, italics, and larger font sizes, information repetition and pictures added emphasis to the specific themes.

Eleven AE home page design cultural themes emerged after numerous reviews of the AE home pages. Similar to the requirements for inclusion of AE home page program content themes, the themes were identified on a majority (13) of the home pages for inclusion as a web page design theme. The 11 AE home page design themes were associated with hypertext links, information format / screen presentation and organizational contact information. Three of the themes, "variety of font styles," non AE oriented links" and "pictures" were included on 20 or more home pages while the remaining themes were included on a range of 13 to 18 pages. Although all of the themes were included on a majority of the AE home pages, the specific themes were not supported in the WWW page design publications.

WWW publication web page design was the final cultural theme category in Table 4.9. Eight themes were well documented in the supporting literature and provided standards for creating user-friendly, professional web pages. The themes focused on specific web page design processes such as download time, ability to locate information (scanability) and professional presentation. Overall, the themes were not strongly supported on the AE home pages. One of the themes, "good text/background contrast" was included on 24 of the home pages while two of the themes were included on a majority of the pages. The five remaining themes were only included on a minority of the AE home pages.

Overall, the descriptive information that emerged from the qualitative evaluation provided a good overview of the cultural themes in the AE publications, on the AE home pages and in the WWW page design publications. As noted in Table 4.9, a total of 15 AE program content cultural themes and 19 web page design themes emerged from the evaluation of the publications and AE home pages, respectively.

Specific themes were identified in the descriptive phase to answer the first research question and contribute adequate information to answer the second, third and fourth research questions. The model in Figure 4.5 illustrates the potential interconnectedness of the multimedia, multi-discipline cultural themes that emerged from the phase I descriptive evaluation. In addition, the number of cultural themes that emerged for each media/discipline was noted for each of the thematic categories.

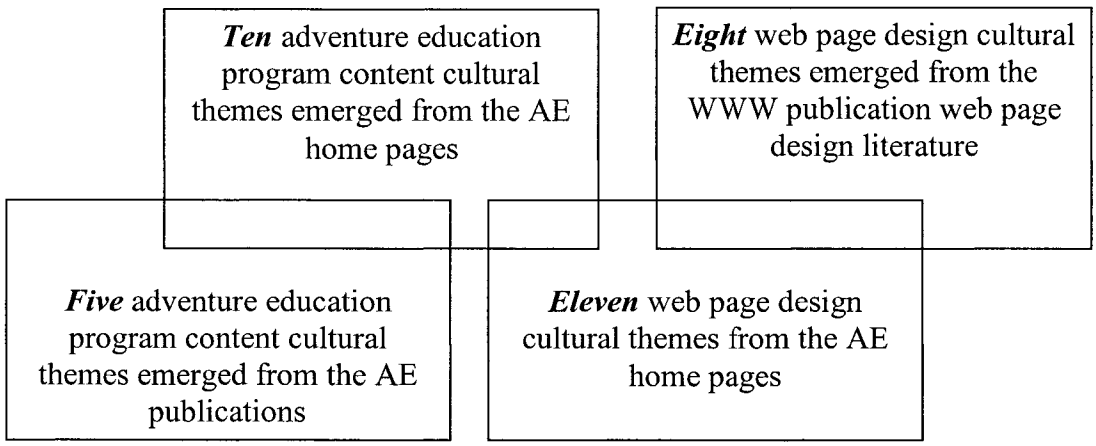


Figure 4.5. Totals of emergent descriptive cultural themes from publication and home page evaluation.

The model's perceived interconnectedness was the basis for evaluating the similarity of the AE home pages based on the levels of inclusiveness of the various

cultural themes. The next section focuses the results of the analysis of the AE publication program content and AE home page program content to answer research question two.

Research Question 2

What are the similarities among the AE home pages based on the inclusion of AE home page program content cultural themes and AE publication program content cultural themes?

The scatter plot in Figure 4.2 illustrated the degree of similarity within the individual program content theme categories and between the AE publication and AE home page program content themes. Sixteen of the AE home pages were similar relative to the low to moderate levels of inclusion of AE publication program content cultural themes. In addition, there was also similarity based on moderate to high levels of inclusion of AE home page program content themes on 19 home pages.

In the final analysis of Figure 4.2, dissimilarity of the media themes on for publications and home pages was reflected in the different levels of inclusion for both thematic categories. There was not a clear majority of AE home pages with similar multimedia cultural theme inclusion levels. "Group orientation" was the only program content cultural theme included in a majority of both media themes categories. Figure 4.2 scatter plot results indicated that the AE publication program content themes and the AE home page program content themes weren't similar or included collectively in the development of the AE home pages.

Research Question 3

What are the similarities among the AE home pages based on the inclusion of AE home page design cultural themes and WWW publication web page design cultural themes?

The scatter plot in Figure 4.3 illustrated the degree of similarity within the individual web page design theme categories and between the AE home page design and WWW publication web page design themes based on the level of inclusion of the specific cultural themes. Sixteen of the home pages included moderate/high to high levels of the AE home page design cultural themes. In contrast, thirteen of the AE home pages included low to moderate levels of WWW publication web page design cultural themes.

Dissimilarity of the media themes on the home pages was reflected in the different levels of inclusion for both thematic categories. Although text/background contrast, functional links and download time were considered within both media types, there was not a clear majority of home pages for the multimedia cultural theme inclusion levels. The Figure 4.3 scatter plot results indicated that the AE home page design themes and the WWW page design publications themes weren't considered in aggregate to guide the web page design of the AE home pages.

Research Question 4

What are the similarities among the AE home pages based on the inclusion of AE home page program content cultural themes and the AE home page design culture themes?

The scatter plot in Figure 4.4 illustrated the degree of similarity within the individual web page design theme categories and between the AE home page design and

WWW publication web page design themes based on the level of inclusion of the specific cultural themes. Nineteen of the AE home pages included moderate/high to high levels of AE home page program content cultural themes and 16 home pages included moderate/high to high levels of AE home page design themes. Although a majority of the AE home pages included moderate/high to high levels of individual themes, there wasn't a majority of the AE organizations' home pages that included themes from the two disciplines.

The differences among the media themes were reflected in the dissimilarity of the home pages based on the different levels of inclusion for both thematic categories. There was not a clear majority of AE home pages for the multi-discipline cultural theme inclusion levels. The Figure 4.4 scatter plot results also indicated that, combined, the AE home page program content and WWW page design standards weren't included as cultural themes in the development of on the AE home pages.

Conclusion

The descriptive section provided thick, rich information to substantiate the multiple and varied cultural themes for AE publication program content, AE home page program content, AE home page design and WWW publication web page design. Based on evaluation of the descriptive themes, the research also indicated that the themes were inconsistent between the medium and disciplines. "Group orientation" was the only AE publication program content theme included on a majority of home pages while only three WWW publication web page design themes (text/background contrast, operable links and less than 20 second download) were included on a majority of the AE home

pages. The similarities within the AE home page program content and AE home page design categories didn't directly support the publication information.

Based on inclusion of single media, single discipline cultural themes, the descriptive analysis identified similarities for the majority of the AE home pages. In contrast, there were dissimilarities based on inclusion of multimedia or multi-discipline cultural theme concepts. The AE home page program content themes were included on a majority of the home pages, but the emphasis wasn't on the professional standards included in the AE publications. AE home page design themes were also included on a majority of the home pages, but the benefit of the themes was questionable.

The web page design orientation seemed to focus on a technical design perspective rather than a customer usability perspective. Pictures caused slow home page downloads and links to the current page, multiple hypertext link format and more than 50 percent non-AE links limited the viewer's ability to quickly scan and locate information. The incongruity between publication and web page cultural themes as displayed in the scatter plots (Figures 4.2, 4.3, 4.4) implied a low similarity among the home pages for the 2^{nd}, 3^{rd} and 4^{th} research questions.

Based on the research results, I would conclude that neither the AE program publications nor WWW page design publications guided the development of the program content or web page design for the majority of the AE home pages. The cultural themes that guided the development of the reviewed AE home pages didn't support the cultural beliefs, values and norms included in the professional AE and WWW publications. The majority of AE home page developers are either: (a) not aware of the AE publication program content cultural themes and WWW page design publications themes or (b)

consciously or unconsciously excluded the thematic concepts when the pages were created. If post-secondary academic AE organizations had wanted the home pages to project cultural themes similar to AE publications and WWW page design publications, they needed to design the home pages to incorporate the publication concepts. More discussion on these topics can be found in chapter five.

CHAPTER FIVE: DISCUSSION

Introduction

At this point, I would like to reflect on the purpose of this research. During the literature review, I realized that there was a lack of research that focused on (a) organizational culture as it is projected or manifested on World Wide Web home pages and (b) multimedia, multi-disciplinary research of organizational web pages. This basic interpretative qualitative research study (Merriam, 2002) was intended to develop an understanding of the adventure education program content and web page design cultural themes associated with post-secondary academic AE organizations web home page design and development. The research was based on the premise that adventure education web home pages are socially constructed, technological, organizational cultural realities that may influence viewer interpretation and participant behavior.

Louis (1985) identified organizational cultures as values and beliefs that members come to share and Weick (1985) noted that the sharing occurs through a meaning making process of interpreting organizational artifacts. Similar to other socially constructed realities that reflect organizations' cultures (Frost et al., 1985; Gagliardi, 1990), the AE home pages are artifacts that explain situations, induce cooperation and may influence member outcomes. Since participant or member behavior is a function of commitment (Virtanen, 2000), AE organizations need to attempt to develop an appropriate sense of cultural understanding and participant commitment on the agency home page.

The concept, that organizational participation occurs when people share a culture in their minds (Beyer et al., 2000) has been a major influence in this research process. As Grunig (1982) noted, individuals seek information to solve problems. To accomplish organizational objectives and goals, a well-defined WWW home page needs to provide a clear definition of the beliefs, values and norms that may be interpreted as accepted organizational behaviors. The challenge in designing home pages is two-fold. The web sites need to project the organizations' accepted cultural values and behaviors and the web page designers need to consider how the technical/graphic art design concepts will influence the viewers' interpretations of the cultural information. Neither of the concepts can be considered or developed in isolation.

The primary emphasis of this research has been to describe the cultural themes (beliefs, values and behaviors) that were identified during the evaluative process and to analyze the similarities among the AE organizations' WWW home pages based on inclusion of the various cultural themes. The scatter plots in chapter four were not intended to rate the AE home pages on a "bad to good" or "worst to best" scale, but represented a level of similarity based on the number of specific cultural themes that were included on each AE home page.

Furthermore, the research results were not an attempt to establish an apriori set of web design usability standards. Although I have identified web page design themes from a number of print and electronic publications, I don't propose that the themes are inclusive of all web design concepts. Each web page design theme needs to be considered in the context of prioritizing and integrating the individual organization's program content goals with the web page design goals.

Chapter five is divided into the following topic areas. The first section identifies the benefits of a multimedia, multi-disciplinary research methodology to evaluate AE web home pages. Section two focuses on interpreting why a scatter plot rating may not indicate the home pages' information quality. In section three, the interpretation shifts to why the cultural themes might have been similar or dissimilar. Section four describes the inherent problems that may occur when program content or web page design themes are dissimilar. Section five includes recommendations for the development of web page program content themes and web page design themes. The final section identifies opportunities for future WWW page research.

Benefits of a Multimedia, Multi-Disciplinary Research Methodology

A multimedia, multi-discipline methodology helps researchers decrease the bias that may occur when a single media, single discipline organization web page study is conducted. Martin (1992, 2001) and Martin and Meyerson (1988), noted that organizations don't have single cultures. Research needs to include various perspectives to adequately balance the analysis and interpretation of context specific meanings (Sackmann, 1991). Similarly, it is critical to evaluate the WWW relative to multiple disciplines and/or multiple media types during the web page design and development phases. Just as the AE home pages should reflect more than the web designers' perceptions, of organizational culture, WWW evaluation needs to consider more than a single viewpoint.

The traditional single-media, single-discipline research and analysis is not applicable for the WWW (Mitra & Cohen, 1999). Cultural studies cannot conceptualize the Internet or WWW as an enclosed container. To adequately interpret WWW home

page messages, researchers need to expand their methodologies to understand how media and disciplines interact to affect the home page information presentation. If either of the media types or disciplines had been omitted in this study, it would have created a bias in the descriptive and analytic phases of the results section. "Group orientation" was the only program content cultural theme included at a high level in both AE publications and AE home pages. The text/background contrast was the only web design cultural theme noted on AE home pages and in the WWW publication web page design literature. A single media / single discipline research methodology would not have isolated the idiosyncrasies and would have created a misrepresentation of the cultural theme attributes. If the research evaluation was limited to the organization's program content themes, the influence of screen location, size, color, and font style would have been omitted. Conversely, if the researcher neglected to evaluate the information content themes, then the contextual meaning would be overlooked. In this research, a multiple research approach helped to identify the dissimilarities among the media cultural themes included on the AE home pages.

Without the multimedia approach, the home pages in this research would have appeared to have a greater level of similarity based on the AE home page program content themes and the AE home page design cultural themes. As Stern noted (2000), it is critical to understand how WWW home pages simulate and complement other media information. Organizations create and manage meaning through a variety of organizational communication activities to maintain a coherent culture to multiple audiences (Cheney & Christensen, 2001). Researching the multimedia cultural projections cannot be limited to an individual perspective. This study has elucidated the

benefits of a multimedia, multi-discipline research process to evaluate organizational WWW home pages in conjunction with context specific program content publications and WWW publication web page design literature.

Interpreting the Scatter Plot Rating Levels

Although the scatter plots in chapter four had levels from low to high for each of the axes, these did not always correlate with "poor to excellent" or "weak to strong" home page ratings. The levels indicated the number of concepts that were included from each thematic category and illustrated the degree of similarity among the AE home pages. The following section provides additional information to interpret the scatter plots and the low to high levels.

AE Publication Program Content Themes

In the case of the AE publication program content, I interpreted the home pages' qualities from poor to excellent in relation to the Figure 4.2 scatter plot axis level. If a page had a low rating, I would conclude that it had a poor similarity or representation of the AE publication program content cultural themes. Since the publications were developed as program and training guidelines, I would state that a low level rating indicates weak support for the AE publication standards. A high level would indicate strong support or an excellent program content similarity with the AE program publications. In the next section, I would propose contrasting conclusions for the AE home page program content concepts.

AE Home Page Program Content Themes

If an AE home page included a high level of AE home page program content themes in Figure 4.2, it didn't imply that the home page had a poor or excellent rating. It

indicated that the home included a high number of the emergent AE home page program themes and had a high level of similarity with other AE home pages that had high levels in this cultural theme category. None of the prevalent AE home page content themes directly supported the program content guidelines identified in the AE publications descriptive information section. I interpreted the web page themes as individual course concepts that identified activities, benefits or organizational practices. Examples such as "problem solving," "team orientation" and "physical activity" may be benefits of quality facilitation and activity processing, but the home pages didn't show strong similarities with the AE publication concepts. Although themes such as "challenge course," "having fun," and "ropes" were components that support experiential education, the emphasis was more focused on the activities rather than the post activity learning outcomes. Based on this process of interpreting the AE program content themes, I wouldn't conclude that a low level correlates with a poor rating or that a high level correlates with an excellent rating.

AE Home Page Design Themes

Inclusion of AE home page design themes on the home pages in Figure 4.3 created an interesting situation. The single AE home page design theme that I believe related to the quality of web page design was the inclusion of email and phone contact information on the home page. Without the contact capability information, the web page becomes a traditional one-way information medium. The number of links, links in multiple locations, background texture or color, contact information on the bottom of the page and variety of font styles may be beneficial or detrimental to the viewer, and inclusion of the themes doesn't guarantee to improve the web page design quality. An

excessive number of links and links in multiple locations, as found in this research may cause confusion and contact information located at the bottom of the page makes the viewer search for interactive communication capabilities. In addition, the background color/text variations and multiple font styles and sizes may detract from important information. I would definitely state that a number of the emergent AE home page cultural themes that did not enhance viewer usability and may actually be detrimental to the AE organization's home page cultural projections.

Having 50 percent or more of the home page links directed to non-AE program information increased unnecessary information and created more opportunities to loose the viewer. An active link to the current page may be annoying and multiple link formats can cause confusion and frustration. Partial screen width usage was popular with the majority of AE home page designers, but didn't provide any benefits to the home page design. One of the problems with the partial screen design was the necessity to create home pages that extended down three or more screen lengths. If the designer had used the complete screen width, it wouldn't have required the amount of scrolling to review the home page. If the home page was designed properly, it would automatically resize to fit various screens regardless of the monitor size.

Whereas, a picture may be worth a thousand words, in some cases the picture(s) caused longer home page download times. Eight of the nine sites with slow download time (greater than 20 seconds) had pictures on the home page. The ninth slow download was caused by graphic link buttons. The picture download time also affected seven other home pages that had download times between 16 and 20 seconds. If pictures are going to be used on the home pages, the designer needs to be certain to test download times on

various computer and modem systems. Thus, based on the interpretation of AE home page design themes, a low or high level on the of AE home page design cultural theme axis did not necessarily correlate with a poor or excellent level of web page design quality. Each theme needs to be considered in the context of the specific detriments or benefits relative to the individual web page. The ultimate rating depended upon how the AE home page design themes might affect the viewer usability and interpretation of the program content information.

WWW Publication Page Design Themes

WWW publication web page design was the final cultural theme category. Similar to the AE publication program content themes, I believe a high rating level on the scatter plot axis in Figure 4.3 correlated with an excellent web page design rating level. If the page had a high level of publication web page design themes, the basic design concept would potentially enhance viewer convenience and usability. Based on inclusion of the WWW publication web page design themes, the majority of the pages were in the low to moderate rating levels and only one of the pages was rated high. Using the correlate of low equals poor and high equals excellent, the majority of the AE home pages would have scored in the poor to fair range. If AE organizations are going to maintain viewer satisfaction, they need to develop the pages based on accepted web page design standards.

As noted in the both the literature review and methods sections, the download time is critical to maintain viewer contact. If the viewers have to wait more than 20 seconds, they will probably cancel the home page download. Text/background contrast and the ability to scan for information determine whether the viewer can quickly locate

information on the web page. Similar to download time, viewers want to accomplish their task quickly and efficiently. When there are inoperable links, inconsistent link styles or difficult navigation structures, the viewer may become frustrated and leave the web site. Finally, correct spelling and grammar, and page update information increases the credibility, professionalism and overall image of the AE organization and affiliates. The next section focuses on the potential reasons for the cultural theme dissimilarities.

Why Were the Media and Discipline Cultural Themes Dissimilar?

Morgan (1997), Rafaeli (1997) and Schein (2000) noted that organizations within the same industry have similarities that can create unity of purpose and activities. This research extended beyond a single organization to a professional group evaluation. Although there was agreement within the AE program content literature and within the WWW publication web page design literature, the publication themes were not strongly supported on the AE organizations' home pages. Kreps, Herndon and Ameson (1993) refer to these differences as discrepancies between expectations and actual performance. In reference to AE home pages, the major gaps were the dissimilarities between the publication themes and AE home page themes. As a professional group with similar organizational goals, there were also performance gaps based on the level of inclusion of AE home page program content themes and AE home page design themes on the individual AE organization home pages. The challenge of this section was to determine why there were performance gaps.

It is important to note that all of the AE organizations were affiliated with post secondary colleges or universities. I am aware that each of the organizations has internal variation, but the post secondary organizations also have similar resources. I believe my

experience as a graduate student, academic researcher, web designer and trained AE facilitator, enabled me to have an emic perspective to evaluate why there were dissimilarities between the media and design discipline cultural themes that emerged from this research. The goal of this section was to identify some of the activities and behaviors that might have influenced the dissimilarities in the program content and web page design themes. The following section focuses on the potential reasons for dissimilarities between the AE publication and AE home page program content themes.

Dissimilarities in Media Program Content Themes

Although the AE publication literature emphasized specific themes, the majority of the concepts were not included on the home pages. The one AE publication theme that was emphasized on a majority of the home pages was "group orientation." Based on my facilitator experience, I would assume that the thematic exclusion was not the result of ignorance or lack of available information because post-secondary academic AE organizations would have access to the AE publications through their library or an interlibrary loan system. With the implementation of electronic library catalogs, locating the information would be relatively simple and straightforward. Also, from my experience with a university AE program, it would seem realistic that the program directors and staff have received training based on the AE publication program content cultural themes. In addition, there are professional networks, national conferences and support organizations available for that provide literature and information regarding the AE program and industry standards.

I believe the differences in media cultural themes were based on personal or organizational perspectives regarding the functions of the media types. The AE

publications seemed to be long term oriented with an emphasis on education and training issues. The AE publication goals also focused on developing and evaluating industry wide, professional standards and the audience was more post secondary undergraduate or graduate programs. The majority of the publications were written by individuals with doctoral degrees or individuals who have professional experience in AE programs. In contrast, the AE home pages had a business orientation with an emphasis on promoting specific information or activities to provide an overview of a "typical day at the course." I am not certain that the AE organizations understood who might view the home pages. Although the organizations were affiliated with post secondary academic institutions, the potential viewer audience is varied and course participants may not be affiliated with the sponsoring college or university. The web pages were more oriented toward selling a short term situation rather than a semester class or college degree. The emphasis on challenge, groups, ropes, high and low elements highlighted the activity more than the AE publication post-activity processing or experiential education benefits.

This disparity may be related to a tradition of "excitement advertising" that seems to be evolving as an idiosyncrasy of the WWW as business communication medium. Perhaps the organizations viewed the WWW from Hoffman, Novak and Chatterjee's (1995) perception that the web is a distribution channel and a medium for marketing communications. I would speculate that the programs began with an emphasis on student groups, but budgetary constraints may have forced the programs to assume a business posture and focus on revenue generation and profitability. The publication content themes also seemed a bit too academic for organizations that were using the WWW medium to increase sales and income. As Morgan noted (1997), it may be easier to

capture the public's attention with "surface hoopla" than the deeper and fundamental processes that sustain the organization. The following section discusses the dissimilarities between the WWW publication design themes and AE home page design themes.

Dissimilarities in Web Page Design Themes

The post-secondary academic AE organizations in this research should have access to web page design resources. All homepages had hypertext links to a student recreation organization, academic department or the college/university home page. This verified that the AE groups were not totally independent or isolated from the institutions' Internet and WWW computer information systems. The institutions' libraries should have web page design literature or the capability to locate the information using an organization or WWW search engine. I might also assume that some of the institutions would offer single day, multi-day or semester academic classes for web page design. In addition, there could be an opportunity to utilize support groups from the information systems staff, faculty or students from a variety of academic disciplines such as computer systems, education, recreation, journalism, business or other disciplines. Without completing additional research, I can only speculate that the web page design dissimilarities might be attributed to some of the following factors.

Publishing on the WWW is not as complicated or expensive as publishing a book or developing finished products for television, newspaper or broadcast radio. Numerous software programs are available to create web pages and transfer the files to the web server. There are also a variety of tutorials available via WWW download that offer design and development examples; however, they may not emphasize the standards of good web page design. The web page designer may not have had direct access to or be

aware of the literature that was available regarding acceptable design standards. Perhaps the designer(s) were overwhelmed with other responsibilities and had not attended any web design training programs or may not have known whom to communicate with or how to locate web design support services. In some cases, the parent organization may have dictated what design style was required and specific links that need to be included on the home page.

One certainty is that the organizations didn't sufficiently pre-test the AE home pages to evaluate page functions prior to web publication and they neglected to check for errors after making the information available to the general public. Quite a few home pages had inoperable hypertext links, were difficult to scan for information, were challenging to navigate back to the home page, and lacked information regarding when the page was created or updated. Although a number of the dissimilarities might have been understood from a technical perspective or attributed to individual or organizational design conventions, the spelling and grammar mistakes were basic editing errors. I would definitely state that the academic errors were attributed to lack of proof reading and/or not using the available software for grammar and checking spelling. Since the majority of the AE home pages would be equivalent to a statement of the college or university's professionalism, the organizations need to improve their capabilities to edit information and project an academic culture.

I believe a number of the web page design themes and the program content themes might be attributed to the newness of the WWW medium. It appears that the AE organizations were not using the WWW pages to support the AE program content themes. Nor were the agencies using the WWW publication themes as guidelines to

design and develop the home pages. Although Murphy (2000) stated that organizations would be in trouble without an Internet model, the author didn't clarify how organizations should integrate the WWW in the organizational communication model. The following section identifies the inherent problems that may arise when there are dissimilarities in the media and discipline cultural themes.

Problems with Dissimilar Cultural Themes

Adventure education home pages are available to anyone with a computer that has access to an Internet and WWW browser software. As Wallace (1999) noted, a home page is like a billboard or the yellow pages. Similar to other communication mediums, incongruities with program content or web page design styles may create confusion for the viewer and problems for the organization. Although the extent of dissimilar information or design style may determine the degree of negative impact, sending a disparate cultural message reflects on the quality and professionalism of the AE organization. Public presentations of cultural information influence individual's behavior (Geertz, 1973) and Van Maanen and Barley (1989) stated that groups devise strategies to cope with problems based on cultural manifestations that have evolved over time. As Wallace (1999) contended, Internet web designers don't know much about their potential audience or how much time the viewer will spend attempting to understand the information. When viewers are exposed to AE home page content, they develop a perception of the organization's culture based on the projected information.

Misinformation is passed on to new members and has the potential to become an artificial cultural standard. The following two sections identify problems that dissimilar

AE home page cultural messages may create through web page design dissimilarities and program content dissimilarities.

Problems with Dissimilar Web Page Design Themes

Although Hedberg and Berger (2001) noted that the content is generally more important than design, the manner in which the content is presented affects the significance of the information (Mitra & Cohen, 1999). My logic for presenting web page design prior to AE program content in this section is that the technical download must be completed prior to the viewer evaluating the home page program content information. Using this approach, the focus is not only on the content of the WWW texts but emphasizes the technical significance of the medium in which the content is presented. It is important to recognize that the interpretation of the AE program content is also a result of production influences that determine how the text becomes meaningful in the public sphere (Mitra & Cohen, 1999). If the viewers become frustrated with the web page technical design, they may cancel the download prior to reviewing the program information.

Web pages have unintended consequences independent of their builders' intentions (Slevin, 2000) and the design can determine how the content becomes meaningful to the viewers. Similar to physical placement of objects in an organization's facility, web page presentations may purposefully or inadvertently signify the importance or value of behaviors (Pratt & Rafaeli, 2001). Web page design may mitigate any message or impact the program content is intended to create. Web users don't attempt to understand the web page layout. At best, they may explore until they locate their information or become frustrated and leave the web site (Sprool et al., 1999).

One of the major viewer frustrations with the WWW is slow web page download (Sklar, 2000) and one of the primary causes of long download times is pictures or graphics. This situation was evident in the conflicting WWW publication web design and AE home page design themes. In this research, more than 30 percent of the AE home pages took more than 20 seconds to download on a 56 K modem. Eight of the nine sites had pictures of AE activities and the ninth site had graphics for hypertext link buttons. There were also a number of conflicts concerning hypertext links. Whereas the publication design themes emphasized making certain all of the links work, the AE home page themes emphasized having more than an average of 18 hypertext links per page. Obviously, the more links there were on a page, the greater the chance there was for inoperable links. The AE home pages also conflicted with the publication themes concerning a consistent link navigation style. The majority of the AE home pages had multiple formats to identify the hypertext links. In addition, more than half of the home pages had a redundant link to the current home page and 50 percent of the links on 21 sites were not related to the adventure education program content.

There were a variety of conflicts between the WWW publication and AE home page design themes and the majority of the AE home pages didn't integrate the publication web page design themes. It was hard to scan for information on 16 of the sites and difficult to navigate back to the home page on 19 of the web sites. When viewers cannot locate information or navigate easily, they tend to leave the web site. Finally, there were spelling or grammar errors on 16 of the home pages and page updates weren't available on 18 of the home pages. If the viewer doesn't believe the information is correct

or current, the page may lack credibility and thus project a negative cultural impression for the AE organization.

As the scenario in Figure 4.5 illustrates, if viewers were searching for information on the 25 AE home pages used for this research, initially, nine home page requests would have been cancelled because of long download times; five of the remaining 16 pages would have been rejected because it was hard to scan for information; seven of the remaining 11 pages would have been cancelled because a hypertext link didn't work and the last four home pages failed because the viewer couldn't easily navigate back to the home page. Although none of the viewers left because of poor text/background contrast, one of the pages that had a slow download process did have poor contrast. Relative to this simple AE home page evaluation process, the viewers would have stopped viewing all of the web pages before being affected by inconsistent navigation style, spelling or grammar errors or lack of a page update.

Identified in Figure 5.1 were the problems that arose when the WWW publications web page design procedures were not followed. When the AE home page design themes were considered, the viewers might have been frustrated by other situations. Many of the pages had more than 20 hypertext links and there was an average of 18 links per page. In addition more than 50 percent of the links on most pages were not relevant to the AE organizations' activities and there were other design features that may have frustrated the viewers. When AE organizations create home pages, the designers need to consider and incorporate WWW publication web pages design themes. Wilson (1995) noted that

design needs to incorporate the agenda of the organization's web pages. Home pages that

don't adhere to the publication design themes increase the potential for the viewer to cancel the page downloads prior to reviewing the program content information. The following section reviews the problems that may arise from inclusion of dissimilar AE publication program content themes.

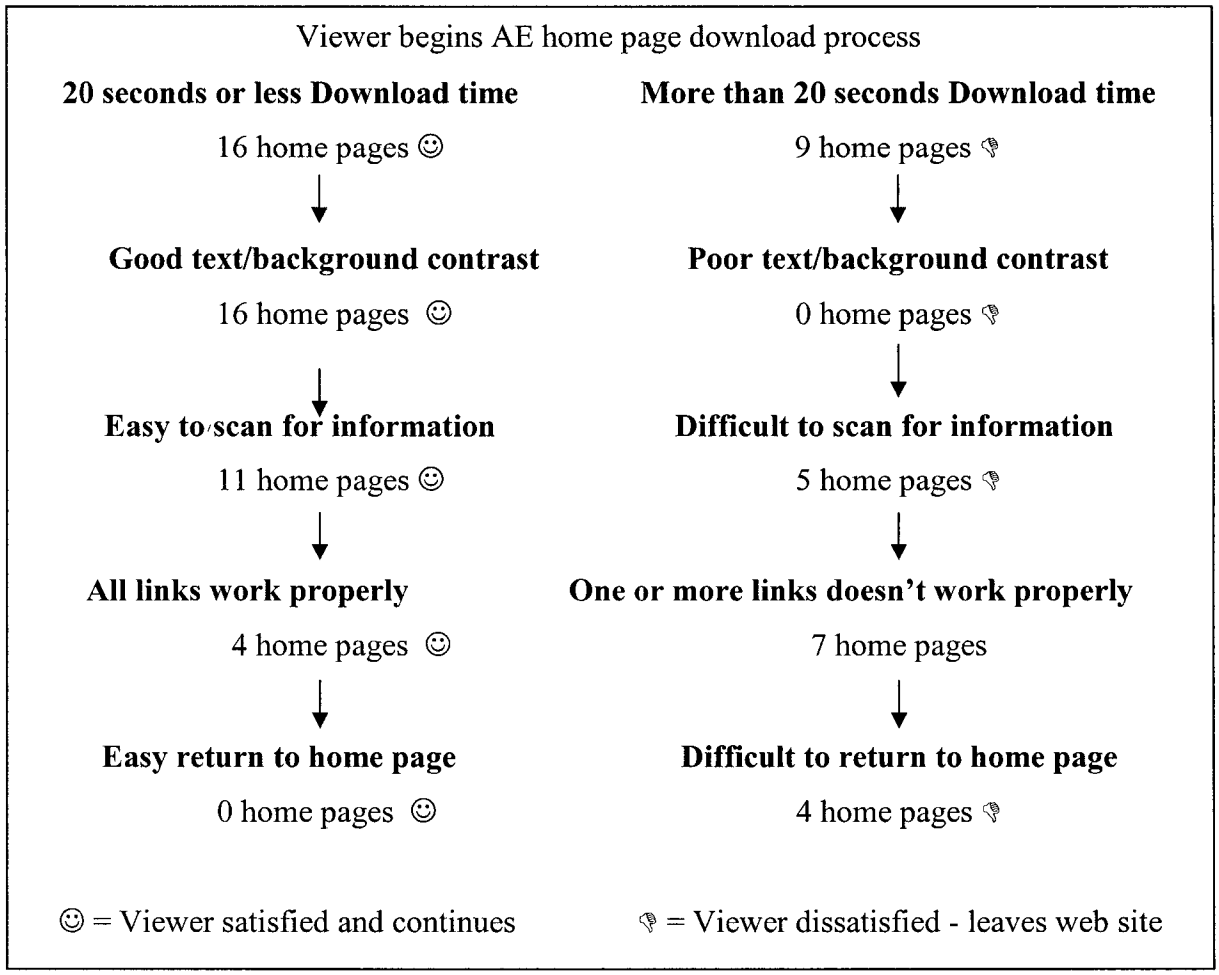


Figure 5.1. Adventure Education Home Page Evaluation Process

Problems with Dissimilar AE Program Content Themes

Geertz (1973 p. 11) noted that, "Culture is composed of psychological structures

by means of which individuals or groups of individuals guide their behavior...culture is public because meaning is." When participants initially arrive at AE facilities, they are exposed to numerous stimuli (outdoor environment, high challenge elements, close proximity to other individuals, facilitator behavior, etc.) that may inhibit their ability to absorb and process new ideas and instructions. For newcomers to transition from outsiders to active participants (insiders) there is a necessary socialization process to acquire an understanding of the accepted cultural beliefs, values, norms and underlying assumptions. Web pages provide an opportunity for AE organizations to communicate the program content culture, minimize potential participant concerns and maximize pre-course interaction. As cultural symbols, web pages create a framework to tell stories, clarify cultural rituals and guide existing and new member behavior. If AE home pages project dissimilar or confusing cultural messages, the information can create unnecessary pre-course excitement or concern and inhibit the potential for individual and group learning.

Symbols and rituals qualify what is acceptable and normative in an organizational framework (Geertz, 1973). Culture as a projection on web sites is the structure of meaning that shapes ideas and attitudes. Although it may be more negligent than purposeful, dissimilar web page program content information can create false impressions of potential AE course outcomes.

Information posted on web pages can attain the quality of cultural truths. Ott (1989) noted that the words and other symbols we use to project understanding become powerful truths because they are used to explain a situation, induce cooperation or control outcomes. Web page designer(s) need to realize that they are creating preconceived ideas

of how the AE course functions and what is appropriate social behavior. When the web pages project a perspective, individuals become attached to the organizational truths through affective and cognitive processes (Beyer et al., 2000). The culture individuals experience when they first visit an AE organization home page has the potential to influence the climate if and when the web visitors participate in activities at the AE facility. Cultural values and norms become realized through perceptual or cognitive association and an organization's web site can project a positive or negative impression of the organization's culture. (Hatch, 2000)

AE www sites can provide virtual information to acclimate and begin the socialization process prior to the participants arriving at the physical facility and increase the potential that participants' expectations will be satisfied (Major, 2000). If individuals review AE home pages and believe the cultural priorities are challenge activities, climbing ropes, and high elements, they may not understand why there is an emphasis on post activity processing, individual communication, and experiential education during the actual AE session. If participants believe they have been misinformed through the web page information, they may become frustrated and unwilling to cooperate in the AE activities.

Summary and Conclusions

This research emerged from an academic and practical interest in adventure education programs. Although the decision to review AE home pages wasn't part of my original research concept, my previous experiences as an AE participant, facilitator and web page designer created a situation where I felt confident and competent to complete this qualitative research study. I began with a general interest in AE concepts and the

focus on AE home pages evolved as I immersed myself in academic studies, an eclectic literature review and adventure education facilitation. I believe the serendipitous progression and the research outcomes provide another method to enhance web page design and WWW research studies.

The AE home pages in this study had dissimilar program content cultural themes and web page design cultural themes than the academic and professional literature. Based on these research results, Web page cultural research can not be completed in isolation from other organizational mediums or disciplines. Just as organizational culture is influenced by multiple perspectives, web page cultural research needs to integrate various media and disciplines that guide and affect how the information is presented to multiple publics. Individuals and/or groups need to include multiple perspectives in the evaluation of organizational web pages. If this research had been limited to one media type or design discipline, it would have created a biased and inappropriate conceptual framework of web page design and research.

I believe this multi-faceted research approach substantiates the necessity to reconsider how web pages are designed and the requisite need to include multiple perspectives in the research and evaluation processes. The three phase research process in chapter three and the overall research procedures can be modified to evaluate a variety of organizational web pages. If organizations include a more varied range of perspectives to evaluate their web pages, they can enhance the program content and increase web page design usability.

Recommendations for Developing a "Good" AE Home Page / Web Site

This section focuses on how to design a web page that mirrors an organization's program content culture and adheres to WWW publications web page design guidelines. Since all web pages are not created for the same audience, please realize that the recommendations are not meant to be specific rules for web page development. The recommendations were based on information documented in the publications used in this research and my: (a) academic and applied marketing background, (b) academic and applied communication experience, and (c) academic and applied WWW page design experience.

Organization Program Content Culture

Web pages project an organization's beliefs, values, norms and behaviors as program content culture. Since web viewers may or may not visit your physical facility, the web page information has the potential to influence their online and offline behavior and attitudes regarding your organization.

Web page projected culture

Determine what organizational culture(s) you want to project? What are the primary beliefs, values, behaviors and norms that you want to portray on the web site? Does your web site mirror your physical organization, activities, and interpersonal interaction?

Message meaning

Decide what meaning you want to convey with your message? Does the content convey an accurate and correct meaning? Analyze the web interface based on potential viewer future face-to-face communication.

Viewer interest

Make certain the web page design encourages viewer interest in the organization? What areas of the web pages are most interesting from the viewer's perspective? Be certain to test your program content with a variety of audiences.

Pictures and graphics

If you include pictures, determine how the graphic will integrate and reinforce your program content message. A picture may be "worth a thousand words," but it may connote a variety of meanings to the web viewers. Make certain any graphics used don't overwhelm your text message(s) or conflict with the main message(s) you want to communicate to your viewers.

Web page design

How does the web interface design affect the organizational program content? Test to determine how well the technical design supports the program content. Make certain the technical design has been tested with a variety of audiences or focus groups. The following information identifies in-depth guidelines for designing web pages.

Web Page Technical Design Guidelines

I have interpreted a number of technical design features noted in the results section as guidelines for successful web page development. Initially, the positive aspects are noted as features that should be considered success and then. Next, the features that should be avoided are identified.

Design features to integrate in the web page development

Web page download time

Design the web pages so that the download time is less than 20 seconds. Remember that web page download has been noted as the major viewer complaint.

Text/background contrast

Maintain appropriate contrast between the text and background. Avoid "novel" animations that may potentially distract and annoy the viewer.

Scanability

Increase the viewer's ability to scan for information quickly (scanability). Use hypertext links on the home page to guide the viewer to necessary resources.

Links work properly

Make certain that all links work properly. Links that fail irritate and frustrate the viewer and damage the organization's credibility.

Easy hyperlink return

Hypertext links should be available so that viewers can easily return to the organization's previous page without using the "back" button. If your organization's web page has links to external web sites, use "target" links to maintain contact with the viewer.

Consistent hyperlink style

Use consistent text style, font/graphics/pictures size and locations for the web page navigation links. Viewers want to move seamlessly within and among the organization's web pages.

Spelling and grammar

Spell and grammar check all web pages prior to making them available on the World Wide Web. Spelling and grammar reflect an organization's communication style and professionalism.

Page update

Include a date on each web page indicating when the information was created or updated. If the web page information is outdated, it reflects negatively on the organization's culture and credibility.

Design features that may negatively impact web page usability

Pictures

Don't believe that pictures are necessary on the home page. Pictures slow download speed, which is the major frustration with web viewers. Make certain the pictures don't overwhelm important content and distract the viewers from the text.

Too many links

Don't overwhelm the viewer with links. Minimize the number of links by categorizing the information and consolidating the links. Use drop down menu style links to minimize clutter and optimize screen usage.

Unnecessary hyperlinks

Don't include numerous unnecessary links. Organize and categorize the links to minimize the number of links on the page. Links that don't offer more information pertaining to your organization's functions increase clutter and consume limited screen space.

Links to the current page

Don't create active hypertext links to the current page. Viewers don't need to spend time opening a link to the current page.

Redundant links

Don't place redundant links on a "single screen" web page. When multiple unnecessary links are available, the opportunity for inoperable links and viewer confusion increases.

Types of contact information

Don't limit viewer communication processes. Promote numerous methods for viewers to contact your organization. Enable viewers to communicate via the Internet, telephone, postal and "face to face" at your physical location.

Contact information location

Don't make it a challenge to locate your organization's contact information. Be certain to have contact information on each page and consider viewer convenience relative to where you place this contact information. Viewers shouldn't have to scroll to the bottom of page(s) to find contact information.

Font colors, styles and sizes

Don't overwhelm the viewer with a multiplicity of font colors, styles and sizes. Use font variety sparingly to emphasize importance and guide the viewer through your information.

Full versus partial screen usage

Don't patently use partial screen width for your overall page design. Some web pages using partial screen width force the viewer to scroll down the page for information that could have fit on a full screen display.

Web Page Development Recommendations Summary

The previous section identified program content cultural themes and web page design cultural themes that should be considered in the development of organizational web pages. If a goal of WWW pages is to create positive impressions and relationships with the viewers, it is critical to project the appropriate organizational culture and integrate user-friendly web page design features.

Potential Future WWW Media or Multimedia Research

Whereas I believe this research has provided a unique methodology to evaluate web pages, there are more opportunities for Internet and WWW research. Questions for future research might ask: Do organizations consider WWW pages as a cultural projection? What do organizations hope to accomplish with their WWW page information? How are WWW communications perceived as an organizational or industry oriented medium? Who suggests, determines or controls what organizational information is projected on the www?

Communicating with the web page designers would be beneficial to determine what influenced and guided the conceptual and technical orientation of the AE home pages. It would also be useful to answer design questions such as: What organizational cultures influence the web designer when they create WWW pages? Who do the

designers perceive as the primary or secondary audiences? What skill do the designers have relative to the content and design of the web pages? How do the designer's link the web page to the organization's agenda?

Other areas of interest might include evaluation of what functions, activities and navigational processes the viewer completed when they visited the web site. There is software available that can evaluate web page viewer's interactive behaviors to determine when users made an initial web page download request, what links they utilized, peak usage time and a variety of other viewer behavior information. Organizations and web page designers need to have a better understanding of their viewers to create web pages that develop positive relationships with their viewers and encourage interactivity and repeat visits. If the content is interesting and the web page design is viewer oriented, the WWW medium should communicate a positive organizational culture and enhance future online and off line organizational communications and interactions with participants.

The vignettes in chapter one identified the potential problems viewers may have interpreting cultural projections on WWW home pages. As an academic, AE facilitator and web page designer, I believe this research process has verified that cultural projections on the WWW need to be evaluated from multiple perspectives.

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Post-Secondary Academic Adventure Education Home Page List

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Site F - http://www2.gasou.edu/cri/SthrnAdvntrs/SAPages/ropes_course.htm

Site G - http://www.ohiou.edu/recreation/op/op_rcc.htm

Site H - http://www.uwec.edu/recreation/ropes/

Site I - http://fsu.campusrec.com/reservation/fsuchallenge.html

Site J - http://www.ume.maine.edu/mainebound/Text/resource.htm

Site K - http://www.huntington.edu/thornhill/ropes/default.htm

Site L - http://www.northland.edu/workshop/gwhite/
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Site M - http://www.unc.edu/depts/camprec/OEC/ropes.html

Site N - http://www.oap.colostate.edu/crc/CRChome.shtml

Site O - http://spider.georgetowncollege.edu/freshmanseminar/Syllabus_FS%20Info
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Site P - http://www.purdue.edu/recsports/fitness/ropes/ropemain.html

Site Q - http://info.hartwick.edu/student/challenge/index.htm

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Site S - http://campusrec.arizona.edu/ropes/

Site T - http://www.uncwil.edu/stuaff/camprec/discover/2challng.htm

Site U - http://www.recserv.ecu.edu/adventure/challengecourse/challengemain.cfm

Site V - http://www.uwlax.edu/recsports/RopesCourse.htm

Site W - http://edschool.csuhayward.edu/Departments/REC/EVINSTIT.HTML

Site X - http://www.recsports.umich.edu/challenge/index.html

Site Y - http://www.unl.edu/crec/OA/challenge.html

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