

ABSTRACT

GOTTLIEB, JACQUELYN CHERYL. Managers' perceptions of the Website development field: the process of creation and the people involved. (Under the direction of Brad Mehlenbacher.)

This qualitative study is based upon the responses of three Web designers and three managers employed in student services departments at a Southeastern U.S. University. The purpose of the research has been to describe managers' perceptions of the Website development field with respect to their preconceived notion of what is a Website, reasons why to create one, and intended use. These perceptions helped lead me towards the ability to further understand managers' communication patterns and expectations of Web designers. The research was focused on established organizational development theories, in particular, cross-boundary communication challenges between employees from different disciplinary cultures.

It was found that, in many ways, Web designers and managers expect similar qualities in one another. Likewise, all participants similarly valued Websites. The challenge was that they perceived each other as having different expectations and felt frustration from experiencing their manager or Web designer "speaking different languages." All managers agreed that some level of understanding of Website development, including HTML knowledge, is necessary for a manager to have the ability to communicate well with their Web designer. Web designers also agreed that managers need some understanding of Website development,

but knowledge of HTML is not necessary. Web designers having effective communication skills and understanding their business were the biggest expectations by the managers. Although there was agreement about the significant role their Websites' played in their businesses, there appeared to be a lack of formal strategic planning.

Each participant realized the vast skills necessary for Website design and the lack of available resources, yet the concept of a Website development team was not explicitly prevalent. There seemed to be a more implicit understanding through the division of tasks via acknowledging different job titles. The Web designer was seen primarily as a visual designer and not expected to have the same skills as other titled Web developers such as an Information and Communication Specialist. Since all participants saw Website creation as continuing to become more complicated, they voiced their belief that Web designers are not qualified enough to design what may be the future of Websites. Managers seem to be expecting their Websites created in such a way that those staff members without HTML knowledge can easily update the content. The aspect of Website creation that was a big dilemma for all was who owned and maintained the content. The Web designers agreed with the managers that Web designers are not expected to be responsible for content creation. Managers claimed that Web designers don't have the skills or interest in content. Web designers only acknowledged that their role was formatting content for the Web.

Ultimately all participants wanted the same thing—to be able to communicate well with one another to create an effective and useful Website. All believed they were decent communicators. All managers felt their Web designers spoke another language and had

different priorities in mind. The Web designers felt it was their manager who couldn't seem to communicate well or able to focus on the correct priorities of Website design.

**MANAGERS' PERCEPTIONS OF THE WEBSITE DEVELOPMENT FIELD:
THE PROCESS OF CREATION AND THE PEOPLE INVOLVED**

by

JACQUELYN CHERYL GOTTLIEB

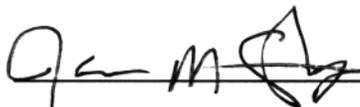
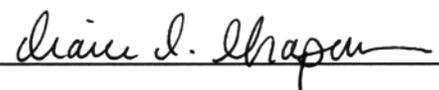
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Master of Science

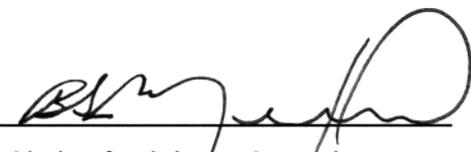
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Chair of Advisory Committee

DEDICATION

This Thesis is dedicated to the biggest joy in my life, my son Brandon Gottlieb-Raines.

Thank you, son, for your support and patience throughout your toddler hood. Your laughter and smiles helped keep my priorities in perspective.

BIOGRAPHY

Jackie Gottlieb is a 1990 graduate from Kutztown University, Kutztown, PA with a Bachelor's in Fine Arts in Photography and a minor in Psychology. She received a certificate of 3-D Animation from the School of Communication Arts, Raleigh, NC in 1993. Jackie spent time honing her skills, and in 1999, she enrolled as a Master of Science in Training and Development candidate. In 2000, Jackie became the mother of a son.

Jackie's career evolved from Photographer to Multimedia Designer to where she is today, a Web Content Developer. She has had fortunate opportunities to work within the corporate, non-profit, and higher education industries. As Jackie's job roles evolved parallel with technological changes, she found herself learning her niche and true interests. Understanding organizational and disciplinary cultures and their impact on communication practices has become a focus of her attention. Finding new opportunities to apply this interest and knowledge will be the next step in her career chapter.

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Introduction

By mid-1990, the Internet boom was underway—in fact, usage more than doubled between the years 1994 and 1995. One in three adults viewed the computer as an “indispensable household appliance” (“Americans going online,” 1995). The number of Americans using the Internet in their homes grew exponentially between the 1995 Pew Research Center report of 14 million adults—25 million when combining home, work and school users (“Americans going online,” 1995) and Nielsen’s December 28, 2004, reporting of 137,996,052 home Web users (McGann, 2004). The statistics are actually even more dramatic because in 1995, survey questions distinguished between using the Internet from using the World Wide Web (WWW)—it was not used as interchangeably as it most often is today. At the time (“The Internet News,” 1999), one million Americans were navigating the WWW, “a whole new dimension of the Internet [that was] still uncharted waters to most users. Only one in five of all online users (3% of Americans) [had] ever signed onto the Web” (“Americans going online,” 1995).

Four years later, the Internet was becoming mainstream with 41% of adults using the Internet (“The Internet News,” report, 1999). According to the Pew Research Center’s “The Internet News” (report, 1999), “As more people have gone online and more Websites have become available, the number of Internet users who go online for a range of information has grown substantially.” Internet usage tracking by Pew Research Center’s phone surveys from 1998 through 2002 asking respondents “Do you ever go online to access the Internet or World Wide Web or to send and receive email?” showed evidence of a steady increase. Usage went from 42% online in December 1998 to 61% in 2002 (“Political Sites Gain,” 2003). Today, in early 2005, Internet and WWW usage is so prevalent it is projected that “more than 6 million American children [under the age of 18]—more than one in four of kids online from home—will have their own personal Websites” (Grunwald, 2003). Nocito (1998, p.4) concludes, “As the number of Web sites increase and more information becomes available on the Web, the value of the medium as an information source will increase as well.”

Greenspan (2004, March) noted the following:

There's no doubt that the Internet has changed the way millions of Americans live, work and play, but there is also a growing population that use the venue as a method of self-expression. 1,500 Internet users found that 44 percent have contributed material to the Internet, which translates to roughly 53 million individuals. Online publishing will grow as a whole.

Along with the multitude of individuals creating personal Websites, organizations continue to expand and improve their Website initiatives, “investing [increasingly] more money towards developing Websites” (Schatsky & Bayriamova, 2004). A May 2004 survey conducted by JupiterResearch found that 49% of the surveyed organizations were focused on creating better designs for the two to four major Website implementations they had planned (Greenspan, 2004, May). The opportunity for “new revenue” is a strong reason organizations chose to have Websites (Lindstrom, 1999). Hunt Burriss & Wallace (2002) also have recognized that “over the past two decades, there has been unprecedented growth in the nation’s information technology (IT) industry. With the introduction of the Internet and e-commerce, the pace of this growth has dramatically increased (p.111)... National data reveal that occupations in information technology are among the fastest growing and highest paying” (p.112).

Optimally, Websites are used as a strategic business and marketing tool for services and sales but often are created for the sake of having representation on the Web. In agreement, Turner & Perry (2002, p.61) say that “technology planning can no longer be a peripheral or stand-alone activity; it must be incorporated into the institutional planning and strategic direction-setting process.” Simply having a presence on the Web, as Lindstrom (1999) reminds us, “doesn’t guarantee greater economic benefit[s]. Websites need to be well-managed and consumer-oriented.” One of the six common success factors found by Lindstrom (1999) includes, “an Internet strategy should be an integral part of a company's strategic plan—it’s about creating a business, not a Website.” Although much of the research has been focused on corporate business increased investment of Websites, educational institutions have not gone unaffected. A 2002 survey by “Nielsen NetRatings” (2002) found that “audience use of University and educational Websites [also] continue to grow.” The population of children who have grown up creating their own Websites will have expectations of the educational institutions they choose to attend.

Like the corporate industry, the education industry is affected by the messages its Websites project, both positively and negatively.

Once an organization or department decides a Website needs to be created, the decision of who will take the lead and ensure its completion needs to be addressed. This leader, or manager, needs to be someone who will focus on the value the Website will bring to his or her audience. Greenpan (2004, May 21) noted JupiterResearch's recommendation that "a single executive [should] be charged with responsibility for maximizing the overall business value of a company's site." Corporations seem to have begun to follow this suggestion (Lindstrom, 1999), but it is unclear how much educational institutions have embraced it. In the case of any Website effort, therefore, Lindstrom (1999) stresses, "Before a site is launched, it is imperative that the company assembles a highly trained team with a clear leader and project owner. This ensures that the project leader closely monitors the developing Web strategy."

Managers are often elected, whether that is a mandate by their supervisor or makes a self-decision about the necessity of a Website, to take on the responsibility of managing a Website. I am defining the role of managers as those with personnel responsibility including the hiring and overseeing of a Web designer. In academic institutions, those with managerial duties most often hold varying titles that include Assistant/Associate Director, Director, Department Head, Dean, Associate Dean, Assistant Dean, Assistant Vice Provost, Associate Vice Provost, or Vice Provost. Two of the manager participants in this study were Directors and one was an Associate Director, but for the sake of consistency, I refer to them as managers.

After managers find themselves with the task of creating a Website, usually with little to no resources, they will often seek some kind of assistance to create the Website—Web designer is the term being used to describe someone who creates Websites. There are many other titles used that encompass similar task expectations such as Web Content Developer, Web Developer, and Webmaster, to name a few. From my experience, often the priority of who will create the Website is driven by the manager's perspective on their department's financial status, their perceived longevity of the job task, and overall assumptions about Website design and Web designers. The focus of this study is on managers' processes and thoughts on hiring,

communicating, and managing Web designers along with the management of creating a Website. My experiences and casual conversations with managers and Web designers have led me to believe there is some kind of disconnect between skills Web designers actually do have and the skills managers believe they have as a result of their perceptions (*see Appendix 5 for Glossary*) about Website design.

Although there are many people today who appear to have the skills to create Websites, the design of a useful interface that contains contextually rich usable content, is accessible and visually appealing requires highly developed skills. A simple Website is one that contains few pages with limited navigation functionality—navigation is the structure that allows users to interact with the content. Knowing that children, as young as six, are able to create their own Website gives the impression that anyone can create one. That is true, but the real challenge is intentionally creating an effective, useful, and usable site. To do so, effective communication skills and understanding workplace politics is necessary. Mark (2004, November 16) provides elaboration:

For every competent Web design house, there are dozens of alleged designers who offer little more than minimal HTML skills. When considering who to hire to create or revamp your site, bear in mind that a poorly designed or executed Website can cost you money, alienate customers, and damage your organization's reputation. When it comes to Web design, not all things are created equal—huge disparities exist between a site that is well designed and user-centric, and one that is uninspiring “brochure-ware.”... If your Website is not thoroughly integrated with your business goals and marketing strategy, you risk spending good money after bad. Beware of developers who don't take the time to learn about your business and where it is heading before they start to develop your site. In the end, a good Web developer must have professional design skill, technical know-how, and a passion for usability. Because when it comes down to it, meeting your organization's objectives, delivering a return on investment AND driving user satisfaction will be the true test of your company's online success.

Skilled Web designers understand what is involved to ensure their Website functions optimally—quickly and accurately. Web designers need to understand the following issues so that they can build a Website that reduces frustration and is seen as credible because it has been found that more than half of surveyed Americans have been frustrated by the speed of their Internet searches, and it is not because they are inexperienced users (“The Internet News,” report, 1999). It is projected that it will be 2008 before low-end bandwidth users will have the

necessary speed to be satisfied with the download times (Nielsen, 1999, May 2)—the speed at which pages refresh and files can be downloaded. Jakob Nielsen (1997, October 1) has found that “credibility is important for Web users, since it is unclear who is behind information on the Web and whether a [Web] page can be trusted. Credibility can be increased by high-quality graphics, good writing, and use of outbound hypertext links.” To clarify Nielsen’s claim, when users visit a Website, unless they are familiar with the organization, they really don’t know who wrote the information on the Website or whether that information is accurate. Users need to feel they can trust what they find at a Website if they are going to be repeat visitors.

The writing, though, needs to be concise with the use of highlighted keywords, meaningful sub-headings, and one idea per paragraph, be quickly scannable and blatantly displays the conclusion. One of Nielsen’s (1997, October 1) studies showed that 79% of their participants said they always scan newly visited Web pages. A big challenge is that “73% of Websites do not explicitly emphasize what they offer” (Nielsen, 2003, November 10). The manager and Web designer need to be able to effectively communicate to one another if the resulting Website is to be the product the manager really needs.

Background

From my experience at this University, skills among Web designers are not equitable. Many Web designers are hired on a temporary basis and are usually students in one capacity or another or people wanting to enter the field; some find themselves adding the job task to their already full-time job—Julie Still (2003) has defined these people as “accidental Webmasters” in her book of the same title and some are full-time permanently dedicated to the task of Website creation and maintenance. Two of the departments within the division I have experience with currently employ two full-time permanent Web designers, including myself, while the remainder of the departments rely on internal employees whose Website design role is only a part of their primary job role—the task responsibilities they were originally hired for.

As a Web designer, I have over eight years experience with managers who required me to design and create Websites for their department. My experience has primarily been the need to be a fore-thinker—the “expert.” My project managers’ vision and scope of their Websites rarely gets

presented to me in a completed fashion. I need to ask succinct questions and encourage communication between us for effective and timely progress on the Website development process to be accomplished.

The mandate to redesign a particular division's Website is such an experience and the one that sparked my interest in writing this qualitative study. The original Website contained primarily a homepage with a list of links, no graphics, and four headings: Vice Provost Staff; Units; Special Initiatives; and Reports, Committees and Academic Responsibilities. The majority of the links led to other Websites or a file to download. As an objective user, I found the Website to be out of context—lacking a clear purpose. It more resembled a repository of documents rather than an informational resource. Upon being assigned to redesign this Website, I was unclear about the expectations and requested elaboration. My project manager communicated to me that she wanted a “better looking” Website that showed their audiences the initiatives this Division was spearheading.

To gain a better understanding of this Division's audiences' needs and to determine the scope of the redesign, I requested key stakeholder names along with the verbal support to interview them. I was given the stakeholder names, but only when one of the stakeholders, a higher ranking co-worker, wrote my project manager about his gratitude for including him in this process, did my project manager support my interview initiatives. It wasn't until that point that my project manager's interaction with me went from feeling like distance and disrespect to a feeling I was somewhat appreciated.

From the interviews, I sought to learn what the audience members felt was this Division's mission, what the Division should do and offer their audience, and what they would like to see this Division provide for their campus audience. The results of my interviews provided clarification of audience confusion about this Division's mission as well as gained a sense of what information and interactivity would be useful to the audiences. Participants acknowledged their desire to have information about how this Division can help them with their jobs—forms they need, available funding, and process clarification. The project manager decided the goal was to provide more on this Division's initiatives.

After two years of working on the Website—held up due to delays in obtaining content, it was completed to my project manager’s satisfaction. A major challenge with prolonging the Website creation process when there is long lags of time not focusing on it, memory of decisions made earlier begin to fade. Although I kept records of these decisions, it required much negotiation, which I was often unsuccessful with, to continue with the original decision. Subsequently, decisions were changed resulting in further production delays. The decisions I am referring to were focused on navigation (structure), graphics (design), and overall what content would be included. Over the two-year period, the decision changes did not impact the timeliness of the content—it was a kind of changing mind decision rather than strategically focused.

The challenge was the questioning of earlier decisions that ended up preventing us from making new ones and delaying progress. It was a very frustrating process for me because, to this day, the Website does not meet my standards of what makes a useful Website. My project manager was very pleased with the resulting Website. She seemed to base her approval from positive peer feedback and her personal like of the design. The Website’s content was 90% the same as the original Website. A more accurate way to find out the Website’s usefulness would be to conduct a Usability Study; something my project manager didn’t see a need for.

The significance of repeating this story is to provide a context of the communication challenges between a project manager and a Web designer from my point of view. My goal was to produce a usable and useful product for this Division, yet I felt prevented from doing the best I could. I also felt disrespected, under-appreciated and an overall lack of priority for this project. I understand my experience most likely was not my project manager’s intention, therefore learning managers’ perceptions is a way for me to better learn and understand.

This is one story of many and extends beyond this one division on campus. The University may have a vast number of existing Websites, yet the ratio of full-time permanent Web designers to Websites is minuscule. In 2003, this University converted their SPA salary classifications to a banding method where there are fewer job titles with more flexibility of salary. Web designer job tasks are embedded within one of three banded positions according to the classification department in Human Resources. I recently learned of a Web Support Technician title held by

one person in the Libraries. There is a Web Content Developer, EPA position title—a title my manager developed and which I was hired as. To date, there are three employees with that particular title. (*see Methodology-Population section for further detail*)

Within the University, there is vagueness as to under what job description to hire a Web designer. This is evident due to the fact that there is an EPA job position and at least three different job title bandings. (*see Appendix 1*) If there is no clear standard or definition, then it is feasible that University employees will have a challenge determining Web designers' job roles. A professor in the college of management acknowledged that the results of this qualitative study would be interesting because “as administrators, we just don't know what to do or what to ask.”

Statement of Problem

This study's focus was on managers and Web designers as members of different discipline cultures within an organization that perpetuate unintended miscommunication and potentially abundant assumptions. These cultures appear not to be able to “see” each other's roles—they are each speaking a different language (Schein, 1996). Managers would place me in a “Web designer” or “artistic” culture, but I see myself as having hybrid capabilities as an interpreter or translator. I understand the business and politics of the organization and understand the scope of Website design. What I lacked was how to communicate and negotiate with a manager who seemed to perceive my abilities differently from how I saw my abilities. I felt a disconnect between what I knew needed to be done and the ability to influence a manager that was the best way to create an effective Website. I hoped to make explicit the perceptions managers have to provide me with the necessary knowledge to be able to diminish that disconnect.

At some point, managers at the University determined that it was necessary to create a Website. Once decided, there ought be an implementation procedure or at least a task timeline. From my experience, commitment to a timeline is often avoided, and money is often not budgeted for Website creation resulting in managers seeking the cheapest way to find help. I have witnessed a number a scenarios including managers deciding to do the Website themselves; hiring the first student they could find; and/or enlisting the help of a staff member like their administrative assistant. My extensive involvement with keeping abreast of happenings on campus led me to be

aware of reactions to newly created and updated Websites on campus. When a manager invests little on the creation of their Website, it often leads to a product that doesn't communicate and/or function in a way that is useful to their audience(s). Vincent Flanders (2005, February 25) provides feedback and a review of a Website he considers to have usability issues:

Their e-mail: The Houston Art League is the oldest art organization of a major city. Unfortunately, this link shows what happens when you (apparently) let artists design Web pages: <http://www.artleaguehouston.org/>

The IFRAME in the middle of the page requires horizontal as well as vertical scrolling to read the text. Oddly, there's plenty of room on the page to make the IFRAME wider, or simply to display the text without it.
Enjoy -- if you can!

My comments: One of the advantages of having artists design Web sites is that you usually get good color combinations.

Visitor numbers of the Website and audience feedback are ways to begin to learn a Website's usefulness. If the manager is fortunate enough to have the funding to hire a Web designer with all the necessary skills, the resulting Website still may not be what they end up wanting or needing although that may not be recognized until a much later date through some form of audience feedback. This can lead a manager to believe their investment was a waste. The process of communication with the Web designer and the manager knowing what skills and knowledge is needed to create a Website is the missing link.

One may ask why not just train the Web designers—because they are the ones lacking knowledge and skills. It is fair to say this could be a qualitative study in itself. This research originally began with the Web designer and whether or not a Web-based Training course to teach Information Architecture should be created—what I feel encompasses the skills of a qualified Web designer. I wanted to learn what would motivate Web designers to further their skills in usability, accessibility, visual and information design. My findings showed that Web designers mostly perceive themselves as “knowledgeable enough”—or adequate enough for the work they were doing—in the areas of usability, accessibility, and information design (Gottlieb and Magliocca, 2003). For the same areas they admit to needing more skills, they also admitted to not seeing a reason to pursue those skills unless their manager required them to. This can be a

real challenge when managers rely on their Web designers to have the necessary skills or at least, expect Web designers to take it upon themselves to gain those skills.

Whether they see themselves as so or not, it is the manager's responsibility to set the expectations of job roles and the working environment. They are also responsible for ensuring they communicate well with their employees and do set the climate of communication. Beyond managers' perception of themselves and their hired resources, they are responsible for the success of their projects and ultimately their departments (Dessler, 2004). Although dated and yet still holds true to my recent experiences, Nielsen's (1997, June 15) findings of the "Top Ten Mistakes of Web Management," reinforce the reason why I decided that managers should be the focus of this study:

1. Not Knowing Why--This is the number one problem, all right. I am amazed how many websites are built simply because some executive told somebody to do it without telling them what the site should achieve. And no, it is not an acceptable reason that 'everybody else is doing it.'
2. Designing for Your Own VPs—Don not build a site that your top executives will love; they are not the target audience.
3. Letting the Site Structure Mirror Your Orgchart--The site structure should be determined by the tasks users want to perform on your site, even if that means having a single page for information from two very different departments.... A classic sign of a mismanaged website is when the homepage has a button for each of the Senior Vice Presidents in the company.
4. Outsourcing to Multiple Agencies—Consistency is the key to usable interaction design....The best way to ensure consistency is to have a single department that is responsible for the design of the entire site.
5. Forgetting to Budget for Maintenance—If you simply spend the money to build a glamorous site but do not keep it up to date, your investment will very rapidly turn out to be wasted.
6. Treating the Web as a Secondary Medium—The Web is a new medium. It's different from [other mediums]...so you cannot create a good website out of content optimized for any [other] medias.
7. Wasting Linking Opportunities--...link directly to [the subject of the content you want your users to find].
8. Treating Internet and Intranet Sites the Same—Internal intranet Web sites need to be managed very differently from public Internet sites.
9. Confusing Market Research and Usability Engineering—A Web design is an interactive product, and therefore usability engineering methods are necessary to study what happens during the user's interaction with the site.
10. Underestimating the Strategic Impact of the Web—It is a huge mistake to treat the Web as if it were an online brochure...The Web should be considered one of the most important determinants for the way you will do business in the future.

Therefore, the purpose of this qualitative study is to describe Managers' perceptions of the Website development field. At this stage in the research, the managers' perceptions will be generally defined as their preconceived notion of what is a Website, reasons why to create one, and intended use. These perceptions will help lead me towards the ability to further understand managers' assumptions about communicating with Web designers.

Research Questions

1. What do managers and Web designers believe make an effective Website?
2. How does it become explicitly evident to managers whether their Website has met their expectations?
3. What are managers' and Web designers' assumptions about the purpose of Websites?
4. How do managers and Web designers define a Website?
5. What do managers and Web designers see as the process of creating a Website?

Significance

The Internet and Websites will not go away in any known period of time. Diverse discipline cultures within organizations will always be there for as long as there are different disciplines and "occupational communities" (Schein, 1992, p.278). Web designers and other Internet technology jobs will become even more prevalent and undoubtedly evolve as technology changes. There needs to be a mechanism of communication between these cultures so organizations can be more effective. Schein (1992) claimed that many diverse disciplinary culture groups experience similar situations of not being able to communicate resulting in frustration. One such disciplinary culture is technical communicators and the challenges communicating with Subject Matter Experts (SMEs)—usually engineers (Redish, 2003). There is significant research from the psychology and business disciplines about organizational cultures and "cross-boundary communication" (Spilka, 1995). As well, there is a good amount of research on computer technology anxiety. Where this qualitative study adds to the current body of knowledge is a perspective that has not often been addressed—the perception of managers' experiences with hiring, communicating, and managing Web designers to create

Websites. While my experiences had led me to believe managers misunderstand Web design, that may not be the reality. This study provided a vehicle to learn managers' realities.

Although computer anxiety quite possibly plays a role in managers' perceptions about Websites, I felt it was not a primary role. The communication challenge between the technical writer and the subject matter expert is not a technological one—a challenge that has existed prior to the Internet boom (Redish, 2003). Building on the concept of multiple disciplinary cultures within organizations and the fact there is little specific research on what can foster successful communication between the manager and Web designer cultures, this study aimed at beginning to fill this gap.

What is potentially needed is an interpreter—someone(s) who can facilitate cross-boundary communication between the cultures of the manager and Web designer. The challenge still remains to first understand managers' perceptions before it can be understood how to gain their acceptance of an intermediate person like an interpreter. I do not claim to believe cross-boundary miscommunication is inclusive of all managers in all types of organizations nor do I know if a particular industry is more susceptible to this occurrence. What I can attest to, due to my personal experiences, is that there are multiple instances within This Southeastern U.S. Tier 1 Science, Technology, and Engineering Land Grant University. According to Schein (1992), the challenge with cross-boundary (cross-functional) communication is a known issue within organizations.

Implications

I would like to see further research that will create awareness and impact change in the perceptions and beliefs. This awareness could better prepare for an aspect of their job requirement that will only become more important in the future. The Internet is staying and Websites may evolve but will remain in some capacity where someone(s) will be needed to create and maintain its functionality. If managers do not have an effective way to communicate with their Web designers, they could see their investment as a negative cost rather than a positive one and experience dissatisfaction with their resulting Website product. When managers can make their implicit perceptions explicit to themselves, the necessary actions to more

effectively manage Web designers and Websites will be more apparent. Argyris & Schon (1975) help describe the importance of making managers' implicit knowledge explicit:

We can test our explicit knowledge against our tacit knowledge — when we learn to put an espoused theory of action to use, we revert the process. Instead of inferring explicit theory from the tacit knowledge our behavior shows, we make explicit knowledge tacit—that is, we internalize it. (p.11) ...[We] need to tap into managers tacit knowledge, giving new information to build on and have them practice a skills allowing them to overcome their fear by progressive familiarization with the performance in a relatively risk-free situation....if the [manager] is performing ineffectively and does not know why or if others are aware of his ineffectiveness and he is not, explicitly stating his theory in use allows conscious criticism. The [manager's] efforts to defend his tacit theory in use may prevent his learning to behave differently; he may not be willing to behave differently until he has examined his theory in use explicitly and compared it with alternatives. He may be unable to test his theory in use until he has made it explicit. And he may be severely impaired in his efforts to teach his theory in use to others until he has made it explicit. (p.14)

It would be beneficial for all managers at this University to include technology development, specifically Website development, as part of their departmental strategic planning. In order for this to come to fruition, I foresee the need for managers to first become aware of the implicit perceptions about Web designers and Website development. Upon further research, it may be found that managerial training on how to effectively communicate with and hire Web designers is necessary. Hawkins & Marcum (2002, p.132) express, “information technology challenges need to be integrated into the portfolio of all upper-level managers in a college or university, but surely this requires education, tutelage, and encouragement.” This qualitative study is a stepping-stone to first understand managers' perceptions.

Literature Review

Introduction

The theoretical foundation for this study is focused on established organizational-based research with respect to cross-boundary communication challenges between employees from different disciplinary cultures and the acknowledgement of the role change management plays. Before I elaborate, research on the subject of Web designer skills and the process of Website design needs to be discussed so that a common basis of expectation can be established. Since it is often information that users seek from Websites, a mention of research about information quality is important—in particular, how that information is perceived affects perception of quality because it is an individual judgment. Followed by the cross-boundary communication research will be an example of another discipline that has faced similar challenges, the Technical Communicator. Aspects of communication between disciplines include a manager's ability to foster the Web designer's creativity as well as hiring and managing that person, therefore literature about creativity and human resource management has been included. Disciplinary culture—those beliefs and values developed through a person's identified career and skill path—is a common thread that influences perceptions and affects behaviors. Consequently, it is the thread that holds this study together. My belief is that there are communication challenges between managers and Web designers. Finally, this belief leads me to suspect there may be a need for change, therefore, change management research plays a role in this study and concludes this literature review.

Web designer Skills and Quality Website Design

Two related theses available through the Southeastern University helped provide some foundation to Web designer skills and concepts for creating quality Websites. A 2003 paper about Faculty perceptions of Web-based resources in Higher Education was the most closely related study to this study that was found. The other thesis, from 2000, was about the experiences of novice Website developers in developing online support. Additionally, research investigating the application of a two-factor model, hygiene and motivator, may be a way to more systematically create Websites. A synopsis' of these studies follow.

Faculty Perceptions.

Crooks, Yang, & Duemer (2003) conducted a faculty perceptions study focusing on “faculty attitudes toward a specific resource and Web resources in general” where the purpose was “to examine the effects of faculty demographic variables on faculty perceptions about the navigability and content of a specific Web-based resource.” At the time of their research, 42.7 percent of college courses used Web pages as part of the course syllabus. Crooks, Yang, & Duemer acknowledged that the Web is an “important educational resource...” Though their study participants were faculty, the significance is that the focus was on using Web resources as a supplement to the curriculum—informational Web pages. The population for this study was those whose Websites were primarily informational.

There was mention of the five-adopter categories for innovation and that 50 percent of the individuals make up the late majority and laggards meaning that half of all individuals in a social system will unlikely become adopters. “These individuals possess attitudes and belief systems that prevent them from embracing new innovations and require more persuasion and institutional incentives before adoption” (Crooks, Yang, & Duemer, 2003). This study addresses the concept of adopter categories and provided a possible effect on managers’ perceptions. I believed the participants would most likely “fit in” the late majority adopter category. The participants may have had experience overseeing a Website, but that does not necessarily mean they perceived and valued it the same as an early adopter. Upon completion of this study, adopter category could not be concluded due to the findings not containing managers’ first experiences overseeing the development of a Website.

Crooks, Yang, & Duemer (2003) findings showed that there appeared to be a difference between male and female perceptions of the ease of use of Website with females focusing more on usability than males. Another significant finding was the indication “faculty members in academia for 13 or more years perceived the provided Web resources as easier to navigate than faculty members with fewer years of service” (Crooks, Yang, & Duemer, 2003). It was inconclusive as to why this may be the case when one more likely assumes the opposite—older faculty members would be more hesitant towards learning new technology and therefore perceive it to be more difficult. Perhaps what the findings really say is that the more seasoned

faculty perceived the Websites easier to use because their expectations were not as high as those who grew up with it or had more experience. Since the demographics of the manager population was all male, there was no basis to compare. This may be something to look at in future studies. A concluding statement that Crooks, Yang, & Duemer (2003) make do parallel what I believe this study should accomplish is, “simply assuming that faculty members will see the classroom relevance and quality of Web sites may not be sufficient—the aspects should be explicitly explained and demonstrated in order to insure their use in the classroom.”

Novice Website Developers' Experiences.

Westhorp (2000) produced eight recommendations based upon her research experience with two academics somewhat inexperienced with creating Websites. She focused on the necessity of teamwork and how while necessary, often teams just can't automatically work together.

Westhorp signified issues of “cultural differences in expectations of roles: teacher & student; female & male; group behavior; national or ethnic cultural difference” as well as “assumptions that team work skills are [not] innate or previously learned.” While I did not term, in my study, the relationship between managers and Web designers as a team, they basically are one. There is the need to be explicitly aware of teamwork dynamics. Though the subjects of this study were novices, Westhorp's descriptions of the process of Website creation follows suit with my beliefs on how a team should proceed—much planning prior to creating is necessary. Unfortunately, my experiences have been to be hurried through the planning stage to “just get the site up and running.” Westhorp's study elaborates on the “Development Cycle” model as a means to plan the creation of the Website—design, development, evaluation, and implementation. This is very similar to models used in other design genres like instructional design and multimedia and something similar that I too follow when developing my Websites. Two recommendations Westhorp (2003) made have particular significance for this study:

Recommendation 1: Very clear and frequent communication is needed to make sure that both, content, background and presentation are agreed upon by those holding the [content] and the developer....Recommendation 7: As part of the planning process, also plan to evaluation process. Know what the criteria for critique will be before you start.

A Two-Factor Model: Hygiene and Motivator.

Zhang & von Dran's (2000) study was about using Herzberg's Two-Factor Model to help evaluate the effectiveness of Websites based upon satisfiers and dissatisfiers. They made the distinction that "satisfaction and dissatisfaction [are] two dimensions rather than two values of the same dimension" and that this distinction is "logical and valuable. Not being satisfied does not mean one is dissatisfied" and vice versa. Most specifically, the goal of using the model was as "an intellectual tool to differentiate Website factors whose presence will be taken for granted by Website users from those that add value by creating a sense of satisfaction and enjoyment." While Zhang & von Dran (2000) were not able to determine whether their approach is a viable one, their study does add value to mine in a couple ways. First, though, Zhang & von Dran (2000) help define Hygiene and Motivator:

Hygiene factors would be the ones whose presence makes a Website useful and serviceable, whose absence causes user dissatisfaction. A good example of a Website feature that may be an example of a hygiene factor is 'live/broken links,' because a live link is taken for granted; but if the link is broken, users are frustrated and dissatisfied. Motivating factors, on the other hand, are those that contribute to user satisfaction. They add value to the Website beyond hygiene factor value alone. A possible example would be the use of multimedia in an information-intense Website. The presence of motivators will enhance satisfaction with the Website, while their absence will leave users feeling neutral, but not necessarily dissatisfied as long as the fundamentals or hygiene factors are in place.

Zhang & von Dran's (2000) study added value to this study by acknowledging the need for more precise Website design guidelines. Zhang & von Dran (2000) stated that "such a model or theory would be very useful because with many design decisions there are too many alternative proposals to test by trial and error." They also mentioned that trying to standardize on one design format for multiple Websites could impact the results by actually creating an ineffective Website. The other way this study informs my research is by recognizing the skills necessary for Web designers to be able to implement such a model not to mention the ability to understand the negative impact of failing to uniquely create each Website. Zhang & von Dran (2000) put it into hygiene and motivation context:

Website designers first need to minimize user dissatisfaction by providing hygiene factors while being aware that these factors are not sufficient to generate user satisfaction....Website designers need to constantly identify and build motivational factors into their Websites.

Website Design Guidelines.

A common thread with these studies is the acknowledgement that the available Website design guidelines are not absolute—one cannot rely on them to help Web designers create successful Websites. There are too many variables to have a systematic procedure, therefore Web designers have to have an implicit understanding of the Web and its capabilities to create an effective Website. Blackwelder (1998, p.59) learned as part of her thesis study that “current guidelines found in style guides and articles should be taken with a grain of salt. The authors who compile these guidelines are making assumptions about their anticipated audience based on categories whose theoretical distinctions may be questionable.” Nocito’s (1998) thesis research:

...examine[d] many of these [Web site design guidelines] publications but also evaluate[d] the research and theory on which these publications base[d] their recommendations (pp.7-8)....Absolute rules for Web page design do not exist; guidelines drawn from research into the rapidly changing medium of the World Wide Web combined with consideration for the unique characteristics of a particular site represent the best approach for designing a site. Likewise, a single, perfect design for a site does not exist (p.52)....Just as with print documents, well-designed Web documents tend to communicate their message more successfully. Knowing how to design Web pages effectively not only requires knowledge of basic document principles but also familiarity with principles, which are still evolving, unique to Web design. (p.66)

The impact of this is that if a Web designer does not have the knowledge and skills needed, it is extremely difficult to create an effective and useful Website. A novice Web designer may rely too heavily on the published guidelines and not enough on understanding the needs of their client or the audiences’ desired use of the Website. A Web designer must know what they are doing because according to Nocito’s (1998, p.12) experience with her thesis research on designing a Website:

Web pages have many inherent characteristics that make good design difficult (though not impossible) to achieve. Primary among these characteristics is that designers never know exactly how a page will look to the user. Designing Web pages that look good under a wide variety of conditions can be a challenge.” Nocito quoted DiNucci’s explanation that a designer needs to understand what can be done on the Internet as well as what can’t be done in order to have the ability to create a quality Web site. Also that, “in contrast to print documents, the designer of Web pages losses much of the control he or she typically has over the printed document. And Web pages must be designed with the awareness of this loss of control. (p.5)

Website Accessibility.

The accessibility of Websites have become a core focus in many industries, especially in academia—in part due to government requirements and in part, moral pressure to be diverse to all populations. “Federal legislation is requiring educational institutions to ensure their programs and services offered on the Internet are accessible to all. Institutions are becoming aware of their legal obligations....[An accessible Website is one where] an individual can perform a Website’s intended function(s)” (Thompson, Burgstahler, & Comden, n.d.). Thompson, Burgstahler, & Comden conducted:

...a study of 102 public research universities, including [this Southeastern U.S. University], to create and test a manual system for evaluating Websites for accessibility along with learning these institutions’ practices of creating accessible Websites. They found that continued effort is needed in order to educate administrators, faculty, and Web designers about the need for Web accessibility and the techniques for implementing it.

There is a regulation on Website accessibility currently being developed at this Southeastern U.S. University. Learning Technology Services (LTS), within this University, does provide workshops for creating accessible Websites for faculty and those that create Web materials for faculty. Information Technology Division (ITD), more recently, has begun to offer their *Concepts of accessible Web page design* workshop for all staff and faculty. Information about the skills necessary for Web designers to understand the scope of creating accessible Websites do not seem to be widely publicized or even available to managers. There have been periodic presentations on campus, but managers who oversee the development of Websites rarely attend.

A particular understanding and acceptance managers need to acquire is that of usability testing of Websites. Usability testing, really a form of assessment, provides the feedback necessary to learn if the developed Website does potentially meet the audiences’ needs including learning if there are accessibility issues. The situation is that “...determining many aspects of Web-content accessibility requires human judgment....software packages are not perfect and cannot be expected to 100% accurately determine the accessibility of a Website—software cannot take into account the ‘severity’ of an error” (Thompson, Burgstahler, & Comden, n.d.). Nocito (1998) acknowledged that:

[her] biggest challenge in the redesign project was to create pages that were visually interesting and attractive while taking into account the technical limitations of HTML

and while addressing accessibility issues....Designing attractive Web pages while keeping in mind all the ‘exceptions’ requires some creativity as well as a certain amount of acceptance of unexpected outcomes. I found that if I remembered that the content was the most important aspect of the page and that the design should serve to enhance the content rather than obscure it, I was able to create widely accessible pages. (p.55)

Web designers.

Reading through Scrivens (2004, March 1) *Job Description* Whitespace Blog, I found a sentiment that these Web designers seemed to agree upon—employers want to hire Web designers with “all the skills” having many years of experience. But, if such a person existed, she would already have a job. It can be acknowledged that the “role of the Web designer has evolved greatly over the years,” yet it was also pondered by Scriven’s (2004, March 1) bloggers that Human Resource (HR) departments really believe that “anyone can learn HTML and build a Webpage” and “that people have all of these skills”—expert in CSS, XHTML, Usability Expert, Information Architect, Search Engine Optimization Expert, Graphics Designer, SQL, PHP, etc.

Although the bloggers focused on HR as the “unknowing” population, my experiences with managers parallel this sentiment. A comment from one blogger is that “rarely is someone a ‘pure’ designer/developer balance—most people lean to one side.” Either way, in the words of Scrivens, Web designers are “highly skilled professionals.” Another Scriven’s (2004) blogger clarifies, “unfortunately the complete lack of understanding regarding what actually constitutes competency in these prerequisites is commonplace in those doing the hiring.”

What it comes down to is for a Web designer to have the ability to create an effective, useful, and accessible Website, s/he must understand the impact of using today’s available technology on a Website’s functionality. To understand the impact of using current technology, a Web designer must have the necessary skills and knowledge. Two of these skills are the ability to (1) “identify [the Website’s] perceived intended function(s)” and (2) “rate the page on a scale that measures the ease with which any user, including a user with disability, can perform the intended function(s)” (Thompson, Burgstahler, & Comden, n.d.). As Nocito (1998, p.57) recognized, “...research into the usability of a Web site can help the site become more effective and satisfying to users as well as help verify design guidelines....As is the case with many organizations, time and financial constraints have prevented systematic usability testing from

being done on the Web pages in this project.” As Blackwelder (1998) found, a big part of Web designer skills is:

[being able to] design according to what users will need from that particular online information source....Anticipating whether audiences will be searching or browsing for information is one way of making assumptions about users needs and goals. (p.2)
Understanding how users visualize and conceptualize sites and their features would be helpful to designers when designing easily used and understood sites. (p.51)

Nocito (1998) offers suggestions for Web designers:

Web designers should keep up with new technologies that may improve sites but also need to accommodate users who may not be able to keep up. Perhaps the best advice to give Web designers is that they should spend time learning the characteristics of the Web before they begin designing and that they should always put the needs of their audience ahead of their need for perfect design. (p.54) Overall, understanding the medium and its capabilities as well as constantly keeping in touch with how the medium is changing is the best way to improve Web page design. (p.34)

Judgment of Information Quality

“In the Web, making judgments of information quality and authority is a difficult task for most users because overall, there is not quality control mechanism.” Usefulness and goodness are primary facets of information quality, and it is also “subjective, relative, and situational.” It is partly based on individuals’ own knowledge that ultimately leads to different evaluations (Rieh, 2002, p.145). If information quality is indeed an individual judgment, then it is very possible to write (create information) something that is not appropriate. Since a user’s judgment of content quality is more by the “institutional reputation” (Rieh, 2002, p.157), the user accepts the information as useful and factual if s/he respects that institution. Management would therefore receive positive reinforcement that the information meets the users’ quality expectations.

In a university, we are educators and it is fair to acknowledge that users expect and even most often assume our Websites are factual and useful. If managers do not have the knowledge and experience to manage Web designers and Websites, their ability to produce a useful and factual Website may be inhibited. One result could be a Website that was inaccessible to an audience population. Another result could be that users proceed to use the Website under the assumption it was a good product and eventually one day, unexpectedly, learning that they have been misled. For instance, a student finds some course related regulations on a manager’s Website

that turns out to be inaccurate, but the student finds out only after s/he has been negatively affected. The manager of the Website subsequently experiences a delay in the realization of the problem with the content as well as potentially damaging the department's credibility.

Cross-boundary (Cross-cultural) Communication

Cross-boundary communication is becoming a regular professional activity that is increasingly integral to success in fulfilling key organizational goals (Spilka, 1995, p.437). Considering this statement was originally made over ten years prior to this study, it is a fair assumption that it is no longer becoming; it is integral. There is suggestion though that unsuccessful cross-boundary communication "can lead to both internal anxiety and tension and territorial battles between organizational units," according to Spilka (1995, p.438). I can vouch for much tension between my project manager and myself especially when we would seemingly be saying things at each other rather than understanding what each other was trying to communicate. The confirmation Spilka's study found was that the occupational cultures must be similar in some ways in order to successfully communicate together. It would otherwise be difficult "to understand, appreciate, and respect one another's needs or resolve problems" (Spilka, 1995, p.441).

Jones (2001) wrote a paper on collaboration and the perceived threat to autonomy for academics. She proposed a cross-functional and cross-discipline collaborative model for online design and preparation that includes five parts: (a) a person that creates the content, (b) a main person who creates the Website, (c) another person who works with the Website to assist and gather resources, (d) a person that understands the academic content and technology (a.k.a. interpreter), and (e) two people who identify and possess the content knowledge. There can be many configurations of this collaborative team setup. It does, though, acknowledge the need for multiple disciplines to work together, communicate, and include an interpreter to ensure the "technology" folks are communicating well with the "academic" folks. The collaborative team "enables continuous dialogue, discussion and explanation, with technology supporting the educational aims set by the academic" (Jones, 2001). Jones also recognized that even though such teams are necessary, cross-functional and cross-discipline collaborative teams are difficult to sell to academics. Universities need to reward and recognize individuals' contribution to the collaborative process. The implication for my study is the supporting data recognizing the need

for cross-discipline cultures to work together and have the ability to communicate well in order to successfully work together. Jones' paper does provide a possible reason why managers may be hesitant towards working in teams—fear of losing autonomy and the lack of reward for successfully working on a team.

Technical Communicators

Technical communicators—usually those who write technical documents—struggle for recognition, justification of their roles and activities, and appropriate funding. Management continues to believe that “anyone can write” and documentation isn't so important anyway, according to Redish (2003, p.1). These statements parallel my experiences as a Web designer. Redish (2003, p.1) also acknowledged what is echoed in the organizational culture research that Technical communicators must “learn to speak the managers' language,” and managers are interested in the “bottom line” costs and benefits in return on investment.

Human Resource Management and Creativity

The word is that there is a shortage of good Web developers with no decrease in demand (Morris, 1998, October 18 and Aspray & Freeman, 2002). According to Aspray & Freeman (2002, 13), it is difficult to assess how much of a shortage there is because “there is a problem in counting the supply.” Defining who the IT worker is compounds the difficulty in counting due to variability of job tasks requiring a wide range of skill sets and knowledge (p.13). Whereas the “application of new technologies is one of the primary drivers [that] the level of required job skills and performance expectation has risen sharply” (Turner & Perry, 2002, p. 54), there still appears to be a “complete lack of understanding regarding what actually constitutes competency in these prerequisites [and] is common-place in those doing the hiring” (Scriven, 2004, March 1)—in the voice of those that live the experience.

Scriven's (2004, March 1) bloggers expressed that Web designing continues to be viewed as something that is “artistic or graphic design” in nature that is also “easy, requires little effort, responsibility, or skills” and does not warrant higher salaries. And, “looking at HTML, you can see it is not that hard.” Another blogger provides an analogy expressing the depth of knowledge necessary regardless of how “easy” HTML coding is: “...its also easier to draw floorplans than it

is to build a house. But just because you can draw a square box and declare it a room, it doesn't make you an architect. There are thousands of issues you need to be aware of as a trained architect when creating real world and usable design.” While these are opinions of those working in the field, this has been my experience as well. A challenge is if indeed the level of skills and knowledge necessary for Web designer is misinterpreted by those conducting applicant screenings, they may let poor applicants bypass preliminary stages of a manager’s selection process. Unqualified applicants may thus go directly to the supervisors responsible for the hiring, who may in turn naively hire them (Dessler, 2004, p. 82). Dolan (2002, p.83) provides a potential solution:

HR can coach the hiring managers not to be overly focused on technical skills but instead to also explore whether the candidate has the particular behavioral competencies needed for success at your institution. Typical competencies in an IT world are ability to learn, customer orientation, and problem solving....The HR department can also help a hiring manager weigh the various technical skills. Certainly the candidate needs to be at least technically acceptable; however, expecting a 100 percent perfect match is not necessarily ideal....It is equally important to understand an individual’s motivational fit—the specific reasons the candidate is interested in a specific job. No matter how perfectly the technical skills fit, a department should avoid a hire whose personal values, interests, and motivational needs are not aligned with what the organization can offer.

In order for HR to coach managers, they must first take the designing of job descriptions into the modern day to prepare for the future. Job descriptions are changing and “new jobs are emerging,...creating expectations for job reclassification both for IT workers and IT-enabled workers,” found by Turner & Perry (2002, p. 58) to be true. The change is necessary because past classification systems “did not take into consideration the kind of skill and competency essential to accomplish today’s work” (p. 58). Some higher education institutions have “restructured job design and compensation systems to accommodate changing skills requirements in the digital age, especially within the information technology community” (p. 68), but many more still “must redesign the criteria and competencies by which a job is classified in order to recognize the changing nature of the job and create a more flexible compensation system that acknowledges the diverse skills and responsibility inherent in a job” (p. 69).

Yet, this is no easy task when the Standard Occupational Categories used by the US Bureau of Labor Statistics are “increasingly out-of-date and an inaccurate reflection of what people do or the skills they need,” according to Aspray & Freeman (2002, p. 3). They define three types of skills: the labor-category used by the Bureau; the skill-set that would be difficult to use for IT due its nature of rapid change; and work-related which is “what people are doing in their work, independent of the job title or skill set” (p. 4). Work-related skills focused are what Aspray & Freeman proposes should be used to define IT job descriptions. Evans (2002) elaborates by making explicit, “skills standards must represent broad career clusters—a grouping of representative job titles, related by close association with a common set of technical skills, knowledge, and abilities—rather than narrowly defined jobs [where] ...integrated skill standards define work duties in the context of the work setting...”(p. 27).

Eight IT career clusters have been identified by the National Workforce Center for Emerging Technologies (NWCET) with Web development and administration as one of them (Evans, 2002, p. 30). Though this Southeastern University has implemented IT career clusters, one explicitly titled Web development and administration does not appear to exist. Evans (2002, p. 31-33) identified that while skills specific to the cluster, such as technical skills, are necessary, employability skills are very important:

communication skills, organizational skills, team contribution and leadership, professionalism, critical thinking and decision making, customer relations, self-directed and continuous learning....to keep up with technology change, employees must constantly engage in self-assessment against the technological landscape of skills and knowledge and then take proactive steps toward enrolling in continual training for their trade.

Morris (1998), a consultant for Internet development companies who is familiar with many different “Web shops,” finds that “many companies think they are going to get people with years of experience...[and] think they will be able to hire one cool person who will have all the needed skills rolled into one young body.” He presents a typical job description and comments that all of these skills do not exist in one person and if it did, that person would already have a job:

WebWidgets needs a Junior Internet Developer to design and build their eCommerce Web site. 5 years minimum Internet experience, C++, CGI, Perl, HTML, XML, JAVA, Web, Internet security, mail, ability to interact with upper management and clients, must be well versed in http, TCP/IP, Lotus Notes, NT, UNIX, eCommerce, iCommerce,

PhotoShop, PageMaker and Quark. Salary £12,000 with excellent benefits. A great opportunity for the right person!

Morris further expresses that this above job description sounds as if the potential employer does not understand the scope of what they are looking for whereas this next job description makes it sound like the position and project are “cool” along with the writer of this job having a sense of humor:

WebWidgets is building the team that’s building the future of interactive Internet communications. Join the team. We offer a good working environment, fantastic projects, excellent benefits, good pay, the tools you need, music, no suits, and the chance to do it right and lead the way. The tools we need: programmers, nerds, creatives, propeller heads, Perl, UNIX, NT, streaming guru, anoraks, Oracle (we need a big Oracle weenie), Lingo, Java, C++, solid Web development experience, big Machead, writers, weenies, designers, games programmers, Web server God. Contact jobs@WebWidgets.com.

Although I do not necessarily find this job description appealing, the first one mentioned is the kind of description I have disappointingly come across all too often—the expectation of designer and programmer all in one person. Not only is filling that job description often unrealistic, the salary rates most often do not reflect the level of skills that are being required. Managers benchmark job salaries against worth to organization relative to other jobs in organization (effort, responsibilities, and skills) as well as difficulty in level of jobs (Dessler, 2004, p227). Yet, this practice is often overlooked when it comes to hiring Web designers within higher education institutions. My experience has been as a witness to managers seeking to hire students as Web designers because they are cheap labor and easy to get. The Website www.salary.com is one of the very few I have come across that lists the multiple facets and titles a Web designer could possess as well as the salary ranges. It does confirm that, around the country, there are industries and companies that do hire Web designers at rates above US salary means.

With regard to recruiting and retaining Web designers, “new approaches to compensation are necessary...to support the new technologies that are so strategic to all dimensions of the higher education enterprise” (Hawkins, Rudy, & Wallace, 2002, p. xvii). Along with new compensation policies, managers providing and supporting continual training is also necessary. While a manager may “expect [Web designers] to be current in their technical skills” and provide the

resources to do so, “it is often seen as the employee’s responsibility to identify personal gaps in knowledge and take actions to fill these gaps” (Evans, 2002, p. 33). An irony, and from my experience, is that although Web designers often do seek to improve their skills, the direction they take often is one of personal interest rather what is needed for their job performance. Many times, though, Web designers are hired without the necessary skills in the first place. One way this happens is through internal recommendations where the interviewing process is foregone. The manager may not realize the impact until the Website is published or perhaps until an unforeseen time in the future that negatively impacts that manager’s department’s image. Mumford (2000) provides the concluding thought, “effective human resource practices must consider the individual, the group, the organization, and the strategic environment confronting the organization in order to manage creativity and innovation.” Some understanding of the requirements for creative thought as well as the characteristic work styles of creative people, like Web designers, is necessary according to Mumford.

Disciplinary Cultures within Organizations

The supporting theoretical basis of this study is the research done by Schein (1996) with respect to the lack of understanding among his identified three broad discipline related cultures often present within organizations—the Executive, Engineer, and Operator culture. Schein defines the Executive culture as those employees in management whose loyalty belongs to the organization; they work for the “good of the company.” The Engineer culture are those employees who remain loyal to their discipline—their decisions, work ethics, and priorities are based upon their craft and feel little loyalty towards the “good of the company.” For this qualitative study I define managers as members of the Executive culture and Web designers as members of the Engineer culture. The Operator culture include those who are the ‘line workers’ and administrative assistant staff that find themselves having to live within the established organizational culture with little influence on it. This study does not include anyone from this culture. Schein (1996, p.1) proposes:

[both cultures have] their roots outside the organization [and therefore] are engrossed in their particular assumptions...Getting cross-functional project teams to work well together is difficult because the members bring their functional cultures into the project and have difficulty communicating with each other, reaching consensus, and implementing decisions effectively.

An example from my own experience was when I informed my manager of the necessity to learn about their audience's expectations of the Website. I was told it was not necessary and not to bother. Our lack of understanding each other affected "efficiency and effectiveness" (Schein, 1996).

I have read comments that this communication challenge is "just normal life in an organization," and it is due to individual personality differences. "The deeper issue is that in most organizations, there are [multiple] major occupational cultures that really don't understand each other very well and that often work at cross-purposes," according to Schein (1996).

"Occupational communities" is another term Schein (1992, p.278) used and defined it as "...[denoting] a group of practitioners, researchers, and teachers who have a common base of knowledge, a common jargon, similar background and training, and a sense of identifying with each other." Throughout this study, the term disciplinary culture is used to mean the same as occupational culture. Schein (1996) further elaborated that these cultures have different goals and that the words they use have different meanings to the different cultures. "...The personalities and occupational backgrounds of [functional subculture] members make it likely that they will come to organizational tasks with very different assumptions" (Schein, 1992, p.274) Studies in rhetoric claim that information having meaning is based upon individual understanding—what may be information to one person may have no meaning to another.

I spent a great deal of time trying to explain the Website design process to my manager as well as explain what content and information I needed from her. It was quite frustrating to feel like I wasn't being heard resulting in my blaming her lack of understanding as a personality flaw. I perceived it as lack of respect for my skills and a lack of appreciation for the creation of Websites. In trying to replace the emotional reactions with logical action, this exploratory study became that outlet to learn, as much as possible, the truth about the situation. According to Schein's research, it is more basic, it is the fact we don't speak the same language. Schein (1992) provides some explanation:

Senior management and the information technology community can be viewed as two subcultures, each making a set of assumptions about the nature of information, the nature of people, the learning process, organizations, and management (p.293)... Individual reality [is] what a given person has learned from her or his own experience and that

therefore has a quality of absolute truth to that person. However, that truth may not be shared with anyone else. When we disagree at this level, it becomes very hard to move forward until we can clearly articulate what our actual experience is based on (p.99)...unless we can clearly write out what we think we feel, we cannot tell whether we really understand and whether anyone else could understand (p.176).

I believe my project manager was used to managing subordinates from the same occupational culture as she, and I was a totally different “animal” to her. Someone like a Web designer is not a part of that subordinate executive culture, and therefore the managing style of that culture is less effective with someone like me. The manager may not see any disconnect and often attribute disagreement to the Web designer’s personality or some other reason. Schein (1996) said these shared “assumptions derive from a common educational background, requirements of a given occupation such as the licenses that have to be obtained to practice, and shared contact with others in the occupation.”

Schein (1996, p.2) proposed that “creating a high level of openness between hierarchical levels,” will help “increase communication and trust among its members [through] ‘action science’ techniques, systems dynamics, and organizational development.” An interpreter can foster perhaps the level of openness between the hierarchical levels, and specifically the different occupational cultures.

Web designers “share some tacit assumptions about the nature of their work regardless of who their particular employer is at any given time” (Schein, 1996). It is important to recognize that management’s worldview is based on the need to maintain an organization’s financial health and growth. In the case of an university, it is the FTE numbers (student enrollment and retention numbers) and bringing in more students. What is interesting is that Schein (1996) noted as managers move up the hierarchy, routines become impersonal—“they increasingly see people as ‘human resources’ to be treated as a cost rather than a capital investment.” They view their ranking as a “measure of status and primary means of maintaining control.”

A similarity between the management and Web designer cultures is that they “are primarily task focused and operate on the implicit assumption that people are the problem, either as costs or as sources of error.” Perhaps that one similarity is what is used by the interpreter to create a bridge

between the cultures. It can be a way to create openness towards their different “languages” and different assumptions about what is important. Again, though, this learning will not happen any time soon because cultures are strong. What is needed is the acceptance of an interpreter. We “need to establish some communication that stimulates mutual understanding rather than mutual blame” and learn how to “conduct cross-cultural dialogues.” Schein (1992) proposes that:

..understanding the “dynamics of culture” in organizations, will give us “a deeper understanding not only of why various groups of people or organizations can be so different but also why it is so hard to change them (p.5)...To get at those deeper [assumption] levels one must try to understand the perceptions and feelings that arise in critical situations, and one must observe and interview regular members or old-timers to get an accurate sense of what deeper-level assumptions are shared (p.13)... Most communication breakdowns between people result from their lack of awareness that in the first place they are making basically different assumptions about meaning categories (p.72)...A common language and common conceptual categories are clearly necessary for any other kind of consensus to be established and for any communication to occur at all (p.75).

Organizational Change Management

According to Burke (2002, p.41), “change management is an attempt to integrate some of the standard aspects of management consulting, for example modifying its information technology systems, with organization change methods that are based on applied behavioral science, particularly organizational psychology.” Recognition of the necessity for change usually occurs “...as a result of a previous diagnosis and in collaboration with the relevant people within the organization” that is often driven by uncontrollable changes in the external environment directly affecting an organization’s business (Burke, 2002, p.49). Focus on change would begin with “one aspect of the system...such as the organization’s managerial structure, [and]...other aspects eventually will be affected, thus making for a total system approach” (Burke, 2002, p.49). Burke (2002) elaborates that:

although one rarely tackles that entire system at once, one works diligently to keep the total in mind as one goes about changing parts, because the change of one part will affect other parts, and perhaps all parts eventually (p.45)... [The] change can emanate from any unit, function, or level within an organization (p. 16)...Those changes typically are directed towards trying to improve product and/or service quality via fine-tuning or changing the structure of the organization (p.1).

The significance of the external environment on organizations is that, in Burke’s (2002) model, it is an “input dimension” (p.199). The process of change “begins and ends with the external

environment” (p. 9). Organizations rely on their external environment to survive—it is a dependency with continual interaction—where the work of people, money, and materials are the input energies (p. 43). A constant selective monitoring of the external environment is necessary for effective and successful organizations, though it is no easy task due to the complexity of these environments that are rapidly changing (p. 58). In fact, the changes are occurring “more rapidly’ than the organizations themselves” (p. 9). Higher Education institutions are experiencing such rapid changes with the “...relatively recent entrant [of for-profit higher education organizations] into the world of higher education [that] has caused a stir and has begun to call into question the long-term survival of many colleges, especially if they drag their feet regarding technology” (p. 7). Turner & Perry (2002, p. 53) provide an opposing view:

although higher education institutions are often stereotyped as change-resistant, technology-driven change on campus is as pervasive as it has been in the general workforce and society at large. Technology, however, is not the only catalyst for change. Global and domestic competition for students, budget pressures, the decreasing ability of prospective students to pay ever-increasing educational costs, evolving expectations of what it means to provide a high-quality education, and the exploding potential for innovation in teaching and learning have presented a set of nearly unimaginable challenges to the higher education enterprise. It is, in fact, technology that often allows higher education to respond effectively to these other changing needs.

The administration within a University may know “it must create and maintain academic and administrative systems that keep pace with technological change” (Turner & Perry, 2002, p. 55), but effectively implementing this knowledge does not always filter down to all levels of the university. In the case of this thesis, the relationship between managers and Web designers is an example. Turner & Perry (2002, p. 55) also acknowledge, “an institution’s technology strategy clearly must be an enterprise-wide initiative and embody the principal goals and objectives of the institution” because technology is no longer an add-on feature (Hawkins, Rudy, & Wallace, 2002, p. xiii). The state of flux and rapid change affecting the necessary skills of IT professionals is an external influence that in turn affects a university’s ability to keep pace (Hawkins, Rudy, & Wallace, 2002, p. xv). The redesign of job descriptions and career cluster creation focusing on the necessity of advanced education and the concepts of knowledge/information workers is a way universities have dealt with the changes (Hawkins, Rudy, & Wallace, 2002, p. xi).

While I did not consider this University to be “dragging their feet regarding technology,” I did perceive some level of change, not yet explicitly addressed, was needed to bridge what I saw as a disconnect between managers’ initiation of Website creation and the quality of the resulting Website product. While the results of this study led me to believe that change is potentially necessary, it was not conclusive as to what needs to be changed. Using the Burke-Litwin model, the change would be considered transactional—that is it would happen in an evolutionary manner. Change would happen slowly, over time, rather than “rapidly and suddenly” (revolutionary) (Burke, 2002, p. 65). I came to this conclusion because, first of all from my experience, it is rare to experience rapid change at this Southeastern U.S. University; and second, Burke’s (2002, p. 67) studies conclude that “95% organizational changes” are evolutionary rather than revolutionary. Most of these “continuous” changes “consist of improvements, incremental steps to fix a problem or change a part of the larger system (p. 68)...leading to higher performance” (p. 82). It is possible for “major change [to] occur without affecting the deep structure” like new information technology systems (p.82), but if change affecting the entire organization is the goal, then it is necessary for “groups within the organization [to make] small continuous changes that are interdependent” (p.68).

Burke (2002) answers the important question “Where do we start?” He proposes that management practices are the first place to look at for evolutionary change (p.108). It “requires managers who see their jobs as that of constantly focusing on improvement and quality rather than on an overhaul of the total system” (p. 203). Management practices are located within the transactional factors section of the Burke-Litwin model. Burke (2002, p. 212) expresses that:

transactional factors are part of the model leading to performance and change that encompass structure, systems, management practices, work unit climate, individual needs and values, task requirements and individual skills/abilities, and motivation— compared to transformational factors, represent organizational dimensions and activities that are characterized as more day to day operations, incremental regarding change, and are more related to foreground (climate) than to background (culture).

The irony of management practices playing such a pivotal role in organizational change is what Blake and Mouton found from their 1968 study as quoted by Burke (2002, p. 37), “managers consider the most common barriers to organizational effectiveness to be (a) communication problems and (b) a lack of planning.” Burke concludes that these were symptoms of lack of

strategy or lack of an adequate one and that “communication problems come from poor supervision and management.” This notion was reinforced by a case study about the BBC (British Broadcasting Corporation) Burke (2002, p. 237) presents in the words of one of its employees, “managers at all levels need to find ways to make the systems work flexibly and collaborate across existing systems more effectively.” This employee’s concern was about a “communication blockage” with respect to department heads having difficulty communicating to subordinates specifically what their business is about. “Junior people” either did not know what the upper management had communicated to the junior people’s managers or had a “seriously distorted view of it” (Burke, 2002, p. 237).

To identify root challenges within organizations, learning “the collective perceptions of the people in that environment” are necessary (Burke, 2002, p. 196). These collective perceptions are what make up the organizational climate—“perceptions that individuals have of how their local work unit is managed and how effectively they and their day-to-day colleagues work together on the job” (p. 197). It is “a set of psychological priorities of a given work environment” that is affected by the organization’s culture (the core beliefs and values) (Burke, 2002, p.196). Burke (p. 213) found there to be a “clear and distinct connection between management practices and climate” where the structure has a direct impact on the climate (p.212) as well as influences that management practices (p. 213).

If “organization change efforts typically rely heavily on the use of work groups,” work groups are important for organizational effectiveness (p. 98), and we look at the relationship between the manager and Web designer as a work group, then it is imperative that managers and Web designers are able to effectively and successfully communicate and work together. Burke (2002) expresses that it is apparent:

groups of various specialists attempting to produce something that is greater than the total of their individual specialties are becoming more the rule than the exception (p. 97)...and it is critical to success that work groups effectively manage differences and conflicts within the group. Group members must learn to share power and leadership. Not all group members are equal with respect to skill and ability, experience, knowledge and expertise. Managing these differences is key to success, that is, deploying the human resources of the group toward task accomplishment in an efficient and effective manner (p. 100).

Methodology

Introduction

The purpose of this study was to gain an understanding of managers' perceptions of the Website development field: the process of creation and the people involved. Specifically, this was an exploration of the working relationship between managers and Web designers from the perspective of the manager. To accomplish this, I chose to explore managers' perceptions through the verbal descriptions of their knowledge, skills, and potential attitudes ultimately seeking to learn their assumptions about Web designers and the process of Website development. To gain a more, well rounded understanding and provide a comparison, Web designers were also interviewed. The questions for both sets of participants will be synonymous allowing for a means of general comparison.

Conceptual Framework

The basis of this study was founded on the belief that when there are communication challenges between different disciplinary cultures within organizations, business efficiency and effectiveness will be affected—ultimately the “survival of the organization” can be threatened (Schein, 1992, p.4). Schein (1997, p.1) expresses that shared assumptions:

...typically form around the functional units of the organization. They are often based on a similarity of educational background in the members or a similarity of organizational experience, what we often end up calling "stove pipes" or "silos." We all know that getting cross-functional project teams to work well together is difficult because the members bring their functional cultures into the project and, as a consequence, have difficulty communicating with each other, reaching consensus, and implementing decisions in an effective manner. The difficulty of communication across these boundaries arise not only from the fact that the functional groups have different goals, but from the more fundamental issue that the very meaning of the words they use will differ.

With Website development continuing to increase (Schatsky & Bayriamova, 2004; Greenspan, 2004, March), it is inevitable that the need for people to create those Websites will increase. There will be more manager and Web designer working relationships than ever—if not already the case. The exponential technological change over the past 10 years has sparked this growth

yet standardized guidance and research on how to hire, communicate, and manage Web designers is still lacking.

In trying to understand the dynamics of the relationship between manager and Web designer, there can be a tendency to focus on technology as the basis of the relationship—the main factor that affects whether the relationship is effective. Although technology is a factor, it is not one I will be focusing on in this study. Rather, this study will focus on disciplinary cultures and “cross-boundary communication” as the factors primarily influencing the success of the manager and Web designer relationship. Considering that many disciplines have struggled to achieve successful “cross-boundary communication” (Olsen, 1993), managers and Web designers are no exception. Therefore, this study was founded on the precept that managers and the people they manage (Web designers) to create and/or maintain their Websites often do not speak the same language—their particular assumptions have no meaning to one another. Based on this conceptual framework, this study explored resulting assumptions through participants (managers’) perceptions about what was the purpose & definition of Websites, what makes an effective Website, how they knew their Website had accomplished their intended use and expectation, and how they saw the process of creating a Website.

Research Design

To describe managers’ perceptions about Web designers, this qualitative study employed interviews of managers and Web designers from a Southeastern U.S. University. The goal of this qualitative study was not to find answers to a hypothesis, rather it was to understand the “behavior from the [participants’] own frame of reference” (Bogdan & Biklen, 1992, p.2). Qualitative researchers seek to “approach people with a goal of trying to understand their point-of-view...”(p.24); “they seek to grasp the processes by which people construct meaning and to describe what those meanings are” (p.38). Bogdan & Biklen (1992, pp. 24-25) further discuss that:

...reality comes to be understood to human beings only in the form in which it is perceived. Research data—[recordings and notes from interviews—is] a particular rendering or interpretation of reality grounded in the empirical world. The Qualitative research tradition produces an interpretation of reality this is useful in understanding the human condition.... The meaning people give to their experience and their process of interpretation are essential and constitutive...To understand behavior, we must

understand definitions and the processes by which they are manufactured. Human beings are actively engaged in creating their world...

Learning about the complexities of communication between people of diverse disciplinary cultures require thick descriptions that are rich in context. Humans are meaning makers and a way of learning what was meaningful, in a “complex, holistic picture,” to managers was through interviews in their natural settings (Creswell, 1998, 14-15). Interviewing participants allowed me to learn about how they each think through the gathering of “descriptive data in the subject’s own words so that [I could] develop insights on how subjects interpret some piece of their world” (Bogdan & Biklen, 1992, p.94, 97). Kvale (1996) provides further elaboration:

The qualitative research interview attempts to understand the world from the subjects’ points of view, to unfold the meaning of peoples’ experiences, to uncover their lived world (p.1) Verbatim descriptions are necessary for linguistic analyses; the inclusion of pauses, repetitions, and tone of voice are relevant for psychological interpretations of, for example, level of anxiety or the meaning of denials. Transforming the conversation into a literary style facilitates communication of the meaning of the subject’s stories to readers. (p.166)

According to Kvale (1996, p.30), there are 12 main aspects of the qualitative research interview. They are in summary: the interview was “theme-oriented” and about the “life-world of the interviewee and his/her relation to it;” it was a way to “describe and understand meaning of central themes” in that life-world through “many nuanced, un-interpreted descriptions;” the interviewee “describes as precisely as possible what s/he experiences and feels, and how s/he acts” in “specific situations” focused on what s/he finds important; and the interviewer pays attention to what was not said as well by being “sensitive to the interpersonal interaction” and seeks clarification to ambiguous statements ensuring the interviewee has a positive interview experience.

Population

Although manager and Web designer teams are prevalent in many industries, A Southeastern U.S. Tier 1 Science, Technology, and Engineering Land Grant University has been chosen for this qualitative study. This research institution houses over 170 Websites. To date, there are three known employees with the Web Content Developer job title under the EPA specification (Exempt for the State Personnel Act). It utilizes the Stat Government Job Class Specifications

(North Carolina Office of State Personnel Website, February 2005) to title the majority of available jobs on campus that are considered SPA employees (State Personnel Act). (*see Appendix 2 for description of the EPA classification.*)

For the sake of this study, the main differences between the EPA and SPA classifications are that having an EPA classification allows a manager to create the most appropriate title for a position along with establishing a salary that s/he feels most fit, whereas, the State regulates the SPA classification through creating job position bands grouping many different job titles together. For example, the Technology Support Specialist may be a computer networking specialist or an Internet applications programmer or even a Web designer. What they each would have in common was being considered to have advanced knowledge. The fact was that unless an employee has been hired as an EPA with a specified title like Web Content Developer, it would be extremely difficult to determine who has been employed as with Web design responsibilities at this University. Depending on specific skills deemed necessary, a Web designer can be hired through one of the three career band families: (1) Technology Support, (2) Business & Technology Applications, or (3) Information & Communication Specialist—1 and 2 being a part of the Information Technology Bands.

Another reason it is difficult knowing who is creating and maintaining University Websites is because many have taken on the responsibility in addition to their regular job duties, and there is no committee or central record of who works on this institution's Websites. There are a vast number of Websites and departments at this University, yet the fact is that there is no centralized committee to manage Website standards.

This institution is based upon independence—each college within, through history, has had the responsibility to manage themselves. The Information Technology Division (ITD) manages and supports the hardware and access to the Internet for the University—front-end support for such things as how to create Websites is left to others. Creative Services, the University's public relations department, has created templates for University Websites and are often employed by other departments to create Websites. Even so, there is no real guidance for newly hired Web designers and no particular group to seek support from. If there were such a support group,

I would know about it because I had spent much of my time as an employee trying to find one through participating in committees, listservs, and networking. To date, there appears to be no formal guidelines or committee to seek such knowledge. There are, though, many standards committees like public relations, teaching, learning, environmental sustainability and many Administrative Advisory Committees like the Campus Writing and Speaking Board and the University IT Committee. The IT Committee meetings “offer an important opportunity for [this] community to collaborate on shaping the direction of IT development on [this] campus” (“About the University,” 2005). During the few IT Committee meetings I attended, the subject of managing Website development on campus had not been part of the discussions.

Faculty do receive support for creating on-line courses, and there are free classes for those that want to learn how to create HTML and other aspects of Website creation through the Learning Technology Services (LTS) department. Still, as a Web designer, I can empathize with the feeling of isolation and a lack of community support for what is expected as a Web designer at this University. There are no classes specifically designed to address how to communicate and work with your manager as a Web designer.

Another reason for conducting this study at this particular University was because, as a working member of its community for the past six years, I have experienced, observed, and been informed of Websites not meeting what was thought to be intended expectations. My experiences at this University have become the inspiration to describe managers’ perceptions about of the Website development field. Research shows that communication challenges often exist between disciplinary cultures leading to an object being perceived differently by each—in this case, the object is a Website.

I am not discounting the fact that there are many successfully effective and useful Websites in use today at this University. Highly qualified Web designers are employed, and there are many technologically savvy managers. The challenge is without there being a common expectation of Web designers, the industry is wide-open to most anyone with the confidence and a little bit of knowledge, managers can be taken advantage of. Website design is a more recently developed discipline where the understanding of what it is and what it should be is not yet well known by

those not immersed in it because it is still evolving. Children today can and do create their own Websites, yet there are many adults still struggling with the whole concept of the computer—what it should even be used for (“Children, Families and the Internet,” 2003). It seems fairly easy for a young person with a few technical skills to be able to sell their abilities to an unknowing adult who in-turn embraces the young person’s knowledge in the area of Web design as a highly refined and mysterious skill. When something like Website design appears “magical,” it can be perceived that the skills to create one is unobtainable and obscure leading to the belief that “professionals” have to be wholeheartedly relied on without much involvement by those seeing it as magical. This study was meant to make explicit those implicit (Argyris & Schon, 1975, p.14) perceptions managers have as a way to help begin to diminish the “magic” of Website design.

On the one hand, managers need to be able to effectively and accurately hire Web designers for the sake of their business. On the other hand, those truly qualified Web designers deserve to be recognized for the vast skills they potentially do have. Quite often, it is the technical skills that are put onto the pedestal like HTML coding. What is usually not appreciated is the skill of making content into information—my pilot study participants revealed that they don’t believe it is a Web designer’s job or something they are capable of. In many instances, they are correct because most often Web designers hired are not qualified or skilled enough to handle responsibility of making content into information. If managers’ expectations when hiring a Web designer expands beyond just the technical skills along with their perceptions of what a Website is capable of accomplishing, the Web designer field will have the opportunity to improve its image and the quality of its people.

I hope this study will spark readers to thoughtfully discuss what managers’ want and should expect from their Web designers. I also hope that readers explicitly see the significance of integrating Web design into their strategic business plan. On a personal note, I wanted to understand managers’ perceptions so that I can learn to be a better Web designer and better capable of communicating with them (Argyris & Schon, 1975, p.86).

While this study allowed me to present my personal experiences as well as make the process and perceptions managers more explicit—to provide a detailed view of the topic (Creswell, 1998, 17), it is important to note that communication challenges between two disciplinary cultures extends beyond my own experiences and beyond this University. For example, Redish (2003) has written a great deal on the subject of Technical Communicators needing to improve their working relationship with their content experts—particularly engineers—by better understanding their managers’ “language.” Since the working relationship between managers and Web designers are only one of many possible disciplinary cultures that must work together within an organization, the results of this study could allow for the transferability (Lincoln & Guba, 1985, p.297) of insight and information to other disciplinary cultures within this University. The relationship between managers and Web designers in other non-high tech organizations may also find transferability of the results.

Studies found about the use and adoption of Websites as part of strategic plans has primarily focused on industries other than Higher Education. Also, studies conducted about Higher Education are mainly focus on issues of no child left behind, distance education, retention, and other areas of academics. Research of the business aspect of Higher Education, like the creation and support of informational Websites, seem to be lacking. Many sources have suggested that Higher Education institutions need to be managed more like an organization. Either way, this University is a good population of choice due to the limited research available about the interactions between disciplinary cultures, particularly managers and Web designers, within higher education.

Sampling Strategy

The purpose of this qualitative study was to find participants who have experienced overseeing at least one Website project from conception to implementation in the past five years (managers) and participants who create Websites (Web designers). The managerial participants had acquired the assistance of another person(s) to create the Website. The basic administrative process I expected to have occurred were the participants being responsible for supplying the content to the Web designer, and the Web designer was required to transfer the content to the newly created Web pages. The end result provided interpretation of participants’ detailed descriptions

regarding their process of Website development along with their subsequent perceptions about Web designers. The Web designer participants provided a comparison between manager perceptions and Web designer perceptions.

There is virtually no previous research available to exemplify the characteristics of Higher Education managers experienced at overseeing the Website development process. Other than the characteristics defined for the selected population, every effort was made to reduce any bias in the selection of participants. Participants were chosen, as much as was possible, by a purposeful sampling so that more in-depth, detailed information and understanding of typical academic administrative perceptions about Web designers could be learned (Patton, 1990, p.100). The six participants—three University managers and three Web designers from the same University—chosen weren't as diverse as I anticipated. The sampling ended up being more limited due to the following criteria: all participants were from student services focused departments where their Websites were an added informational resource and not a mandatory use by audiences; the managers were to be “typical cases;” the managers had experience working with a Web designer and was responsible for overseeing a Website; Web designer and manager participants were not be working directly with each other. I did not work directly with any of the participants. The resulting population occurred because it turned out that a number of managers also created and/or maintained the Website themselves, the student services departments with Websites that were designed by an internal employee was limited, and there were fewer student services departments with substantial Websites than I expected. These constraints led to a limited diversity of participant demographics.

The three managers were all Caucasian males and seasoned University employees appearing to be over 45 years of age. The Web designers were a little more diverse with two males and one being female, though her experience had to be a previous one six months prior due to a job change. Their age range appeared to be early 30's through mid-40's. An interesting result was that all three Web designers had been employed as managers—I had to specifically request they remain in their Web designer role. Another interesting and unexpected result that became evident after the interviewing process was that two of the Web designer participants had previously worked in the same department as one of the manager participants. I did not know if,

at any time, they worked directly together. I did not realize the relationship until during the interviews when each revealed the Websites they had participated in working on.

The participants were contacted by phone with everyone asked agreeing to participate at the time of that call. I discussed with each participant that I was seeking to understand their point-of-view regarding the Website development process and their experiences working with others who created Websites. I did not have to go into details further than that. Everyone was very willing to help and were very accommodating. Emails were sent to confirm the established meeting date and time as well as send a copy of the Informed Consent Form to those who said they wanted it after I asked for their preference.

Informed Consent

Once participants verbally agreed to participate, upon our meeting they were provided an Informed Consent Form detailing the purpose of the study. Each participant was requested to sign the form agreeing to being interviewed via note taking and tape recording. Participants that wanted it were given a copy. I have a copy of each signed Informed Consent Form.

Participants were made aware of the approved exemption to the University IRB process (*see Appendix 3*) and that this study was for a qualitative research Thesis towards my MS in Training and Development.

The Informed Consent Form acknowledged that participants were voluntarily participating; their interviews would remain confidential and anonymous; and they were being asked to speak freely and openly about their experiences. Participants were offered a copy of their transcript with two Web designers and one manager specifying their desire to receive a copy. One of the two Web designers also requested a copy of this Thesis. Their interest in the copies appeared to be that of interest in the study and curiosity; not a concern for what they spoke about. After the interviews were transcribed, all interview data collected as well as transcribed audio recordings have been secured. CD ROM burned recordings and transcriptions will be kept secured for five years from the date of the completion of this research. All other copies will be shredded and deleted from all computer hard drives.

Data Collection and Instrumentation

Semi-structured interviews were conducted on-site and arranged during a time that was agreeable for the participants. Interviews were scheduled for a sixty-minute time allotment with all taking within that time frame—it turned out to be an ideal amount of time. Participants were briefed once again regarding the purpose of the research and the confidentiality of the data. Permission to audiotape the interview was confirmed, and it was restated that the sole purpose was to allow me to focus on the interview rather than on note taking.

The interviews were conducted in locations of the participants' choosing. All interviews took place in a room behind closed doors except for one that was an open cubicle. People were around but didn't seem to notice our conversation. All interview locations had some level of noise distraction due to either very thin walls to other offices and the outside world or were a form of cubicle space. No one was concerned with privacy and didn't seem to be phased by the noise level. Most often the noise types were laughing voices and telephones ringing. One interview included fire engine sirens that seemed never ending. Only one interview had a direct interruption by someone knocking at the door and the participant stopping our conversation to respond. His thought process was briefly interrupted but seemed to be able to continue on without much effect. Four of the six interviews were conducted with some form of table or desk either partly or entirely between us. All interviews were conducted with us facing each other. The distances varied depending on the table size. Office size also varied from a crowded open cubicle, to a 10-seat conference room, to an office with a separate small conference table. The perception of power can influence data, therefore mentioning the differing interview environments can be useful. The sense of privacy, distance between participant and interviewer, and whether objects like tables were present can each affect a participant's sense of control and comfort during the interview. Though, I did not feel an impact from these differences, these are potential issues to be aware of.

All managerial participants were asked the same set of nine "how and what" open-ended questions (*see Appendix 4*) that reinforce a qualitative inquiry (Creswell, 1998, p.17). Likewise, all Web designers were asked the same set of nine questions. The question sets between managers and Web designers were synonymous. Although the questions were structured, they

were also broad enough to allow the participants some flexibility to roam from focus on the questions so that I can see what priorities were in their mind. Kvale's (n.d., 174) definition of a "semi-structured" interview is "neither a free conversation nor a highly structured questionnaire. [It]...focuses on certain themes." The themes for this study included defining Websites, communication with Web designers, and the hiring of Web designers. From the interviews, I gained a better understanding of managers' thought processes regarding their perceptions about Web designers through their explicitly acknowledging and confirming them.

I tried to be careful during the interviews to not impart my beliefs about Websites and Web designers. During my pilot study, I found that the participants knowing who I was and the kind of work I do had little impact on their willingness to speak freely about their perceptions. The ability to remain physically and verbally neutral is something I have had the opportunity to practice when conducting Usability Testings. Since the Usability Testings were conducted on Websites I created, I understood that being personally involved could cause bias of the study. Therefore, I consciously made myself aware of my behavior to ensure the participant received as little as possible of my bias. Once the interviews were completed, I did more openly share some of my perceptions and assumptions for those participants interested in engaging in the conversation.

Data Analysis and Coding

Analysis of the data began by first transcribing the audio recordings and adding my notes and reflections to the transcriptions. Each transcript was read through and the margins marked with words and phrases that seemed to describe the data (*see Figure 1*). Using paper and pencil, I proceeded to write those descriptive words and phrases in a list initially organized by the topics of the nine questions. As I progressed, new topics were added in addition to the original nine. I open-coded the data by using lines to connect the words that seemed to have commonalities and chunked the data creating categories (*see Figure 2*). Once I typed up the 14 categories divided into three over-arching—Definitions, Website Development, and Skills, I created three tables encompassing the eleven main themes that had emerged (*see Tables 1-3*). The table columns became the categories and are primarily based upon the questions I asked during the interviews.

The emergent themes are the table rows that became the sub-themes once the over-arching themes were defined—a method called axial coding (Creswell, 1998, p.57).

time
Fast
Convenience

the door and have someone here to pick up the phone because they can look it up anytime they want to. taking it a step father then; see it as a tool to deliver services as well. PAUSE I will stop (you don't have to) at some point in time i start to wander i guess. so i'll try to stay a little more focused. if you would like to guide the discussion that would fine otherwise i will talk down rabbit trails for the full hour (ok then we will continue on then and we will see if there are more things you want to say that we didn't cover) i am sure there will be (ok, i laugh)

Tool
Deliver services
Personal reflection
wander

Creation
Revise
How structure
Info
detail Ant
Compare
Competitor
look & feel

i have been going through the process of web page creation now, and revising our webpage and how to structure 5;11 our information and how much detail to have available online uh that sort of thing and comparing our ~~website~~ page to uh other similar schools around the country; we have 30-50 other ~~websites~~ office webpages bookmarked; and periodically we look at those and see how they are presenting their information uhm we try to make sure we are competitive with everybody as far as the look and feel and information we provide. that's our goal

2) effective website: an effective website is one that communicates what the viewer wants to see as efficient as possible. PAUSE it allows them to accomplish what they are trying to accomplish as effeciently as possible. PAUSE

From competitive comparison

Example
- Believing
- Michigan
- U of Indiana
- U. Of S.C.
- Columbia

effective site example, well i would like to think ours is, or becoming so uh certainly uhm PAUSE i think michigan state has an excellent webpage, university of indiana has a good webpage, again, i am talking about from the ~~office~~ office perspective throughout this, how they highlight the information for students and focus information; focus attention of the current important information; uh those are some of the ones that come to mind. PAUSE University of south carolina columbia has a pretty good one too. PAUSE

Info
highlight
Focus
Attention
focus
current
Important

(and what makes them effective is their ability to focus information --is that what you are thinking these have all in common?) i am thinking 7:17 what they have in common it is visually interesting uh, it highlights important information PAUSE it's organized so that the person accessing the webpage to find the information they need; it's logically organized PAUSE and the, part of that i think is that its kept fresh its ...they are not stale uh georgia tech had one that was starting to look old and dated until just recently. they have

In common
- Visually
- Interesting
- highlight
- Imp. Info
- easy to find
- logical organization
- kept current (Fresh)
- Bright

↳ (compare w/ competitors)

Figure 1: Margin Markup of Original Transcript

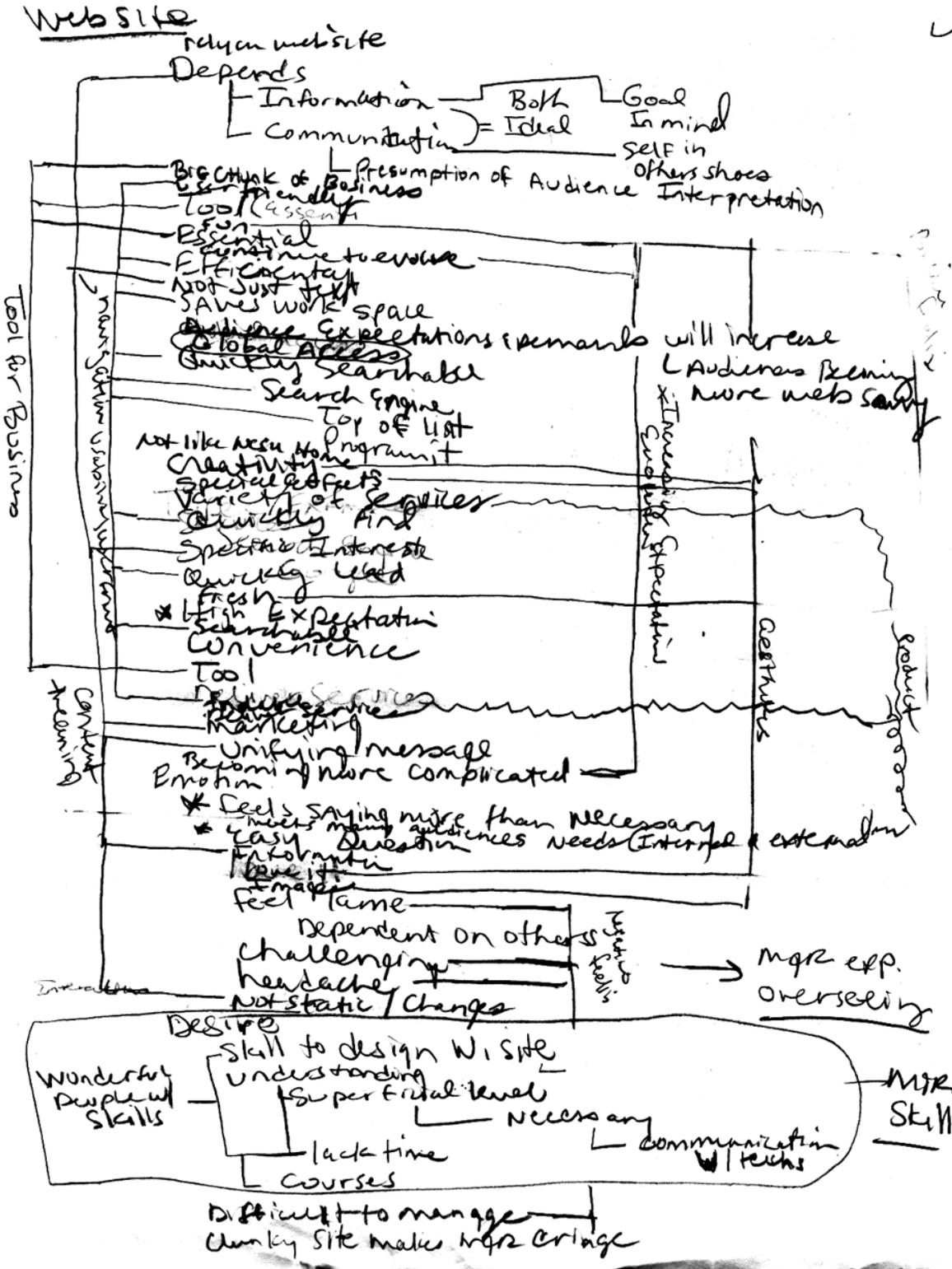


Figure 2: Open-coding and Chunking Data

Table 1 Definitions

	<i>Definitions</i>	Websites Defined	Purpose of Websites	Effective Websites	Content	Info
Website Elements	<i>Aesthetics/ Design</i>	Creativity Special effects Images Clean Not busy Fun Fresh Bright An amazing skill, an art		Limited flash technology Visually interesting Limited images A joy WD Attractive Not too flashy or wild Not overpowering		
	<i>Functionality/ Navigation</i>					
	<i>Content / meaning</i>				MANAGER becomes information Has to be organized Static WD Should be dynamic & very accurate Just something up there Most is in someway info	
Significance	<i>Example Websites</i>					
	<i>Evolution</i>					
	<i>Tool for Business</i>					
	<i>A Product</i>					
	<i>Assessment</i>					

Table 2 Website Development

	<i>Website Development</i>	Intended use of Website?	Manager experience overseeing site develop.	Managing Resources	Website design/maintaining
Website Design Process	<i>Information</i>	MGR Communicate info. WD Provide clear messages			
	<i>Interactivity</i>				
	<i>Educational Services</i>				
	<i>Consumer products</i>				
	<i>Audience use of site</i>				
	<i>How assess site (no mention of usability studies)</i>				
	<i>Manager reflection</i>		Love technology; exciting Lack of control Hate technology		
	<i>Planning phase</i>				
	<i>Development phase experience</i>				
	<i>Time frame</i>				
People	<i>Priorities</i>		Content and look are equal priorities WD Organization of info is primary Flow and appearance is secondary		Goals: organize info so people can get where they are going;
	<i>Participation role</i>				
	<i>Team effort</i>				
	<i>Interactions w/ web designers</i>		Constant battle War of web development	Provide conditional creative license	

		Frustrated with designers Difference of opinions WD Hands off	Guide the tendency to create beyond needs delegation	
People	<i>Job searches</i>			
	<i>Hiring</i>		Feel lucky to have internal resources	
	<i>Allocated funding</i>		Funds not specific to hire web designer	
	<i>Distribution of web design skills</i>			
	<i>Staff development</i>		Appreciate web designer	Want happy employees Communicate honestly Foster real business experience to learn
	<i>Software</i>			
Website Elements	<i>Competitors</i>			
	<i>Content</i>			Who maintains authorship WD So much info
	<i>Cost</i>			
	<i>Graphical look</i>			
	<i>Functionality /navigation</i>			Easier navigation Improve functionality Fix problems WD Goal is 5 main links on homepage
	<i>How often revise</i>			

Table 3 Skills

	<i>Skills</i>	Managers	Web Designers	Comm.between WD & mgr	Student Web support	Contract Web support
Education	<i>Background</i>					
	<i>How stay current</i>					
	<i>Technology training</i>					
	<i>Fostering/training for WD to learn the business</i>		Be a part of the operation-learn the process of whole dept.			
	<i>Expectations</i>					
	<i>Preferences of design</i>				Want flash, bang, & video fun stuff	
Behaviors	<i>Reactions of criticisms</i>					
	<i>Personality qualities /interpersonal</i>	Strategic planning Communicator Big picture Business communication WD Weakness is completely interpersonal	Think outside box Interpret Recommend Outspoken Fearless- brave Make suggestions Ethics WD Be patient to deal with people lacking website design process knowledge Not married to own ideas			
	<i>Performance</i>					
	<i>why</i>					Not authorized for on staff web designer
	<i>Website design process</i>					

Website Elements	<i>HTML experience</i>	Zero zero Took 2 courses Lack time	Html skills Dreamweaver courses WD Yes can write html Don't need to know html anymore, just use s/w			
	<i>Benefits of technology skills</i>					
	<i>technology skills</i>					
	<i>Content knowledge</i>					
	<i>Necessary skills</i>	Hire the right person Evaluate output & desired outcomes Delegation WD Understand some concepts and trends	Mgmt skills Communicate effectively Creative sense General skills WD Understand customer needs & vision of website	Web designer should be a "translator" between self & mgr + self & programmers		
Communication Process	<i>Knowledge</i>					
	<i>Is it different</i>			Yes & no; No; Yes WD Don't think so; No; No		
	<i>Why different</i>					
	<i>How communicate</i>					
	<i>Should it be different?</i>			WD Yes-because 3 different groups in dept No-style was		

Communication Process				very good No		
	<i>Conversation Topics</i>	WD Had really hard time communicating what needed and wanted Clarification of what he was asking		Not technical What fonts How user gets info they want WD Need ability to interact with client/mgr-		
Workplace Role	<i>website task responsibilities</i>	WD Mgmt more or less knew what wanted and was involved	Maintain site make look nice Ensure links work Post provided content WD Make site not overly complicated			
	<i>Part time role</i>					
	<i>Full time role</i>					
	<i>Pure web designer</i>		don't know content			
	<i>info. & comm. specialist</i>					
	<i>Admin asst</i>					
	<i>Lan Tech</i>					
	<i>Tech. Support specialist</i>					
	<i>Programmer</i>					
	<i>Department staff member</i>					
<i>Web master</i>						

Limitations

Potential limitations of this study included having had direct working experience with two of the participants. This same limitation was also a strength because I have credibility—with people I know within the University. I understand the culture of this University and have studied the managerial discipline enough to have a sense of what makes a quality manager. Though two participants knew me, I had no influential power over them and therefore was not seen as a threat to their job or ego.

Another limitation of this study was that I did not know if what the managers' claimed as their process of managing and communicating with their Web designers was what actually occurs. Some claims made by a participant during my pilot study about the expectation of her Web designer's role, skills, and performed tasks differed from the Web designer's perspective. This is first hand knowledge on my part that what the Web designer does and believes to be his job was not the same as that participant's viewpoint. Since the focus of this study was to understand managers' perspectives and subsequently their reality, the results would represent that reality as well as a glimpse at similarities and differences among Web designer perceptions. Although, the fact that this study provided input from both manager and Web designer allowing some cross-comparison, the Web designer participants were not direct reports to the manager participants. The resulting findings limitation is that of inconclusiveness of a direct comparison between managers and Web designers who work together.

Findings

Introduction

While the population of this study was those within a University, the challenges of disciplinary culture communication and the tasks of Website design can be generalized for other industries. It is more the factor whether you are a part of an organization that embraces and fosters teamwork where it is recognized Website development requires many talents and the resources are allocated towards those resources. Those that are expected to be primarily the sole person creating and maintaining a Website and have been giving little to no resources to support the initiative would find this study useful. Those who are expected to manage the creation and/or redesign of a Website with little to no allocated resources would also find this study useful. These findings can also be generalized beyond a University simply because the disciplinary culture of managers will have similar qualities no matter the industry. Due to the similarities in process and context, Web designers will have some similar qualities no matter the industry.

These findings are based upon answering my research questions: What do managers and Web designers believe make an effective Website; How does it become explicitly evident to managers whether their Website has met their expectations; What are managers' and Web designers' assumptions about the purpose of Websites; How do managers and Web designers define a Website; What do managers and Web designers see as the process of creating a Website? This chapter is structured with each research question as a main heading. The themes that emerged from the analysis are the sub-headings. There are three over-arching themes derived from this study: Definitions, Website Development and Skills. These over-arching themes evolved from grouping the data into three groups, what are Websites, what is the process, and the people involved. Definitions and Website Development and its supporting themes answer the five research questions. Skills and its supporting themes, education, behaviors, Website elements, communication process, and workplace role, will provide the foundation of the perceived skills, knowledge, and attitude that each of the participants' bring to their current position. This insight helps inform this study on some of the influences that affect the participants' answers to the interview questions.

Managers' and Web designers' perceived skills and communication styles.

One of the most telling takeaways from this study was learning that all six participants put such emphasis on not being formally trained in the field of Website development. Each of the Web designers came into the field from different paths. What ties all six together is their expression of feeling like they come from a unique perspective. One manager saw himself as “not a typical manager” because of his personal background not originating in the technology field. WD2 expressed his perspective:

Coming at Web design the way I did, I think, possibly gave me a slightly different perspective than someone that got an education planning to be a web designer. Uh, and hopefully it gave me a, (PAUSE) a little bit of a unique view toward it and allowed me to create something that is not just like everybody else's. Uh, so, in that respect I'm, I like the way I came into the Web design part of my job.

An irony is that the Web designers felt it was their previous knowledge and education that contributed to their success in the Website development field and therefore, not being formally trained was no hindrance. But, the managers quite often focused on not being formally trained as a strike against their aptitude for Website development compared to their Web designers who were supposedly formally trained—a necessity in the managers' minds. What each participant apparently failed to remember was that the Website development field is barely ten years old as we are half way through 2005. The way we know the Web today is really only four years old, therefore, how much formal education in the field can be expected from those that had already graduated college prior to the Internet boom? Yet, it was so prevalent on their minds.

Since the Web designers were not formally trained, they did have to acquire their skills some way. These Web designers learned by reading books, trial and error while on the job, “looking at the Internet,” and taking classes at the Computer Training Unit at the Southeastern U.S. University. The skills they sought to acquire were mostly the ability to code HTML and understand how the Web works, which makes sense, considering their previous education provided other areas of necessary knowledge. Managers, though, felt that Web designers' education today is too focused on technology, and yet, they each related formal training to HTML coding knowledge. Managers also felt that lacking HTML knowledge made it a challenge for managing Web designers.

Managers Skills.

Two of the three managers admitted to having “zero” HTML experience while the third had taken two classes. All three spoke about the reasons for their lack of HTML experience and not having created Web pages was because they didn’t have time and/or it wasn’t part of their job responsibilities. They claimed to have the desire to write their own Web pages seemingly mostly for personal interest reasons. The reasons they gave for wanting more overall technology knowledge was to learn the “scope of Web capabilities,” “best practices,” “ability to translate needs to the Web designer,” “understand why limitations exist,” “gain a breadth of knowledge,” and “skills [needed] to better communicate with Web designers.” The individual expectations of themselves ranged from having “introductory level HTML skills” to a general expectation of self to just know how to use technology. One manager felt it “would take years of full-time experience to match Web designer skills.”

Managers described the technology knowledge they do have as “ignorant,” and “naïve.” The qualities they felt they do have are as communicator, strategic planner, seeing the big picture, how Web ties to their business continuity, issues of disaster recovery, and understanding their audiences. The abilities to “hire the right person,” “evaluate output and desired outcomes,” and “delegation” were viewed as important to the managers.

The Web designers expressed their viewpoints on what skills their managers should and do have. When asked about their managers’ HTML experience, all three Web designers ultimately said their managers did not have any and really didn’t need any. Upon initially asking WD1, though, so that he could have help making minor updates, he said:

...It would be nice if they had HTML experience so they know how to do something. It would be just as easy for them to do it. So that would be a perfect world, UHM, but that is not. That is my job and I love doing HTML. [My manager should have HTML experience] just for minor stuff, so like, if there was a typo, and if there is a typo AND I AM OUT, it would be easier for them to update it quickly instead of having something bad on the Website for three days. So I think there should be more than one or two people in the, uhm, in the office, so if there is something minor, it can be done quickly. Because, I mean broken links for 4 days, that is just death in the (laugh) in the Web world.

I felt the need to elaborate and clarify to see if he really meant for his manager to have HTML skills or just wanted someone else to help and since we were talking about managers, that is what came out. I am not sure of the answer, but when I pursued it further, he did change his mind:

Hum, okay that's, that's a good point. I think there should be someone else that would help for that. I think it would be important for the manager not necessarily have the ACTUAL skills but to...to understand some of the concepts or the trend. That is the better way to put it. Like, it would be helpful for the manager to have an understanding this is why you would do this. Uhm, there is a lot less explaining or a lot less convincing...

The skills the Web designers did expect their managers to have was, like WD1 said above, to have an understanding of Web design concepts. Knowing Website development trends, having at least a "basic understanding of what type of site they want," and having "a vision of how the database should be presented on the Web" were expectations of the Web designers as well. Possessing these skills arms managers with the ability to better understand their Web designer's intentions as WD1 provides his example:

Uhm, knowing if a manager could understand...okay, I want this on the Website. This being a database, like you are, are saying I want this on the Website may or may not happen. So if I say no, I don't want the manager to feel like, OH they are saying no. [He] just doesn't want to do it. But here's the, here's the thing that needs to happen. So, this isn't, put this on the Website, this could happen in 20 minutes. Put this on the Website means, has to be uploaded. It has to be formatted. It can take a longer period of time, so just having a basic understanding of what a timeframe, of what put this up means.

Qualities that Websites expect their managers to possess include being "very forward thinking." WD3 presents the downside of having a manager focused on the cutting edge:

...Very forward thinking, and here is mister cutting edge. Now that goes both ways, cause lots of time, when you have manager cutting edge in charge, uhm, you end up chasing down things that are not practical. They are not useful. You know, have to ask yourself, do you want to do this because it is cool or do you want to do this because it makes sense. Uhm so, there is a cautionary tail there uhm, his, his weakness was completely interpersonal.

An irony in WD3's comments above is that the managers voiced a similar concern about the Web designers that will be discussed in further detail later in this section. Briefly though, one manager had expressed that Web designers have a tendency to "create the best when the best isn't needed." Other qualities entail managers being able to take responsibility for their Website

and make necessary decisions, to not make decisions solely on their own preferences, to rely on their Web designer as an expert, and have strong interpersonal skills.

Web Designers' Skills.

The Web designers shared thoughts on the skills they expected Web designers should have. I say it like this because none of the Web designers interviewed hold the job title Web Designer and therefore, may not always be speaking about themselves. It was not always clear when they were speaking about the field itself versus themselves. As one Web designer put it “Web design is not all about HTML.” That seemed to be the consensus because although each had initially learned HTML, it is not needed as much anymore. Something that I mention later is how much attention managers put on HTML as the basis of Web designer knowledge even though their complaint was that Web designers’ skills are too focused on technology. And, managers felt that their not having HTML experience was a hindrance to working with their Web designer. Even though they are capable to writing source code, all three Web designers have adopted using primarily software to do their HTML coding these days—Macromedia Dreamweaver and FrontPage. I too have come to get comfortable with these softwares and can also relate to WD2’s sentiment:

Probably in the beginning I could pretty much write Webpages, from the beginning to end, but now I can't anymore because I have gotten so used to working with Dreamweaver and FrontPage and their environments. So I probably forget half of the stuff I need to actually get the page working. Uhm, it seems to have gone backwards, but you get a better result anyway.

WD3 spoke about her reasons for “moving on to stuff like Dreamweaver and FrontPage” and her viewpoint on how easy HTML is to do:

...just because you get TIRED of having to type in list items (laugh), and it made it easier to layout a page as well, because you didn't have to do the tables by hand, and you didn't have to do any of that other stuff, so I'm, I'm all about some Dreamweaver. BUT...you can teach people, but you know, 'I' is italics and 'slash I' ends your italics....Nowadays it is not even necessary to know ANY HTML at all if you have Dreamweaver. It helps, you know, now it is more backend stuff –the PHP stuff that I am just not, not that interested in. But, uhm [Dreamweaver] MX does a lot of that for you too (giggle), or helps you out with that so you can really get by in the world of the Web without (giggle) a lot of computer background. (laugh) Which I am the poster girl for that. You don't have to know HTML. I think that makes some of the web designers angry (laugh) because you get into the whole sort of, uh, this person doesn't know

anything about what I am supposed to be doing and they are doing my job kind of thing and it probably breeds some misunderstanding.

Beyond HTML knowledge, the Web designers saw their task responsibilities to be the navigation, the structure, have good technical skills, to “know what is needed to actually produce the site,” make it the flow easy, “graphics skills,” and completing the site. This equates to knowing what makes a Website usable. When it came to mentioning more of the programming knowledge, there was contradiction. They would say they want more PHP and ASP databasing type of knowledge, but also said they don’t care about programming; they are not programmers, and they are not interested in becoming one. It was recognized, though, that having those skills is becoming more important and necessary. Web designers also need to “understand about getting content.” Other skills they feel they should have include being able to “take charge of the visual container,” “change the site quickly,” and eye for good design. Overall, Web designers “should be experts on different aspects of Web design creation and asking so, what does research say, what do you think and those types of things, and how can we do this,” according to WD1.

Qualities the Web designers expect to have are the ability to have patience with those “lacking Website design process knowledge,” be “highly organized,” to think through processes and map out directions,” to foresee the end product “during the initial design stage,” to communicate with many types of people, be “a good and effective project manager,” keep “accessibility issues on their mind,” “know the difference between good and bad layout and design,” “understanding the audience is key,” and to “know their own limitations.” WD3 acknowledged a limitation of hers was not being as visual as she felt necessary. She doesn’t create imagery through pictures well, but is confident about painting pictures with words. Managers, on the other hand, made the assumption all Web designers are visual; they are good at making things look nice. Mgr3 felt that his Web designer “can make it look nice and do all kinds of things but they really don’t understand our business.” “The designer is somebody I see as introducing a visual for the homepage and for the succeeding pages...uh produces a basic layout but isn’t necessarily going to be the person who is going to, uh, take all that content and really make it work with HTML,” according to Mgr2.

Like their expectation of managers not focusing too much on personal preferences, the Web designers felt they should not be “married to their own ideas”—they need to be a “little bit flexible.” WD1 explains that Web designers have to be “willing to take constructive feedback, hum (laugh), and non-constructive feedback (laugh). And also have thick skin, be able to design a Website whether they like it or not, that is what their client wants.

The technology skills managers expect their Web designers to have are being able to “implement design,” “display experienced Website creation,” know programming languages, do the “visual design process,” “create links,” make the Website “ADA compliant,” be “smart enough to create site editable through forms,” possess “cross-platform knowledge,” and make the Website usable. Other skills managers expect of Web designers are the ability to “translate text to visual” as well as being artistic and creative. Tasks that managers expect their Web designers to accomplish include maintaining the Website, posting to the site, making it look nice and interesting, keeping up information and making sure it is easy to access, ensuring the links work, and organizing the homepage. Mgr1 describes his view on the significance of Web designers having the necessary skills:

... You have someone who designs Web pages and has a certain skill set that have the ability to (PAUSE) take a fairly complicated amount of text and turn it into pictures which is amazing. To be able to do that in a way that is interesting and communicates effectively, I think, is an art. I have seen some very clunky Webpages that made me cringe when I tried to use them, and I have seen some that are just a joy to use. And, there is obviously a difference in the skills of the people that put it together.

Although the managers spoke of their Web designers not knowing content, when asked about their expectations about Web designer skills, they said otherwise. Being “able to write,” “attempting to understand the message of content and information,” improving content,” and “suggesting how to organize information inside the container” are all desired skills. Yet, the Web designer does “not necessarily” provide the content, and they “can’t rely on the Web designer for all information.”

It was verbalized by the managers their desire for Web designer qualities to be able to “think outside the box,” “guaranteed quick,” “Interpret,” “recommend,” “make suggestions on

content and layout,” have “integrity” with ethical behavior, be “outspoken,” be “fearless,” to “multi-task,” to “work in groups and teams,” to “analyze each situation,” “know the potential of Web development,” and “be a generalist.” This is a tall order considering the often more negative perceptions managers have such as Web designers “lack [knowledge of] policy and procedures of department,” like computers more than helping people, takes criticism personally, feel “look and format are more important” than content, and “have a difference of style.” These expectations and perceptions seem to be polar opposites. Other signs of polar expectations is the Web designer should be fearless enough to ask questions and try different things, but create the Website within the parameters set for the project and not beyond. They “shouldn’t act like they know more than manager.”

One of the major areas of concern and apparent frustration for the managers was Web designers not understanding their business. Mgr3 helps clarify by explaining the challenge:

...maybe your ideas are great, but if it really isn’t what the organization doesn’t need right now, uhm, resources aren’t unlimited (laugh), can’t always buy the biggest and best, ya know, software package, uh and to enable you to do things. And, uhm, so it kinda, you know, what is appropriate for your site, for that particular industry or unit business is doing, what most web folks don’t bring, the skills they don’t bring are, uhm, necessarily an understanding of the business, at least not at this level.

Mgr1 believes that “a web designer who understands those differences and tries to work with the department or with the particular person they are working for does a better job if they understand the business.” Mgr1 also provided suggestions on how to foster a full-time Web designer’s ability to understand the business; “be a part of the operation to learn the process of whole department; be the LanTech; handle customer services and issues on a regular basis and be a troubleshooter.” One Web designer recognized the need to communicate with three groups in his department—counselors, support staff, and managers. If he recognized that, then it would seem to me he has some sense of the business in that he understands some of the culture within.

Communication between managers and Web designers.

Communication styles and abilities emerged as one of the major areas of focus for all participants. When asked if they communicate differently with their Web designers compared to the rest of their staff, one manager replied yes, another said no, and the third’s answer was yes

and no. The Web designers answered the same question about their managers and were more in agreement that their managers do not communicate differently with them. WD3 exclaimed when asked the question, “Holy cow, sort of difficult to pinpoint.” One Web designer saw his manager’s process as standard—“instructed to look at different departments within the organization, gain input from them and then take it to his manager for final oversight.” But, upon further elaboration, it seemed that at least WD2 felt his manager did communicate differently. His comment was that they his manager and he had “wildly divergent styles of communication.” The reasons the managers said they communicate differently were because of the Web designer’s “technical aspect” of their job, their “technical function,” “expertise and the nature of the job.”

The Web designers were asked to address the issue whether their manager should communicate differently. It produced a mixed response. One said yes “because there are 3 different groups in the department; another said no and that the manager’s style was good and worked well; the third Web designer only replied with the suggestion they both “should have 50/50 training to meet in the middle” so they could understand each other. It was expressed that the “best communication is back and forth while having the most free range of creating initial setup” and that managers “should explicitly say ‘what I tend to do as a manager is,’ [it] would prevent challenges.” That doesn’t seem to be the experience of at least two of the three Web designers. Their experience had been basically a lack of clear direction and interaction. One Web designer stated the all-inclusive statement “all managers have the same challenge—the communication thing.” WD3 shared her analysis and assessed reasons for her manager’s communication challenges:

[My manager] took too many psychology classes. He has spent his entire life dealing with emotionally fragile apparently....He just had a really hard time communicating what he needed or wanted. And then, thinking that you knew when you have no idea, or when you thought of something completely different. And you could of thought of something completely different from what he wanted even after you had asked him clarifying questions (laugh) about it. Uhm, and so, the affect that it has is it kinda slows everything down because everyone is second-guessing. Well is this what he really meant. You know, and you end up trying to read someone’s mind which doesn’t work out too well....It was JUST the way his brain worked. I mean, he wanted to be concerned with, uhm, what was the coolest next thing and he could not come, he couldn’t explain why that would be important or relevant to other people, you know what I mean, or uhm, you know, I, bottom line, I just think it was different brain, different way to approach things.

It was mentioned by one Web designer, “my manager was out there in his own area, treated everyone same, spoke the same, and pretty much [provided the] same message.” Something to consider is if a manager does communicate differently, in what context is it different; and if a manager communicates the same with all employees, is that way effective enough? One-way to look at is if these managers communicate the same to all their staff, is that a good thing?

WD2 got approached by his manager who said “we need a website, can you handle it?” His manager was involved to the point of specifying only wanting a “static Website.” WD2 seemingly wanted to create something more but “followed management’s instructions.” He said, “I tried to keep management involved by showing them templates and diagrams. They would approve it. Once I knew exact areas they wanted, I publicized it; I built a database.” The key here is he tried to keep his manager involved.

The way their managers communicated were not always a disadvantage for the Web designers according to their perspective. When their manager remained hands-off during the Website design process, the Web designers had more free-range to do what they wanted and have an easier time influencing their managers. One Web designer’s experience was when he said “sounds like we should...,” the manager replied “okay.” He didn’t have to do much influencing. WD1 sold the idea to his manager that a new Website needed creation. It was an easy sell for him since he specified that money would be saved and that “creating something that no other competitor was doing, something new; I was instructed to get it done w/in specified parameters otherwise [my manager was] hands off.” WD3 noted her tendency to get defensive when she thinks something is good, I will argue until [my manager] stops. My manager was apt to stop. My interpretation was what he said wasn’t important. I took criticisms as not a request to makes changes. I communicate very directly, no metaphors, not emotionally. It is easy to run over introverts.” A manager who has challenges communicating and is primarily hands-off can easily become victim to such.

As for the Web designers, they feel it is real important for they to be able to communicate well. They have to “be able to inform [their] client of [the] process and [make] recommendations,”

they need the “ability to deal with people who speak a completely different language” about the same subject. One Web designer felt that the “biggest part overlooked” is needing the “ability to interact with their manager, human interaction. If you don’t know what they want, then you will have problems with the final design.” WD3 admitted, “I always interpreted his directions wrongly. It took me a long time to catch on. He probably never had an employee like me.” Therefore, the Web designers did take some responsibility for the communication process and see that they and their managers have to share the effort of communication.

While it was noted earlier that managers were split decision on communicating differently, they were in agreement about the necessity to be able to communicate with their Web designer. One manager even admitted to wanting to “better communicate with his web designer.” There was a desire for overall “better communication skills.” The managers may have said they want to communicate better but didn’t provide details of what that communication may look like.

There was a little bit of divergence among the managers as to the way they do communicate. There was the belief in being hands-off and providing little supervision. Honesty and being more directive with Web designers than other employees was a priority. One manager felt he explicitly defined outcomes but did not provide any examples. Another manager said he defined the limits to keep in scope. As a rebuttal, WD3 said, [my manager] “was less apt to come out and be direct. It was a challenge for me; a hideous mgmt style. I wasn’t used to hearing and didn’t know how to listen.” Perhaps there is a difference in perception as to what being direct means? Interviews between actual managers and Web designers would need to occur to confirm this perception difference.

The managers expected their Web designers to have the ability to “be honest about their Web design and development views,” and about “where they are coming from.” Managers feel they can use that information to determine if they are a good match for each other. Web designers are also expected to be open to constructive feedback—just as Web designers feel towards their managers. Web designer should be a “translator” between their self and managers and their self and programmers, they are viewed as speaking a different language when communicating with others.

Managers spoke about specific topics discussed with their Web designers. Although conversing about “what to do with content,” “how to structure,” “what fonts,” “what links to what,” and “how user gets info they want” are important for Website development, they are the details that should be based upon the larger message they want to get across to their audiences—how the audiences will interact and actions audiences can take after visiting the Website. It is quite possible this study didn’t provide the opportunity for managers to express all topics. Further study about the extent managers discuss Website expectations with their Web designers may be useful.

Although they said they didn’t focus on the technology aspects, it seems like their topics were technology specific. They conversed about “what to do with content,” “how to structure,” “what fonts,” “what links to what,” and “how user gets info they want.” They claim these are not about how a site is developed. I guess their idea of what “talking technical” means is different than mine. In my mind, if they were not going to talk about the technical aspects, then they would be more likely discussing the message they want to get across, what interactions are desired for their audiences, and what actions they want their audiences to take after visiting their site.

To summarize, it is important to communicate effectively recognizing the different languages between managers and Web designers. It is inconclusive whether communicating differently between Web designers and the rest of the staff is necessary. Both participant groups voiced the same concerns and complaints about each other. They both feel they are doing what is necessary to communicate, but also feel that they are not being communicated to each other very well.

Managers and Web designers definitions of Websites

The definitions topic consists of the five categories: Websites Defined, Purposes of Websites, Effective Websites, Content and Information. From these categories, two main themes emerged: Website elements and significance. Examples of effective Websites are a part of this topic area but not included as a theme. Within the Website elements there are aesthetics, functionality/navigation, and content/meaning. Significance is addressed in the purpose section that follows.

Website Elements.

Managers overall used more aesthetic related words to define Websites than did the Web designers. Graphics was the word used by Web designers whereas managers used the expressions fun, fresh, images, bright, and creativity. Managers' definition of Websites was focused on the navigation aspect of functionality/navigation and described it as efficient, search engine, and quickly searchable and findable. Web designers focused on functionality like commerce, security, and interactivity. All participants used words that describe the need for Websites to be useful and usable. Defining the content theme of Websites resulted in both participant groups mentioning the word information.

To ensure I understood what participants meant when they said information, a question about whether there is a distinction between content and information was asked. The sense I received from each participant was some confusion and/or not knowing how to answer the question. Initially all three managers said there was no distinction yet upon further verbalization, two of the managers found distinctions. Mgr3 found distinction, but had trouble expressing what he seems to implicitly understand:

I kinda use them interchangeably (giggle) till you asked the question. Content maybe, (pause) I guess, to me, maybe content is information that just sits there which is really meant to inform. Where information is maybe things we are trying to push out to students; that if we want some kind of interaction with them, it might be a way for me to look at that. I haven't given it a lot of thought until you asked the question, because I only have conversations, ya know. Information is stuff we want to put out on the web. Probably to us content is information that we need manage.

Only one of the three Web designers felt confident that there is a distinction with the other two ultimately seeing no distinction. WD3 expressed the distinction as, "Content is the icing on the cake, sometimes, and information is why you are there. It is why you visited; it is the purpose; and it is not necessarily always going to be pretty. Sometimes they can be a part of the same thing but you can also separate them." WD2 who found no distinction said, "I think content and information are so closely tied together it's hard to really separate." WD1's uncertainty was expressed through his vocal thoughts:

...ohh good question. PAUSE. Hum, content and info, let me think about it. PAUSE. There seems like there should be a difference, BUT I don't see it as a difference. In the

back of my mind, there seems like there should be one; should be just outgoing information and one should be dynamic. But to me, I guess I just see them the same. Like, I think any information, or anything on the Website is content that either should be changed or it should be at least, uhm, directed to a certain audience, uhm and it should be very accurate. Information seems so plain and content seems souh but in Web design, I think any information on there is content and it is important. Information seems like it is more important and more in depth. Content just seems like it is just something up there, uhm but to me ALL information or ALL things on the Website should be important. That is a really good question.

What was agreed upon was that information is the message you want to get across to your audiences. It is why you visit the site. Deciding how to define content appeared to be the root of some discomfort. As described by the managers, content is “static” until it “becomes information.” One Web designer described content as “something that is just up there.” They were not able to succinctly verbalize what they thought content was, but eventually found words to help lead me to conclude that which ever word is used, it should have meaning to the user. Mgr1 put it best of the six participants, “...it is only information to me if I want to know it. ... You can have a lot of content but unless it is properly organized, unless it communicates what the observer wants to know, it is probably not information.”

Significance.

This significance of these findings is that when all participants spoke of information, they were expressing the importance for the words on Websites to have meaning and usefulness to users. The organization and accuracy of it plays a part in becoming information. During the interviews, it was evident how thought provoking the question was by their long pauses to think and look up as if in deep, painful thought. Their body languages led me to believe they were unsure of themselves, yet were innocently intrigued by the question. Some of the comments were “that is a really good question,” “interesting question,” “you know, I may not have expressed it very clearly but I never really thought about it in those terms,” and “I would have to go out to the dictionary or something to see if there is a difference.” This was the only interview question that brought out so much expression.

Where there appears to be discrepancy is the understanding of what makes information useful. As Mgr2 noted, "... if I put something out there and it is content, I expect that it is going to inform." To restate what Rieh (2002, p.145) said, information is "subjective, relative and situational," and its usefulness is a "primary facet" of its quality. Therefore, just putting content up on the Web and assuming it is information by sheer fact it is visible, is a short sighted expectation. How content is presented, grammatically structured, and formatted effects whether the reader perceives it as information. What can be noted about all participants' responses to defining a Website is their focus on elements of it as an object versus what a Website is supposed to do and be used for. The purposes of Websites had to be sifted from different questions.

Managers' and Web designers' assumptions about the purpose of Websites

Website Elements.

Once again, managers seemed to focus their functionality/navigation aspect of Website purpose as objects while Web designers focused on the substance—what the user will get out of it. Managers spoke of portals, forms, and databases while Web designers saw the purpose as entertainment and freedom to find information.

Significance.

The significance of the purpose is that it is a tool for the business. It is a product that meets audiences' needs and tells about your business. Manager responses are more heavily weighted in these sub-themes and specifically acknowledge their reliance on Websites to deliver services that help increase their department's quality. Even though the purposes for Websites in general didn't derive much data, all participants seemed to have a little better idea of their Websites' purpose and intended use. Their sites' primary purpose was to widely communicate and disseminate information. It was unanimously recognized that Websites needed to be effective for them to do what they intended and expected.

Managers and Web designers beliefs about effective Websites

Website Elements.

A little more robust data was derived by this question than by the purposes and definitions. In many instances, Web designers agreed with managers about what elements make a Website effective. There were, though, contradictions among the participants within their groups. Both groups, managers and Web designers, expected an effective Website to be visually interesting yet have a limited number of images, and it shouldn't be too wild. All agreed that the navigation has to be easy with high quality working links—equating to a usable and useful structure that caters to audiences' needs. The Website's information has to be kept “current,” “comprehensive,” “clear,” and “make sense to all users.” Being able to find the information one is looking for was a big priority for both participant groups with WD3 specifying, “It has to be clear. You know, who you are, where you are, what you are doing and where to go to get more in depth information about certain things like hit the high spots...and here is the link to get down deeper if you need more detail.”

Significance.

It came across strong that effective Websites are a kind of marketing product to “support name brand recognition” and “makes the customer want to come back.” This was interesting because although all participants agreed, in some form or fashion, that Websites are a marketing tool, all three Web designers named search engines as their favorite effective Websites—Google was the most popular and Yahoo was second. Including Amazon.com, the commonality among these Websites is having lots of content, yet one Web designer mentioned ESPN as effective that has too much content. LandsEnd was mentioned because it is a retail Website and became a model for one Web designer working on a retail-based site. NY Times was added by one Web designer for its eye-catching titles and because it is updated several times a day. To sum it up, these Web designers want heavily contented Websites with a robust search engine so that the information is easily found and has many types of interactions available.

Managers' examples weren't as elaborate. Other than one specifying Google for the same reason as the Web designers—a search engine, all managers exclaimed their own departments' Websites as effective. None of the Web designers made mention of the Websites they had

worked on. Managers also seemed to focus on competitor and peer departments' Websites as a point of reference. Managers stuck with educational types of sites as reference while Web designers ventured out to resources they personally used.

Managers and Web designers view on the process of creating a Website

The Website Development topic informs about participants' views on the process of creating Websites and consists of four categories: intended use of the Website, manager experience overseeing Website development, managing resources, and Website design/maintenance. The emergent themes include Website design process, Website elements, and people. Sub-themes for the process include information, interactivity, competitors, educational services, consumer products, audiences' use of the site, planning phase, development phase, and priorities. The people sub-themes are managers' and Web designers' participation role, team effort, interactions with the web designer, Job searches, hiring, allocated funding, distribution of Web design skills, and staff development. Finally, the Website elements sub-themes are the same as for the Definitions topic with one added: aesthetics, functionality/navigation, content, and software.

Process.

When managers were asked to describe their most recent experience with the development of a Website from the planning stage through the finished product, I anticipated learning the initial spark to decide to create a Website along with the thought process behind the decision and the working relationship with the Web designer. I did attempt to guide the conversation towards the interaction process between manager and Web designer, but it did not become explicitly spoken about by the managers. It seemed easier to draw out the Web designers versus the managers perhaps because the managers spent a great deal of time answering the question as asked that I felt constrained for time. That impacted my thought process to guide the conversation.

Website design initiation.

Managers' data begins with the decision that their Website needed to be worked on while two of the three Web designers provided why their Websites got initiated. The managers did have a tendency towards describing more of the mechanics of their Website revisions rather than the

human interaction aspect. By looking at competitor Websites, Mgr1 determined his Website was getting stale. His decision to hire a University employee from the IT division as a contractor was based on his assessment that the LanTech employed in his department was not skilled enough. The IT contractor had more visible credibility around campus to structure Websites, and Mgr1's LanTech had only "some fairly straight forward design kinds of things." Mgr1 elaborated, "...so our main goals in working with [the contractor] was to give us something that was fresh and professional, uh, sophisticated, if you will. And comparable to other universities." The reason for Mgr2 to pursue the revision of his site was to fix it; the last contractor did not complete it and left it not fully functioning. Mgr3 only spoke of their current process and challenges with their Website design resources. He informed me about having a full-time Technology Support Specialist and a part-time work study web programmer. The origination of his Website, though, was partially informed by two of the Web Designer participants who happened to be previous employees of Mgr3's department.

On the other hand, the Web designers were able to express how they got the responsibility for working on their department's Website. Only one of the three Web designers was hired specifically to work on a department's Website. The other two acquired the task in different ways. WD1 proposed the design of a new Website to replace their department's print material mailings. He explains how the process started:

...It was just a conversation I had with my supervisor in terms of, ya know, I am tired of doing this newsletter. I mean I don't think that it is that effective; not knowing if people are reading it; and how about this is something that could last the entire year that we can change information. I think it would be a good PR thing so it was a short discussion. And since the fact that that I was willing to do it because it wasn't in my job description, uhm, what so ever, and since I was, uhm, willing to do it and, uhm, find the resources, the conversation was more like 'okay if you want to make it happen here is your timeline to do it' and go from there....

It was actually a money saving thing, we started out in terms of having newsletters sent out to parents each summer on how to check in, uhm, information on the halls and so we had that printed up and had to stick it in packets that were sent out to students. So, I suggested to my supervisor that, hey, we would save a lot more money if actually made a Website instead of sending out 4-5 page newsletters. Just send out a business card with the Websites of all three halls and then that way we can change information as needed. We would save, I think we saved probably about \$1000 with the Website. AND this is

even before we realized that we could get free space at the university so we were using popup space; uhm we were using Tripod.

WD2 describes the conversation with his manager about creating their department's Website came about:

Uhm, pretty much it went like 'we need a website, can you do it' and that is pretty literal. Ya know, I came on board to do mini computer programming which was at that time cobalt. There was some Cobalt, there was some BASIC, (indistinguishable). I did some work on that PCs but primarily I came on board to work on the mini computer in the back office. Uh, and because I had the PC background and a manager from another department, uh, asked me if I could handle doing that or should they get an outside person to handle that, no I think I can take care of it. That is when I started doing the research.

Communication.

How ever the participants came to their Website creation decision, what appeared to be at the core of Website development for all participants is communicating with their audiences—whether that be as an “informational service,” “marketing tool,” or “sales tool.” Part of the communication is giving their audiences access to interact in various ways such as purchasing online, signing up for workshops, Listservs, and providing the motivation for audiences to take a specific action. Though this is the goal of the participants' Websites, all three managers acknowledged some level of challenge as to how to communicate with their audiences. The managers viewed information as “messy bits of data” and “more complex than it looks.” There is also a presumption that audiences are expecting more today and a feeling of pressure to meet that expectation. Yet, the managers made no mention of having any statistically based documentation as supporting data that audiences “expect more of Websites.” The Web designers, likewise, voiced the belief that audiences are expecting more and that their “attention spans are shortening,” leading to the need for more dynamic Websites and keeping it “fresh.” Providing an abundance of useful and clear information that is widely distributed to multiple audiences was a strong message from all the Web designers.

Priorities.

Although one manager specified he bases quality and audience expectations on his own knowledge of where information should go and where he would think to find certain

information, all managers did compare their priorities to their competitors' Websites as a process of determination. Upon planning their Websites, all participants also used competitor Websites as a benchmark to aid in the design of the site. Mgr1 provides an example of how he proceeded to utilize a competitor Website:

... We were at the point of being kind of stale with the Webpage we had, that we had borrowed from one of the California schools, San Diego I think... Uh, the first sort of Webpage that we had was the standard grey and red... thing had for so many years. Then we decided to get a little bit better organized, so we borrowed one from the [a department like ours] out West and uh, used that organizational scheme, and then we got to the point of the kinds of things we were offering and the amount of information we were offering was more than we could really fit into that structure.

Some of the elements the participants used as comparison and "emulation" include "look and feel," "amount of detail," "structure," "freshness," "graphic design techniques," "what is available in the departments using limited resources," and the reviewing of "peer institution activities." WD2 acknowledged:

Uhm, probably the first thing was research. Uh, similar sites to what I wanted to produce, uh and then based on looking at the research, selecting the items from those different sites that were appropriate to what I was trying to convey... We obviously went out and looked at other college store websites, and peers and saw what they were doing...

From the interviews, I found managers' priorities were having a Website that looks as good as it is organized with quality content. I sense they look for a balance, whereas the Web designers believed the priority is on the organization of the information with the "appearance being secondary." I didn't expect managers to put such emphasis on the looks of Websites especially because I heard managers define Web designers as too focused on the visuals and the look of Websites. A "difference of opinion" with Web designers is that "designers like to have a nice clean tailored look to their design," as specified by Mgr1. Mgr2 explains his point of view about Web designers:

The designer is somebody I see as introducing a visual for the homepage and for the succeeding pages, uh, design is where the key link buttons. They are not interested in my text. The designer, the pure designer people aren't interested in the text I want to get out there, the content. They are interested in that superficially, in that they would like their design to REFLECT what the content might have in there but not, not interested in programming.

Planning and Developing.

Establishing their priorities were part of the planning process for all participants. What I didn't get out of the data was a sense of formalized or structured planning process. Two of the managers made mention to including their Website initiatives into their business strategy without specific actions they take to actually plan these initiatives. Mgr1 spoke of his Website as a "very valuable resource" with a goal to "deliver more services electronically." This goal "is a compact plan issue for us; that we managed to get into the newest compact plan that we, uh, furnish, uhm, up to date electronic services to students," according to Mgr1.

WD3 was the only Web designer participant to speak of the need to assess her current department's Website's condition. A specific action WD3 took to incorporate into her department's Website planning process was assess surveys from two of their audience populations. WD2 provided a systematic procedure for their Website planning:

...primarily a series of face-to-face meetings. The primary meetings, the first meetings, PAUSE, review what our peer institutions were doing, look at what we had available to us here, with, uh, the idea of using limited resources and then come back and look at what the departments within the organization need, and then come back, and we will map out the final strategy. And after that there was a series of face to face meetings, and planning sessions and, uh, review of templates and then working down to the final product. So fairly orderly.

When entering the development phase, managers saw their role as overseeing Website "creation," "revision," "communicating the big picture," providing conditional creative license, "delegation," and "ensuring the web object matches their business objectives." No specific details were offered about what they actually do during the development of the Website. Web Designers briefly mentioned their role as determining the "structure and hierarchy," create database with forms, and overall "ensuring the site works well." The managers did often speak of their feelings about the process, their expectations of necessary skills, and what the Web designers tasks included. These will be discussed later in this study.

Website Elements.

The Website design and maintenance elements (look, navigation, and content) played a big role in the overseeing of the development even though managers claimed not to focus on the

technology in their conversations with their Web designers. Mgr3 made note of his advocacy for using Web editing software because it makes “editing and development much easier because all the programs are doing the programming behind the scenes for you. Ya know, one of these days I suspect you will probably be able to just talk to your computer and it will create the code and what ever else you want from it.” Although Mgr3’s example conversations with his Web designer did not directly contain Website elements, what he did say led me to believe his thought process does and subsequently would communicate that during his actual conversations. The following feedback Mgr3 provided is an example:

Ya know, they know they have to be ADA compliant, they know that, ya know, folks don't necessarily have the latest and greatest computers at home. So they are not going to create a video clip that is going to take someone 15 minutes to download or create something that works in Explorer but doesn't in Netscape. They are going to have to figure out some things, so for the most part they have the ability to try different things.

I found Mgr1’s discussion about not focusing his conversation on the technical aspects somewhat conflicting:

...Most of the time, she is not so concerned with the content, if you will, or policy issues, but more or less how to present them; how to, uh, structure it, how to index it; how to relate it to other things, make sure it is organized properly, and uh, and presented in a way it is going to look okay when it is finally accessed. So in terms of what she ends up doing with our conversation, I talk to her about that. It isn't always necessarily how it is developed and the technical aspects of it. I may develop the policy with one person and talk to her about how it is going to be presented; PAUSE and the idea is just what we want to accomplish with this; here's what it consists of and how we end up presenting it and how do we structure this table or how do we ...What fonts do we use or how do we ...What do we link it to things like that. So when somebody comes in and tries to find it, how will they get to it. Those are the kinds of things we talk about more than necessarily the technical side of it.

The context of maintenance by the managers was most often having to “fix” their Website. The cost of Website design resources and resulting cost to fix their Websites were prominently on all of the managers’ minds. It came across to me that they viewed the costs as a constraint rather than an investment. As part of the fixing of their Websites, all participants felt the need to improve the sophistication and layout of their Websites and how “there is always room for improvement.” They saw the need for the Website to be better organized, consolidated, made easier to use, and technologically up-to-date. A part of improvement was ensuring users had as few links as possible to click before reaching the sought after information.

What seemed to cause dilemma for all was the content. Managers expressed being overwhelmed by the “number of web pages” and voiced concerns about how to get the content shifted. Who updates the content, who is responsible, and who has authorship? They know they wanted to “improve branding and attention getters,” yet the process of making it happen appeared to be uncertain to them. All three managers shared the view that Web designers are not interested in content. It appears consequential that managers do not expect Web designers to be responsible for content.

Like the managers, the Web designers were also concerned with how to manage “so much information” and that it was a constant challenge figuring out “how to fit everything on the homepage.” “Content is everything,” said WD3. She also specified that others create the content while the Web designer formats it. That seemed to be the consensus from all the Web designers—the content gets supplied to them. WD1 clarified the difference between one persons having sole responsibility versus multiple people. At one point, he was solely responsible and spoke of having to know how to do it all including content. He became frustrated when another person got involved:

[It] became more frustrating because since then, there was actually another person involved. Depending on when I could get information from my supervisor, depended on when I could actually do the work. So, there was like a period of time where she didn't have time to give me the content, therefore, that was put on the back burner. So it wasn't a major issue because that wasn't my primary job and so the deadline was all hers. And so, when she wanted to get ready, it was okay for her to move the deadline. And, and it was good for me because she never moved it UP...Now I think it is important for my supervisor to either give me more creative control over what happens to the website, that uhm, or for everybody that has an input into the Website to understand content management, graphic design, and the trend, to uhm, of where Web pages are going now.

People.

Each manager admitted they have to rely on others for the creation and upkeep of their departments' Websites. Although two of the three managers believe the process is a team effort, with one manager's department supporting an advisory group “to provide guidelines to programmer, provide feedback, create templates,” all three had a great need to express their

feelings about having to rely on others. Managers expressed Websites as “challenging” and a “headache” along with feeling a “lack of control,” “embarrassed” for his Website not being completely functional, and “feeling lame for being dependent on others.” When managers became specific about the interactions with their Web designers, even more emotion surfaced. They saw the relationship as a “constant battle” with “difference of opinions” and “disagreements.” The process was “slow, slow, slow” leading to “anger” and “frustration” working with the Web designer. Managers saw it as a “war of Web development” and “a struggle to fix things.”

All of this emotion aside, there was still a sense of appreciation for having the help. Managers expressed feeling lucky to have an internal resource and view Web designers as very valuable. Mgr1 voiced his appreciation for the work of his hired contractor, “...I really appreciate the work that [the contractor] has put into it, and uh, we get along fine. I think he understands what I was trying to say.” Mgr2 also verbalized his appreciation of his administrative assistant who is responsible for maintaining his Website, “... that staff person is a jewel of a person to work with, and we're very close. We communicate very well and honestly. I do everything I can within my managerial style to promote my staff to bring them opportunity for professional development, and uhm, and I think it is critical.” Mgr3 elaborated the most:

We are very fortunate that [my Web support person] came to us, uh, with a degree in computer science. We brought her on, uh, as a kind of services kind of person. When we found out she was really interested in Web design, and also other things, we tried to help her out. And uh, she is now on the computer technician, support technician or something like that, I don't remember the exact title. Part of the new banding thing that was done. She is in the computer services band now. They took her out of the accounting clerical. We thought it would be better for her.... We are fortunate in that respect. Not all departments are as fortunate enough to have those services.

The Web designers didn't express as strong emotions. They did casually mention frustrations but it was more a matter of fact rather than pure personal emotion. Overall, they were more diplomatic and empathetic towards the manager even if they expressed some level of frustration. IT was when the Web designers supplied details about their managers' involvement with the Website design process that some emotion appeared. Because WD3 experienced a “very hands off “ manager, if she said “this sounds like what we should do, everyone was like ‘OHH, OKAY’ and so we did it.” WD1 gave details on his manager's involvement level:

Yes, she was involved in the initial. This probably ended up being a three-year project. And so, we met initially about what we wanted, and we used the newsletter as a general guide in terms of this is what information we knowingly want to go out. How can we improve on this. Uhm, the only input she really wanted was when she decided we wanted to do a campus Website that was when she really wanted to know more about it and wanted to have more hands on, Uhm, aspect of that one. But the other one, she really allowed the other halls to, she would really monitor what, somewhat, and made sure that things were appropriate and if she got any negative feedback, would follow up. [It was the] major content [she want more involvement with.] She had specific things she wanted that she wouldn't necessarily given that input to the other halls, so uhm certain, certain kinds of graphics, uhm like, I totally came up with the structure, the hierarchy for the other Website but she wanted more input on the Hierarchy, because, ya know, she was going to be the main content provider for that actual site also...When [my] manager became more involved with providing content, the process became frustrating because another person was involved.

WD2's experience was from a different angle because he deliberately tried to keep his manager involved:

From the beginning, I tried to keep management involved right from the start, showing them a general template, doing diagrams for them, uh, just to keep them up to date. And, make sure I was covering all the things THEY wanted covered. Uhm once, once I knew exactly what areas they wanted publicized, that allowed me to, uhm, build the database out to different agents, and the order that worked best for them, and then come in with a more technical items, and how to do an image, how to do the rollovers. [My manager] more or less [was pretty involved and knew what he wanted.]

Two of the managers seemed to be involved with the process in some form or fashion. Being hands-off, allowing his workers to do their job is a perspective Mgr2 seemed proud of. He was the only manager to explicitly voice a preference for being hands-off because it "prevents the need to micro manage." An interesting note, Mgr2 expressed the most frustration, of the three managers, towards the difficulty getting his Website fixed and functioning to his satisfaction.

Contradictions occurred when the Web designers provided their viewpoints on team efforts although all three Web designers saw themselves in the role of doing the site themselves. Each of the Web Designers did spend more time than the managers addressing their ideas about the impact of teams and the lack thereof. The contradiction was the recognition of the necessity of

a group effort and that it provides quicker and more efficient Website design, yet one Web designer can do it all. It also seems to be a discrepancy that Web designers see the need for teams, but get frustrated when more people are involved. WD3 supported a team effort:

Kinda a large task. (laugh) Uhm, getting all that organized and then we would visit it about every year just to make sure it was still kind of fresh, to see if things have changed, because the way we did business would change. And your site has to change to reflect that, so it was very much sort of a, uhm, community effort.

WD2 explains the distinction between the decisions to have a Website design team versus an individual:

Uh, it depends on how specialized you want to be with what area you are working in because Web design has gotten so (PAUSE) technical in some areas that you need a technical team with specialized skills. You need a database designer; you need an interface designer; uh, somebody that can integrate everything, put all this together. Uh, so skills as far as being a Web designer, unless you are going to be designing a small fairly easy to design Website, and not too many pages, uhm, seems like people specializing in, uhm in particular, the database websites where you pull in thousands of pages, and it is designed on the fly, you need somebody with good programming skills. In particular, Javascript or some of the other, uh, languages that do those things for a database....The biggest distinction to me is someone, like myself, does ALL aspects of working on a Website than a larger corporation group that has a complete team of Website designers. Uhm, from my point of view, a Web designer is someone who can package the entire Website to the initial design of how the website should be broken up to custom coding if necessary, uh, to obtaining graphic images even to the point of going out and taking digital images themselves, uh, editing the images, uh, placing them in the Website. There is a big distinction, like I said, from a one or two person operation and an operation where you have a team, and you may have one person that is responsible for graphics and one person responsible for content, and that type of thing. So, from my point of view again, it is somebody that can package the whole deal and pull it all together....I have to look at things from a broad perspective because I am a one man operation....[My ideal would be], I don't know. I guess with the team aspect you can concentrate on some areas to a finer degree of detail than you could, say, with a one-person operation. [You] could possibly get a more refined outcome in a shorter period of time. Over time a one person operation can achieve the same result, but uh, there is just a limited amount of time, and a lot of the work, uh just eats up time, page layouts, that type of thing. Uh and, especially if the designer has OTHER responsibilities in the organization. The time is just not there to do it to as fine of a detail as you would like sometimes or you just have to produce something that is GOOD, but uh, could have been produced with better detail if you had a team....It is uh, it is suitable [to have one person] in that, uh our, uhm, Website is fairly simple. Uhm, more complex websites probably would require uhm either someone who does absolutely nothing but the Website or a team the can be used to do Websites among other things. Uh, one of the things that I just mentioned, over time I have learned to take what I initially get out on the Website and

define it to the point that it finally looks like a very good finished product. Initially, sometimes you just have to pop stuff out there fairly quickly, and uh, it is acceptable.

Considering managers were appreciative of their Web support resources, it makes sense they were accepting of their allocated resources to support Website. None of the managers felt they have been assigned funds to hire a full-time Web designer, and there was a consensus that using a contractor is often necessary. All three managers were advocates of centralized Website design support and seemed to see it as more cost efficient. Since Mgr3 has an advisory board representing all groups within their division, it is safe to say that they already function as a centralized resource. “The division has to have an IT shop that is run by a central person and run as a vendor shop so that all units work is managed effectively, otherwise it is nearly impossible for it to work,” according to Mgr2. Mgr1 pondered, “The centralized resource that services several departments is certainly more cost efficient and uh, I think if I was doing it, I would probably do the same thing. Still I am glad I have someone.”

For those employees the managers have been approved to hire, it was made apparent to me that staff development was important to the managers. Mgr2 finds it is important, first off, “to invest time to hire the right person,” and once hired, “provide enjoyable work” because he wants “happy employees.” The managers, though, don’t anticipate hiring a dedicated Web designer. They are more apt to hire a staff person with other responsibilities, and then send the new hire for Website design training. An example was when Mgr1 hired a new employee who happened to be interested and have aptitude for Website design, so he helped her gain the knowledge necessary to do that task. Subsequently, he had her job title changed to reflect her Website design responsibilities. Yet, this same manager wouldn’t hire a Web support person initially. Mentoring is another way, by two of the managers, seen as a good way foster staff growth. One manager saw himself as a “Teacher of real world business” and that “web design is not glamorous.” It is important to learn through “fostering a real business experience” and helping “Web designer learn to present and communicate in their office.”

The types of Website support became categories in the Skills topic area—student Web support, contracted Web support, and Web designers. Focusing on the students and contractors for the moment, the use of these resources were prevalent with the managers yet most often not a

satisfactory experience. This is even though, as mentioned earlier, the managers were most appreciative of the resources they had and the effort those resources made. The typical behavioral beliefs about students, of the managers, were that they want “flash, bang, and video,” the “fun stuff.” Student Web support people were viewed as too young, temporary employees that are transient and subsequently “lack communication skills,” “lack seeing the big picture,” “lack ability to craft a message,” lack understanding and knowledge of your business rules other than a basic goal of the Website,” and “communicate differently.” Managers voiced their experience of students doing what they wanted in isolation of the manager’s request and having attitudes of knowing more than the manager.

The managers seemed to accept the limitations they found in their student employees because, after all, they are “cheap labor.” Limited skills usually are to be expected with cheap labor. The skills the managers saw their students Web workers have were the ability to make the Website look nice and upload files to the Web. One manager recognized that even if the student realizes an issue, that student may assume that manager already knows and make no mention of it. In spite of this seemingly negative picture, the managers’ gave the impression they felt they had little other choice but to employ students. It is either that or a more implicit expectation they feel. Whatever the reason, the managers led me to believe they will continue to utilize student resources for their Website initiatives.

The contractors the three managers primarily used were local individuals or groups within the University. The responsibilities and expectations were higher for the contractors than for the students. Contractors were expected to be able to maintain the Website, specifically the functionality and keeping up the changing technologies. Initially, they are seen as having a good reputation and experienced especially when their Website work is very visible to the public.

Upon one manager experiencing the process of utilizing a contractor, he found it too bad because the contractor was “unresponsive,” “incompetent,” and gave excuses as to why he couldn’t finish the project. Another manager spoke of a contractor group on campus he was dissatisfied with because “they don’t have a Web designer. What they did [to the Website] needs explanation and changing.” When it came to having to rely on another department for his

database, this manager found it to be a constraint. The department's server access was proprietary therefore making the manager rely on that department to do the necessary programming. The department doesn't allow people outside their department access to their servers. This caused long delays. Mgr1 retained the services of a particular individual in the Information Technology Division at the Southeastern U.S. University and shared his experience:

Uh, do we get into the point when I get frustrated with the designers? Or are we going to tackle that later on? One of my concerns, or one of my differences of opinions, I suppose was that the designers like to have a nice clean tailored look to their design, and they tend to take it personally when you don't think it does what you want it to do. So I think we finally got through....And we still have a standing disagreement with [the contractor] about the appropriateness of what we did, and I'll show that to you here in a minute if you want. Because as a manager, what I want this to do is communicate. From the design standpoint, there is a little resistance in what we did; they like to see it nice and clean and pure....[I] think it is a large improvement. I really appreciate the work that [this contractor] has put into it, and uh, we get along fine. I think he understands what I was trying to say. Any problems I have had about [this contractor] is certainly a difference of style. We have style differences; he is a designer and I am an accountant, and I could be wrong. Probably am, and that is okay.

An observation I realized was that Mgr1 makes the distinction between being a designer and an accountant as having different styles, yet earlier in our conversation, he made the comment “[HTML.] That's a technical skill just like accounting is.” This seems to be a similarity. It is also evident that Mgr1 changes his tone about the contractor. I believe that is in part due to the question I asked him about his concern with being anonymous.

The reasons the three managers gave for continuing to retain contractor services were because they are “not authorized for an on staff Web designer,” they were “familiar with this arrangement” because this had “been a primary Web support experience.” It appears that neither students nor contractors are the ideal solutions for these managers, but the behavior to use these resources persists. It would seem then, that a more ideal situation is a permanently hired internal Web support person.

When the managers spoke of internal Web support, eight classifications/titles emerged. The “Pure Web Designer” was identified as someone who “doesn't know the content,” they have “superficial knowledge of what [the manager] wants the site to do,” “doesn't like

programming,” is “expensive,” and “imagines how to make [the site] look.” One manager specifically mentioned his LanTech as someone who has been “increasing [his] skills [by] taking classes,” is “proficient at maintaining [and] updating information” with “straight-forward design skills.” Another manager utilizes his Administrative assistant who “loves the Web” and is “happy learning” as much as she can. She had been given the added task of editing and updating his Website, but that wasn’t what she was originally hired to do. There was mention of a Webmaster who “plans in advance and writes goals for the site.” The programmer’s role was to make the “site work with HTML,” “setting up the database,” “creates utilities,” and overall “makes the site function,” but is “not concerned with beauty.” The technology support specialist employed by one of the managers has Website tasks as part of his responsibilities. One person was hired with student services responsibilities and had “strong Web interest,” so her manager showed his support by changing her title to reflect her new Web task interests. The last role that was spoken about was the Information and Communication Specialist. Mgr3 expects this position’s role to “supervise the Web staff,” “provide her own vision,” “sees the larger picture,” have a “marketing and communications degree,” and has a “high level of Web skills.” The Web designers were able to provide a perspective between being a full-time Web support person versus being hired with only being expected to conduct Website tasks part-time. One Web designer expressed that Website design “wasn’t part of [his] original job responsibilities.” He felt that his manager wasn’t concerned with his skills because the “site didn’t have to be done. It was a perk if it got done.” As a full-timer, another Web designer voiced how important it was to him when his manager gave him “more creative control over what happened to the site.”

With these different job titles floating around and all playing some role in the Website development process, it is no wonder an abundance of confusion and contradiction emerged from this study. Explicitly talking about the many job titles helps bring out the diversity of skills necessary to create a Website and the reality that people working on Websites come from many different educational backgrounds and experiences. There seems to be no one ideal job title. WD3 recognized this through her experience as a “single Web designer” doing all the tasks, “managers couldn’t decide my job title—Designer, Programmer, so I called myself ‘Marketing Czar.’”

Evidence of managers' explicit knowledge of their Website meeting expectations

A fourth theme of the Website Development topic is assessment. It is about how participants assessed their sites' effectiveness, audience uses, and how often the Website should be revised. Surveys and checking the Number of Page Hits statistics were the primary ways that four of the six participants learned about audience use of their Websites. The managers made mention of conducting focus groups, receiving word of mouth comments—fine, nice, good, like it, info confusing, and “putting myself in others' shoes.” Mgr3 provided his process, “... I also think what a good website has is the, uh, the ability to have a survey from the user. Ought be able to assess what information they did like and didn't like; something that tracks users mainly the number of clicks...to get information....So I can assess its effectiveness.” Experiencing no one complaining was viewed by one manager as a form of positive feedback. The Web designers seemed to rely heavily on the server statistics and made mention of speaking with individuals along with seeking feedback from peer institutions. Mgr2's reasons for [not knowing] “how busy the site is and how much it has grown” were because:

You know I can get all kinds of data for my assessment program but also to see where the action is [on my site] and uh how best to serve...[but] I don't. I mean I really don't. I can't use my database function which is just not working, uhm, so I can't get certain kinds of information. Uh, I don't know how many Hits I get a day. I don't even know how to figure that out. I don't know how to do that. It is probably a very easy thing to figure out. I guess I can find out but no one has ever showed me how to do that...

While most made some attempt at assessing their Websites, there seemed to be a lack of confident consensus that the information they receive is not thorough enough. One participant found that online surveys provided a “poor response” and is passive. In fact, while Web designers had a sense of audience use of their sites, the managers admitted to not absolutely knowing. This is due to the fact they do not do formal assessment. Manager responses range from their site doesn't do what they expected and “they don't exactly know how to assess nor what they really want to accomplish” to “Good question, Site accomplishes what [we] think [we] wanted.” Web designers were able to specify milestones achieved like the goal of getting their audience to regularly visit their Website was achieved by providing prizes for doing their online quizzes. To sum, participants mostly knew what they wanted their Websites to accomplish and primarily relied on their own sense of audience use to determine effectiveness and usability.

Discussion

Introduction

This qualitative study is a description of managers' perceptions of the Website development field: the process of creation and the people involved. Specifically, this was an exploration of the working relationship between managers and Web designers from the primary perspective of the manager. These conclusions are derived from the findings as they relate to the research questions: What do managers and Web designers believe make an effective Website; How does it become explicitly evident to managers whether their Website has met their expectations; What are managers' and Web designers' assumptions about the purpose of Websites; How do managers and Web designers define a Website; and What do managers and Web designers see as the process of creating a Website? Within context of the research, these conclusions will be presented.

Website knowledge level

In gaining an understanding of managers' perceptions it helped to broadly learn their background history and how they defined Websites and Web designers. The perceptions I had about the demographics of the participant population were inconclusive. All three managers were male and therefore, I cannot say if any perception differences exist. Whether these over 45 years of age managers perceived the Web easier to navigate than those under 45 years of age is not known either since the participants ages very so close. It is quite possible these managers were late majority adopters of technology and the Web. My sense, considering all participants' contributions, was that they slowly went with the flow. As they saw their competitors taking actions to evolve with technology, these managers hesitantly followed suit; but again, inconclusive.

Although each participant found their way involved in the Website development process from different paths, there were many commonalties in definition and expectations. Based upon my expectations, all participants knew what a Website is, know the skills necessary to create one, what it can do for their business, and value it as part of their business objectives. There was agreement that Websites need to be easy to use, effective, and a good experience for its users.

Meeting audiences' expectations is key. A difference I did find was that managers more often used words leading me to believe they saw Websites as a way to find information, and Web designers saw it as a way to interact—to accomplish something other than as a receptacle of information. Upon managers' initial expressions, Websites are seen as more of a one-way perspective, pushing information out. As stated by Mgr3, “Where information is maybe things we are trying to push out to students.” They saw their role as getting their message across, whereas although not discounted by the Web designers, they saw their role as providing a more two-way experience for their audiences.

There were a few more surprises when Web designers were defined. The difference in my expectations might have occurred due to the question I asked, “what comes to mind when I say Web designer.” All participants' focused on visual skills and surface knowledge of Web design as if the Web designer does not offer the necessary skills to produce today's Websites. Putting the Web designer title aside, it was recognized what skills and knowledge are necessary. Other questions brought out more of what skills are needed for the field, and those skills are much more in-depth and seen as difficult to acquire. WD3 brought up, like what I specified as my experience, that people perceive Website design as “magical” and requiring skills that are hard to attain. WD3 elaborated:

...The web stuff has always AMUSED me because people seem to think its this GRAND mysterious thing, and ITS NOT. It is basically, you look at what other people are doing, if you like it, you look at the code and what they are doing, and figure out how to do it yourself. It's not so super hard, you know.

While one manager realized having the basic knowledge of Web design, particularly HTML, gave him the necessary understanding of Website development capability and language to speak to his Web designer, there was still the feeling of wanting to know how to create a Website. Another manager openly admitted he finds the skills intriguing and would love to be able to do it himself. The third manager voiced his interest seemingly for the mere fact of not having to rely on anyone else; his desire is to be self-sufficient. If a manager puts the skills of Web designers on a pedestal and feel like they couldn't acquire those skills themselves anytime soon, can a manager still effectively manage that Web designer? One manager did make the comment that it

would take him years to gain the necessary skills to create a Website. Managers' focus seemed to be primarily on the technological tools necessary to do the tasks of creating a Website when it is the planning that is the first priority. And, that is the part managers are supposed to be involved with; that is the part of the process that defines and establishes what the Website will accomplish. The Web designers seemed to realize this, but the managers appeared to be confused.

This seems to be an aspect of the disconnect addressed in the research. In a way, managers do know what is necessary to produce an effective Website, yet something gets in the way of it being explicitly understood. Managers did recognize the skills necessary to create Websites and felt that they did not have those skills available to them internally. It was also felt that Web designers, as a specific job title, do not possess those necessary skills. WD2 commented, "managers don't understand how long [the Website development process] takes when they don't have the technology skills." Further research may need to be done to better identify the root of this dichotomy.

Job titles

The issue of job titles appears to be a significant facet potentially contributing to the disconnection. Everyone agreed the expectation of Web designer skills and knowledge have evidently evolved, just not maybe in context of the Web designer title. Titles seem to play a large role in perception of Website support people. Part of the challenge was probably due to my questions by that I meant the title Web designer as all-inclusive to those who create Websites. The fact is there are many job titles, and the responsibilities vary. Perceptions of those titles and the skills associated are also different. That may make managers feel like they lack control because it is not clearly evident under what job title to hire a Web designer. This University's job classification structure doesn't help either. One manager changed his staff member's title to reflect her added new Website design responsibilities. All he could remember was that it fell somewhere under the IT banding track. I found that the Web designers, who have become banded, couldn't remember their own job title. The IT banded positions are quite focused on technology skills that only reinforces the expectation of Web designers only having technology skills.

When deciding to hire a Web designer in-house, managers seem to be left with Human Resource's recommended titles or they search for one themselves that includes the word "Web." A title used by Mgr3 was the Information and Communication Specialist. He expects that titled person to know Website design but didn't perceive that position to be primarily a Web support person. That person was perceived as a person with marketing and writing skills who would also manage and keep up his Website.

All participants recognized that Website design becoming more complicated is an inevitable evolution. If that is the case and no one person could have all the skills, then needing multiple people is also inevitable. Website design was recognized as a team effort more implicitly rather than explicitly. Not one participant said that teams weren't necessary. Quite the opposite, there was a great deal of mention to teams and having a team effort. Why not hire all the individual skills necessary; why not a team? It comes back to the perception of a lack of resources. I sensed a seemingly lack of decision-making control as well.

Resources

Websites are valued and some level of involvement with the process is necessary. It was recognized that a team effort is needed, yet I heard nothing that would lead me to believe they would form them strategically. Having highly developed specific skills and knowledge in order for an effective, useful and usable Website to be created was also recognized. Effective communication skills and understanding their business were the biggest expectations by the managers.

The managers also each acknowledged, although they might have wanted to do it themselves, they need help in creating and maintaining their Websites regardless of why their Website came to fruition—to save money, the source of their business, to increase profits, to nurture their audiences, or to expand their services. A question, then, is why is there so much confusion and controversy with hiring the necessary resources? I am not sure this study fully answers this question but does provide some insight. As found in my research and experience, investing little into Website creation often leads to products that don't accomplish what it intended. The

managers do invest, but it seems to be a temporary investment through the use of contractors and students even though all acknowledged the continual evolvement of their Websites.

A glaring reason for not just hiring the resources they felt they needed was because the managers didn't feel they were allowed to allocate funds to permanently hire a Web support person as in context of this study. Two of the managers spoke of a centralized Web designer for their division and a sense that is what the University expects and advocates for. Therefore, seemingly by default and ease of acquiring, students and contractors are hired instead. The irony is that the managers really do want in-house Web support people and that was reinforced when they had more challenges than success with their students and contractors. One of the managers did have a team structure with one student managed by one permanent Web support person who only did Web work as part of their job. That was the closest to having an internal team. What I found to be interesting was this manager's perception was that this team was not complete.

All the while we spoke about Web designers, he too felt he didn't need one in-house, but there was a currently open position for an Information and Communication Specialist. This person was expected to manage both of the internal Web support people he had as well as manage the production of the Website. This manager seemed to expect to be able to heavily rely on this new permanent staff member, yet he didn't see the position as a Web designer position. Upon being asked, he specified that an Information and Communication Specialist has a high level of Web experience and knowledge in addition to her marketing and communication background and ability to write. This is not the same thing as a Web designer according to this manager because a Web designer is not expected to have the same skills.

State of the industry

All six participants confirmed my research findings that there is an Internet boom with an increased value towards Website development and an increase in online. There is a definite love-hate relationship with technology and a sense of increasing intimidation according to one manager. With it is a realization of the complexity of the Website design process. One of the Web designers worked on a retail-based Website and spoke about expanding their online transaction services to increase revenue. Although there may not have been consensus on Web

designer job titles or the best team structure, all participants didn't see the need going away any time soon and in fact, couldn't see their business functioning without it. Each Website they were a part of had been revised in the past year, therefore staying current and keeping with changing trends is a priority. Without explicitly acknowledging it, each participant saw their Websites as a strategic marketing and business tool. Only one manager and one Web designer really spoke about it in those terms.

The reasons and steps taken for the initial creation of each of their Websites were from divergent paths. I was able to better learn from the Web designers than the managers the concrete reasons for the creation of their Website. All agreed that it should be audience focused and needs to be managed well. I do not think any of the participants would agree their Websites were originally created for the sake of creating one, but there was confirmation of "hoping on the bandwagon" actions. One of the Web designers approached his manager to create their Website in part because he was tired of creating print materials. When they first created the site, their goal was to transfer all the print material information onto the Web. The Web designer was able to convince his manager under the pretense it will save his department money. So, in this case, the Website wasn't created for its sake, but the manager half-heartedly went along with it. Since then, the site has grown, and it is something they cannot live without.

This example provides evidence of a lack of strategic technology planning. Though all the other participants had a seemingly more methodological approach to the creation of their Websites, it seemed like any strategic planning that took place did so more implicitly. At the very least, the managers did not share it with their Web designers. My research showed that manager leadership and involvement is important. The lack of strategic planning seemed to go along with the lack of strong manager involvement. Everyone's words sounded as if they attached much value and necessity to their Website initiatives, yet the amount of manager involvement varied greatly as well as their process of hiring and maintaining their Website support resources.

Two of the three managers verbalized the need to stay involved with the production of their Website. The third manager believed in hands-off as the best method so that his employees can do what they are good at. Unfortunately, this third manager experienced the most challenges

with the production of his Website. He heavily relied on students and contractors who repeatedly failed at producing the product he needed and expected. This manager continues to believe that a centralized Website designer resource is the best route and that he does not need to hire his own internally. His administrative assistant updates his site to his satisfaction even though he recognizes there are facets to the site's development that require skills different from hers.

One of the Web designers expressed frustration with a hands-off manager, and another expressed frustration when his hands-off manager became hands-on. Apparently, his manager's Website development skills and knowledge did not change, but his manager's interest in the production of the final product did increase due to wider visibility and subsequent increase in accountability. The third Web designer said he was satisfied with his manager's active involvement. Although the Web designers said they prefer creative license and felt their managers were "intruding" on their ability to do an effective job, they did seem to feel it necessary for their managers to be involved at some level. Managers who were involved yet didn't micro-manage seemed to be the most successful in their Web design process and working with their Web designers. Maybe the context of that involvement also has something to do with it. Rather than the managers being involved with the tasks of creation, manager should be primarily involved with the process as in project management and take ownership of the information and message they want to get across.

Content, Information and Business Objectives

A big dilemma that emerged from the managers was who is responsible for the content and how to manage it. As Mgr3 stated, "I think the big issue with content management is identifying who is responsible for each section and trying to define a timeline that it needs..." Mgr3 did primarily rely on his advisory board that consisted of content people, and Mgr1 used the universal "we" are responsible. The issue of content did repeatedly arise from different perspectives.

When the Web designers experienced a lack of involvement from their manager, content was either delayed or wasn't given to them. WD1 didn't pursue his manager because she controlled

the deadline and if she didn't supply the content, the deadline was "on her" kind of thing. WD2, on the other hand, pursued acquiring the content on his own. His resulting situation was when he said something should be done, he received approval without much involvement from his manager.

From the managers' perspectives, no one wants to be responsible for the content, there is too much content, and Web designers are just not interested. Web designers only know how to lay it out. If no one expects Web designers to be responsible for the content, and it is important for content to become meaningful information, what are managers thinking Web designers are doing when they layout a Web page? Who is responsible for ensuring the message gets across? Quite an interesting perspective considering content only has meaning if it is effectively presented on the Web. The way information is presented affects the message audiences receive, so to isolate content from the way it is presented raises concern.

The information on a Website is most often a direct reflection of the business that hosts the site. One of the bigger complaints that came out of this study is Web designers' lack of knowing the business of the organization they are creating the Website for. All the managers agreed how important it is for their Web designer to know their business. As with content, managers believe that Web designers are just not interested. While all three Web designers agreed that students are not interested, they themselves, in some way, saw the need to understand the business they worked for. It may be semantics; Managers are just lumping everyone that creates Websites into one category, and one being that they don't understand the business. Only one manager spoke of a way to foster the learning of the business, but I don't know if it is a conscious effort as I had to specifically ask him the question. His answers also alluded to hiring employees as part of the core services staff and that person would gain the necessary Web design skills. Perhaps that is the challenge, Web designers are hired for their technology skills and that is often in isolation of the core services of that department. In turn, the Web designer is seen as an outsider, someone that is different.

If Web designers don't understand the context of the business and are the ones expected to format the content for the Web, then how can managers expect the content to effectively deliver

their message on the Web? A MS Word document is not read the same on the Web as is in-hand. How do the managers communicate the business message and content message well enough for the Web designer to know how to best present it?

Communication and Culture

The managers appeared to feel confident they communicate well with their Web designers and any communication challenges are directly related to Web designers wanting to do what they want. Two of the Web designers saw it differently. They felt their managers either didn't communicate directly enough—too many innuendos, or didn't know how to communicate effectively, or simply weren't involved enough to even have conversations. WD3 misunderstood everything her manager said no matter how much she attempted to clarify and repeat back to him to ensure she heard correctly. She attributed it to him overly focused on making the Website the latest and greatest versus an effective communication tool as well as the fact that he just was on another wavelength. Basically, they blame each other for the lack of effective communication; each of them were fine communicators according to their own perspectives.

The research shows that managers must be effective communicators and set their expectations of roles and working environment. The relationships I sensed all around were one of vagueness, no one ever quite knowing where they stood or how to interact. Everyone complained, blamed, rationalized, then perhaps felt guilty and said positive things, and no one seemed to take responsibility. Well, that is something they all had in common then.

Another concern, or rather challenge, all participants voiced was the fact they were each speaking different languages—discipline related differences, not ethnically based cultural languages. The problems I listed in my research did appear within the resulting data. The concept of speaking different languages was one the participants offered on their own. There were no questions that would have led them to those words. It was obvious they could not fully see each other's role. What I found to be ironic was the unexpected result of each Web designer having previous experience as a manager. I had to ask two of them to remain in their Web designer role. Both of these Web designers admitted that they would have answered the

questions differently as managers versus Web designers. To be able to separate themselves like that was intriguing and would make for interesting further study.

These participants did confirm experiencing a great deal of frustration that usually results when two disciplinary cultures are unable to communicate. Whether the managers' business' have been negatively effected by their communication challenges is neither absolutely yes nor absolutely no. Since I was unable to learn about the managers' experience with their first Website, I do not have the dated data to compare. The managers did speak about fixing and improving their Websites, and all agreed it is an evolution. My sense is that they each experienced a non-positive result from having a poorly created Website but were never aware of the impact. All of the managers had recently revised Website; their knowledge and expectations have evolved with their Websites. Even if they are currently experiencing some negative effects, as Mgr2 had expressed, their businesses are still functioning at some level but what level is not known.

Assessment

A reason the managers did not know the extent of negative, or even positive, impact was because they didn't conduct any formal assessment or analysis of their Websites. One way the participants did say they benchmarked their sites was by comparing it to other Websites. Managers cited university/peer institutions as examples while Web designers cited Websites they personally used for either personal or professional purposes. It could be read into that managers focused more on the industry their audiences' stem from—academia while Web designers were more apt to focus on what they are familiar with. It could also be deduced that perhaps although Web designers spoke of the necessity to build Websites for the appropriate audiences, their actions are often otherwise. If the Website is for an academic institution, then it makes sense to benchmark the site you are building against a competitor university. Looking at it from another point of view, just looking at other universities' Websites could stagnate and limit the possibilities. A higher number of people and a more diverse population most likely use sites like Google than any one university Website. Therefore, looking at Websites outside your industry may be a good thing.

The participants also spoke of reviewing page hit statistics, surveys, focus groups, and receiving feedback on an individual basis to learn of their site's effectiveness and user satisfaction. The feedback they received though was often words like "nice," "fun," and "like it." They really couldn't quantify the impact of the Website on their business. Although many words were used leading me to believe they all want their sites to be usable, not one participant mentioned conducting usability testing on their Websites. In a University that puts such emphasis on assessing one's departmental initiatives, it is amazing that more effort isn't put into the assessment of Websites especially since all the managers claimed that their Websites played such a critical role in their businesses.

Change Management

After conducting this study, I continue to believe a change is necessary. How can it not be considering that Website development capabilities, expectations, and uses are continuing to evolve. When the external environment changes, organizations need to adapt as necessary and that often means change for that organization at some level. In looking back at the Burke-Litwin model of organizational performance and change, there are multiple categories within the Transactional Factors that could use some work. My assessment is that the Structure category could be the first area of a department to focus on. Specifically, the Structure is "the arrangement of functions and people into specific areas and levels of responsibility, decision-making authority, and relationships. Structure assures effective implementation of the organization's mission and strategy" (Burke, 2002).

Summary

The premise of this research was based upon the expectation that managers and Web designers perceive Websites and the design of them differently subsequently affecting their ability to effectively communicate. The resulting data revealed otherwise. The fact the data proved different than expected provided for a more complicated and rich basis of discussion. Managers and Web designers are seemingly more similar in their perceptions about what a Website is, what it should do and expect similar qualities in one another. Rather than a communication challenge because their perceptions are different, a communication challenge exists because they each think the other misunderstands them. While there was an interpersonal communication

misalignment, managers and Web designers had basic principles in common. A challenge is that they perceive each other as having different expectations. The research on Motivators and Hygiene can perhaps shed some light. To reiterate Zhang & von Dran's (2000) definitions:

Hygiene factors would be the ones whose presence makes a Website useful and serviceable, whose absence causes user dissatisfaction. A good example of a Website feature that may be an example of a hygiene factor is 'live/broken links,' because a live link is taken for granted; but if the link is broken, users are frustrated and dissatisfied. Motivating factors, on the other hand, are those that contribute to user satisfaction. They add value to the Website beyond hygiene factor value alone. A possible example would be the use of multimedia in an information-intense Website. The presence of motivators will enhance satisfaction with the Website, while their absence will leave users feeling neutral, but not necessarily dissatisfied as long as the fundamentals or hygiene factors are in place.

What I heard the Web designers say was the desire to spend more time on adding database features and more bells and whistles, those things that students would enjoy. They want to work on the more sophisticated aspects of Website development adding features that would enhance the interactivity of the Website. Therefore, it is the Motivator factors that Web designers want to focus on; at least that is true of the ones that participated in this study. Managers, though, expect the Web designers to remain focused on the Hygiene factors. The Hygiene factors are those elements of Websites that require regular maintenance and are the tedious technical tasks so much associated with Website design and subsequently the most recognized skills of Web designers.

This study provides a starting point towards awareness that managers and Web designers are perhaps on more common ground than they believe. The next step is finding ways to get them to see their common perceptions and explicitly address them. If managers and Web designers can believe they do have similar viewpoints and are on the "same team," perhaps the feelings of not being understood or heard will be diminished. An attempt to put preconceived notions aside and discuss the Website process believing they are on equal ground may be a way to create a bridge between these two disciplinary cultures. As spoken of earlier in this study, an interpreter may serve useful for this process—a kind of moderator, someone who understands the managerial world as well as the world of Web design.

A key finding was Web designers that are hired solely for their technical skills seem to be seen by managers as most different than those hired into the department with a primary job role directly related to the business itself. The managers perceived Web designers not knowing their business as a negative quality, yet didn't expect them to know the business because their specialty is technology. This study may be useful towards a glimpse into the future expectations of Website development.

Website design may be, as WD3 amusingly put it, a “giant time sucking vortex,” but it has become a core value for businesses today. What will be interesting to watch, what seems to have begun, is the evolution of the resources used to create the Websites. Overwhelmingly, I have heard the participants say that Website development is getting more complicated. With the onset of managers expecting more control over updating their Websites themselves, wanting to rely less on Web designers, accepting that they will not have all the necessary resources internally, we will see more and more Websites created utilizing database functionality. If this proliferates, then the future of Website design and the people that create them will not be as we know it today.

If you are a Web designer reading this study, it is hoped that a take away is that the field is evolving as are expectations; getting a degree that focuses solely on technology skills may not be enough in the future. Understanding the politics and business you are working for is imperative if you want to be perceived as something more than a technology guru. It would benefit Web designers to have content knowledge of a specific industry of interest in addition to technology skills. If you are a manager reading this study, it is hoped that a take away is the awareness of the usefulness explicitly recognizing your individual perceptions about Websites and Web designers and the process of creating a Website in the context of a project. It would benefit managers to see Web designers as having potential beyond their technological skills.

Future studies I recommend are conducting large population quantitative research on both Web designers and managers to learn the significance of Web development job titles and further details on their communication challenges. I see value in learning managers first experiences of overseeing a Website and how it became determined that a Website was needed. The managers

brought up the concept of strategic planning; obtaining more in-depth knowledge about their strategic planning processes may be useful. My final recommendation is for a study specifically devoted to determining what change actions would be helpful to lessen the communication challenges between these two disciplinary cultures.

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Appendix 1: IT Job Banding Classifications

Information and Communication Specialist II

Info & Communic. Spec II

Section I. Overview

A. Primary Purpose of Organizational Unit:

University Housing and Greek Life exist to provide service, facilities, and programs to more than 7,700 students living on the North Carolina State University campus. These Departments, consistent with the academic mission of the University, strive to create positive growth environments for students by providing programs, services, and facilities that promote educational, social, and cultural development.

University Housing and Greek Life are responsible for the development, administration, and management of all facilities, operations, and programming involving 20 residence halls, 295 apartments, and 15 fraternity/sorority houses on the campus of NC State as well as 23 other Greek organizations. These are complex, highly visible operations that involve the coordination of student information and require extensive knowledge in the areas of housing assignments, facilities, judicial affairs, student development, statistical, and historical data.

B. Primary Purpose of Position:

The primary purpose of this position is to develop and implement an integrated public relations, communications and marketing program for University Housing and the Department of Greek Life, including all publications, marketing materials, electronic media, and Web.

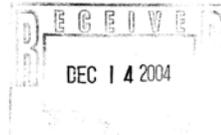
C. Work Schedule:

Monday – Friday, 8 a.m. – 5 p.m.

D. Change in Responsibilities or Organizational Relationship (Basis for Request):

This position was recently vacated and we would like to reclassify it to a higher level Information and Communications Specialist so that we will be able to recruit for a marketing professional who has the skill and ability to direct a comprehensive communications and marketing program for University Housing and Greek Life. As the housing market surrounding campus is increasingly competitive, and with the addition of non-traditional student housing such as Wolf Village Apartments and Western Manor Apartments, we need a marketing specialist who can take our communications and marketing plan to a more competitive level.

In 1997 this position was reclassified to an Information and Communications Specialist, salary grade 65T. At that time, the position's primary role was to coordinate various publications, brochures, and booklets geared toward traditional student housing. The position continued to grow with the departments' increased web presence - the goal being to offer a website that communicates information clearly and concisely, and offers interactive web services that reduce time, efforts and costs of delivering programs, services, and activities administered by University Housing and Greek Life. This position provided leadership in developing such web-based services. Currently, the departments' business plan, along with market forces, require that this position transition once again.



SECTION II. Position Description

A: Description of Responsibilities and Duties:

This position will develop and direct a comprehensive public relations, communications, and marketing program for University Housing and the Department of Greek Life. The work requires the exercise of independent judgment and initiative, creativity, planning, and partnership development. The position is responsible for the interpretation and dissemination of information through a variety of media to stimulate interest in University Housing and Greek Life programs; and to inform students, staff, and the public of the operations and activities of the two departments. The following are examples of the types of duties that the position will be performing:

- Develops and implements contracts with writers, authors, photographers, and printing houses for all print and electronic productions. Establishes terms, such as costs and deadlines. Manages contract compliance.
- Provides editorial and design oversight for University Housing and the Department of Greek Life websites, journals, monographs, training manuals, posters, flyers, brochures, newsletters, business plans, marketing resources, marketing research projects, and research papers. Proofreads, copy-edits, and verifies information. Oversees design layouts.
- Evaluates publications, marketing, and communications program, making adjustments as needed.
- Resolves technical problems with regard to electronic presentations, including, but not limited to, charts, graphs, and tape recordings.
- Establishes and maintains editorial standards for all publications, marketing, and communications programming, including printed and electronic productions.
- Advises University Housing and the Department of Greek Life's administration on issues related to public relations, trademarking and image.
- Plans, writes, and edits University Housing and the Department of Greek Life publications on educational, informational, and promotional matters.
- Takes photographs for publications and to illustrate web content, news releases and feature stories.
- Plans and prepares University Housing and the Department of Greek Life displays and exhibits for University Open House, Visitations Days, Conferences, etc.
- Prepares speeches for radio, television, CDs, and web video from a general outline for agency officials.
- Represents University Housing and the Department of Greek Life in developing and coordinating publicity and informational matters (written and web) with other public and private agencies and organizations.
- Develops and implements public relations, communication and marketing programs designed to acquaint the media with University Housing and the Department of Greek Life goals and objectives.
- Edits periodic publications for University Housing and the Department of Greek Life; writes materials for publications and performs a variety of tasks in connection with design, printing and distribution.
- Coordinates with writers, designers, and photographers, pre-press and printing houses in connections with print media productions.

- Evaluates publications/communication/website marketing efforts through online and printed surveys.
- Develops and manages twice monthly online Living and Learning Newsletter along with list serve.
- Determines need and orders all tchotchke related items for departments (shirts, pens, balloons, banners, key rings, magnets, etc.)
- Researches information and composes relevant documentation, such as reports, letters, memos, directives, presentations, and agendas.
- The position oversees all aspects of University Housing and the Department of Greek Life Web presences, including site design, content, direction, and supervision of all work pertaining to the site (600 pages of content and 21 individual residence hall sites). This position is responsible for the following Web-related activities:
 - Evaluates technological solutions to enhance site performance, navigation, and resolve problems.
 - Ensures that the Web site is fully compliant with the Americans with Disabilities Act, and that it conforms to the "Bobby" standard set forth by this act.
 - Advises University Housing and the Department of Greek Life on using Web technology to enhance overall services provided to the student body, and helps develop solutions for all members of the Departments.
 - Provides editorial and design oversight for University Housing and the Department of Greek Life Departments' Web sites.
 - Web tools currently used to support the websites include php technology, HTML, JavaScript, Dreamweaver MX php, Adobe Photoshop, Macromedia Fireworks, Scanner and software, and AutoCAD. In addition, we use IPIX proprietary software with a digital camera for the 360-degree pictures on the sites.

SUPERVISION: For positions which supervise and/or coordinate the work of permanent employees, check each area that applies to the position.

	NO	YES
1. Oversees the work of permanent employees? How many?	X	
2. Conducts interviews and makes final hiring decisions	X	
3. Responsible for making salary recommendations	X	
4. Makes work assignments and/or coordinates workflow		X
5. Counsels and disciplines employees under direct supervision	X	
6. Approves work plan and conducts performance review appraisals	X	
7. Determines job duties and writes job descriptions as needed	X	

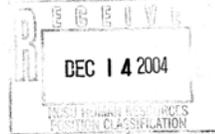
B: Other Position Characteristics

1. **Guides, Regulations, Policies and References Used by Employee:**
All purchases and contracted services must be in compliance with University rules and regulations, as well as State of North Carolina policies, which govern purchases and contracted services. The Incumbent must also be familiar with University rules and regulations governing communications and publications. The incumbent should consult with University Legal Affairs on the legal aspects of all communications. Computer and software reference manuals are available for technical understanding. The incumbent should have experience and working knowledge of all aspects of communication design and production, including printing practices and techniques, editorial standards, web design and development.
2. **Physical Effort:**
Very little physical effort is required beyond occasionally moving a box of materials.
3. **Work Environment and Conditions:**
The work is performed mostly in a modern office environment. There may be frequent interruptions.
4. **Machines, Tools, Instruments, Equipment and Materials Used:**
The incumbent uses a personal computer, digital camera, scanner, laptop computer, projector, fax machine, copier, printer, and other electronic equipment as needed. Software used for publications includes Microsoft Project, Quark, PageMaker, Word, PowerPoint, PhotoShop, Acrobat, and ftp to a file server at the print house. Web tools currently used to support the websites include php technology, HTML, JavaScript, Dreamweaver MX php, Adobe Photoshop, Macromedia Fireworks, Scanner and software, and AutoCAD. In addition, we use IPIX proprietary software with a digital camera for the 360-degree pictures on the sites. Various other materials may be used for layouts and idea boards.
5. **Visual Attention, Mental Concentration and Manipulative Skills:**
Incumbent must have excellent visual attention for proofreading, copy-edit, verifying statistics, and overseeing design and layout work. Excellent mental concentration is required, as this position requires great attention to detail and a high degree of accuracy. Extensive manipulative skills are needed to operate various equipment and for design layouts.
6. **Safety for Others:**
Employee is not normally exposed to workplace hazards, so safety for others is an infrequent consideration.

SECTION III. Additional Considerations

A. Supervision Received

The work performed under the general supervision of the Associate Director for Administration, University Housing, but is expected to perform independently the majority of the time. The Associate Director of Administration gives guidance as needed and is available should the incumbent have questions or need advice. An annual Marketing and Communications Plan is done with the assistance of the Director of Housing and the Associate Director of Administration.



B. Resource and Guideline Availability

1. Available resources and guidelines are: University Rules and Regulations, University Procedures Manual
2. If resources and guidelines are unavailable, the incumbent must rely on knowledge of communication design and production practices, printing practices and techniques, editorial standards, and web design and development practices. The incumbent should be self-directed and always seek to stay current on marketing and communications principles and practices.

SECTION IV. Knowledge, Skills & Abilities and Training & Experience Requirements

A. List of Knowledge:

- Considerable knowledge of journalistic principles and practices.
- Considerable knowledge of the techniques for disseminating information to the public through a variety of media.
- Considerable knowledge of the methods and techniques of planning, writing and editing publications.
- Ability to edit and analyze informational material prepared by others.
- Ability to write according to correct English usage and accepted standards.
- Ability to collect and prepare material for speeches.
- Ability to establish and maintain effective partnerships both internally and externally.
- Considerable knowledge of web design and how to market via the web.

B. Minimum Level of Formal Training:

Graduation from a four-year college or university preferably with a major in journalism, English or Business Management specializing in Marketing and two years experience in communications, public relations, publicity work, marketing or equivalent combination of training and experience.

C. License or Certification Required by Statute:

None Required

Technology Support Analyst

Description of Work:

This is analytical work in providing consultation, support, and/or training to end-users of computer or other technology-based systems. Employees may provide support of hardware, applications, operating systems, and networking. This function requires a broad understanding of a variety of technologies to effectively support end-users. These employees are not usually involved in application development or network design; but may participate in system integration and network analysis activities. This work requires particularly strong communication skills, an ability to effectively interact with a broad range of end-users and an ability to use a variety of technical resources for providing this support. Employees at this level may provide routine and non-routine support for a broad range of technologies, or may provide in-depth support for a more narrowly-defined area of technology. These employees may be responsible for oversight of programs or projects.

Competencies:

Core	Contributing	Journey	Advanced
Teamwork	Works effectively as a team member. Actively contributes to tasks at hand.	Plans and works with others to achieve agreed upon outcomes.	Leads team efforts and assesses the skills and strengths of individuals within a team.
Organization Awareness	Understands operations and services of functional unit.	Demonstrates working knowledge of organization, services, and relationships for problem solving.	Demonstrates in-depth knowledge of organization, services and relationships (formal and informal).
Effective Communication	Presents ideas clearly either in writing or verbally. Communicates in methods appropriate to situation and audience.	Interprets and communicates information. Independently solicits appropriate information and selects best method or format for presenting it to the client. Clearly conveys ideas on non-routine subjects or in a non-standard manner.	Interprets and communicates information, ideas and instruction. Uses persuasion and negotiation to build cooperation and consensus towards decisions. Translates advanced technical issues into understandable terms appropriate to audience.

Functional	Contributing	Journey	Advanced
Customer Service	Demonstrates ownership of customer issues and independently seeks solutions.	Proactively establishes a positive relationship by demonstrating a sense of urgency in interactions with clients.	Proactively promotes positive customer relationships and mentors others to ensure client satisfaction and organizational success.
Planning and Organizing	Works independently on tasks, developing own work schedule and monitoring progress against defined parameters. Performs job with minimal supervision.	Organizes and follows complex and/or detailed technical procedures. Works well independently and with teams.	Creates ad hoc work groups to analyze problems, develop solutions, and communicate solutions effectively. Participates in planning for the organization.

NOTE: This is a generalized representation of positions in this class and is not intended to identify essential functions per ADA. Examples of work are primarily essential functions of the majority of positions in this class, but may not be applicable to all positions.

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Functional	Contributing	Journey	Advanced
Project Management	Serves as a productive project team member through timely completion of assigned tasks.	Manages technical projects involving own work and under minimal supervision. Demonstrates initiative in solving problems associated with projects and daily work.	May lead projects that require directing the work of others and with some latitude on actions or decisions. May manage timelines and resources, and may lead implementation efforts to completion.
Technical Knowledge	Demonstrates knowledge of technology principles and terminology associated with the work unit and area of responsibility.	Demonstrates substantial working knowledge as demonstrated by an understanding and use of the principles, theories and practices pertinent to area of responsibility. May mentor or train peers and others.	Demonstrates comprehensive knowledge as demonstrated by an in-depth understanding and use of principles, theories and practices pertinent to the organization.
Technical Solution Development	Works within own specialty with ability to integrate and coordinate elements of that specialty. Demonstrates working knowledge of technologies and systems in place with the capability of supporting these technologies.	Documents solutions that solve client problems and clearly presents these solutions. Integrates knowledge and skills from a range of technologies to address work assignments. Implements appropriate technologies.	Demonstrates knowledge of other work specialties and the ability to integrate this knowledge to develop and communicate solutions. Develops and/or implements information technology solutions to enhance organizational success
Technical Support	Resolves routine problems. Solicits relevant information from client in order to sufficiently describe non-routine problems to technical expert, and effectively communicate solution to client.	Independently resolves routine and non-routine problems. Troubleshoots problems and performs diagnostics on software and/or hardware. Interacts with hardware and software vendors as appropriate to solve problems.	Identifies trends and makes suggestions for technical modifications to solve future problems. Contributes to decisions based on weighing options and consequences.
Consultancy Skills	Determines client needs and effectively communicates back to technical experts. Acts as technical resource to others within work specialty.	Consults with clients and higher-level technicians and analysts to resolve technical problems and ensure client satisfaction. Proactively verifies problem resolution.	Analyzes and assesses client needs to develop effective and appropriate solutions.

Minimum Training and Experience:

Graduation from a two-year technical college with a major in computer science, information technology or related area and one year in the information technology field related to the position's role; or graduation from a four-year college or university and one year experience in the information technology field related to the position's role; or graduation from a four-year college or university with a major in computer science or information technology or related degree. Related information technology experience may be substituted year-for-year for the required education.

Business & Technology Applications Analyst

Description of Work:

This is technical and analytical work in developing, designing, and/or analyzing technical solutions for clients through an appropriate blending of technical knowledge and business solutions. Employees participate in the development of solutions using programming expertise for day-to-day problems to include maintenance, modification or development of complex inter-related applications/solutions. Solutions link technical knowledge with business solutions and may range from consulting services (software or hardware recommendations) to developing integrated-automated systems. Duties include client needs assessment as well as evaluating hardware availability and software requirements.

Competencies:

Core	Contributing	Journey	Advanced
Teamwork	Works as a team member by doing own share of work and listening to and acting on expressed needs.	Plans and works on shared or joint projects and coordinates with others to achieve agreed upon outcomes.	Leads multiple team efforts and assesses the skills and strengths of individuals.
Customer Service	Establishes a positive relationship by exercising an appropriate action in a timely manner.	Establishes a proactive relationship by demonstrating ownership of customer issues.	Promotes positive customer relationships and mentors others to ensure customer satisfaction.
Organization Awareness	Understands basic operation of functional unit and develops awareness of its role in the enterprise.	Demonstrates working knowledge of organization and relationships for problem solving.	Demonstrates in-depth knowledge of organization and relationships (formal and informal).
Effective communication	Presents and receives ideas clearly either in writing or verbally.	Interprets and communicates information. Solicits and selects appropriate information and best method or format for delivering or receiving it either in writing or verbally. Clearly conveys ideas on non-routine subjects.	Interprets and communicates information, ideas and instruction. Selects appropriate information and best method or format for presenting it either in writing or verbally. Persuades and negotiates to build cooperation and consensus. Translates advanced technical issues into understandable terms for non-technical users.

NOTE: This is a generalized representation of positions in this class and is not intended to identify essential functions per ADA. Examples of work are primarily essential functions of the majority of positions in this class, but may not be applicable to all positions.

May 1, 2004

Functional	Contributing	Journey	Advanced
Planning and Organizing	Works independently on tasks, develops own work schedule and monitors progress against defined parameters.	Organizes and follows complex and/or detailed technical procedures. Works independently and performs job with minimal supervision.	Independently manages project timelines, resources, staff and leads implementation efforts.
Project Management	Serves as a productive project team member by completing assigned tasks.	Manages technical projects involving own work and under minimal supervision.	Manages projects that require directing the work of others and with some latitude on actions or decisions.
Technical Knowledge	Exhibits working knowledge of specialty work area demonstrated by an understanding of and ability to apply the standards and terminology associated with the work specialty.	Exhibits advanced knowledge of the specialty area demonstrated by an understanding and use of the standards, theories and practices associated with the specialty.	Exhibits comprehensive knowledge of the work area demonstrated by an in-depth understanding and use of advanced principles, theories and practices associated with the work specialty.
Technical Solution Development	Works with own specialty with the ability to integrate and coordinate elements within that specialty. Demonstrates an understanding of the standard technology and systems in place. Contributes to the support of the operation.	Integrates knowledge and skills from other specialties to address moderate to complex work assignments and problems. Supports technology applications by exploring and adapting to changing technologies. Independently applies technical judgment to work assignments to achieve desired outcomes.	Demonstrates in-depth knowledge of other work specialties and the ability to integrate this knowledge base to achieve solutions to highly complex problems. Investigates, researches and implements new technologies in specialty or related area. Develops information technology systems or modules.
Technical Support	Obtains relevant information from client in order to sufficiently document problem to technical expert. Independently resolves routine problems. Performs diagnostics on assigned software and/or hardware according to standard operating procedures.	Proactively verifies problem resolution. Independently resolves routine and non-routine problems. Performs diagnostics on assigned software and/or hardware. Makes suggestions for technical modifications to prevent future problems.	Utilizes advanced skills to make technology modifications. Determines pro's and con's of implementing technical modifications
Consultancy Skills	N/A	Consults with clients and higher-level technicians and analysts to resolve technical problems and ensure client satisfaction.	Consults with clients to develop solutions using existing technologies.

Appendix 2: EPA Specifications

Employees Exempt From the State Personnel Act (EPA) Policy *POL 05.15.1*

Authority: Board of Trustees

History: First issued on May 22, 1981. Last Revised, February 20, 2004

Related Policies: UNC Code, Appendix Section I.C., UNC -GA Administrative Memorandums

Additional References: UNC Admin. Manual, III-C-1. "Employees Exempt from the State Personnel Act."

Contact for Info: Associate Vice Chancellor for [Human Resources](#) (919-515-3443)

1. SCOPE OF POLICY AND DEFINITIONS OF POSITIONS

1.1. Scope of Policy

1.1.1. Coverage

Positions Exempt from the State Personnel Act (EPA positions) are those positions that are not subject to the State Personnel Act and are classified in one of four categories: 1) EPA Professional, 2) Faculty, 3) Senior Academic Administrative Officer Tier-I (SAAO Tier-I), or 4) Senior Academic Administrative Officer Tier-II (SAAO Tier-II). University students who receive stipends are not covered by this policy.

1.1.2. Scope

1.1.2.1. EPA Professional: This policy (POL05.15.1) applies to all permanent EPA Professional employees and all Postdoctoral (Postdoc) employees.

1.1.2.2. Faculty: This policy does not apply to academic year (9-month) or fiscal year (12-month) faculty, but for Section 2.4 which applies to all faculty and Section 8 which applies to fiscal year (12-month) faculty only. BOT 21.01 Tenure Policies and Regulations contains the other applicable policies for faculty.

1.1.2.3. SAAO Tier-I: Sections 2.4, 8.2.1.2, 8.2.3, 8.2.4, and 8.3 of this policy (POL05.15.1) apply to SAAO Tier-I positions. In addition, Chapter III-A of the Administrative Manual of The University of North Carolina applies to SAAO Tier-I employees.

1.1.2.4. SAAO Tier-II: Sections 2.4, 3, 4, 5, 8.2.1, 8.2.3, 8.2.4, and 8.3 of this policy (POL05.15.1) apply to SAAO

Tier-II positions. In addition, Chapter III-A of the Administrative Manual of The University of North Carolina applies to SAAO Tier-II employees.

1.2. Definitions of Positions

1.2.1. EPA Professional:

1.2.1.1. Permanent EPA Professionals: Employees not subject to the State Personnel Act (N.C.G.S. Chapter 126) and who are not: (1) faculty subject to institutional tenure regulations; (2) employees within administrative categories of employment subject to N.C.G.S. § 116-11(4), N.C.G.S. §116-11(5), or N.C.G.S. § 116-14; (3) positions within the "physicians or dentists" category under N.C.G.S. § 126-5; and (4) University students who are employed incident to their status as students, as in graduate teaching assistantships or work-study positions.

1.2.1.2. Postdoc: Employees in a Postdoc status include Research Associate Postdocs, Resident Postdocs, Teaching Postdocs, and Postdoc Interns. Postdocs may not be in such status for cumulative period of more than three (3) years, do not contribute to a retirement system, and are defined as temporary employees.

1.2.2. Faculty: Employees covered by the NC State Tenure Policies and Regulations (BOT 21.01).

1.2.3. Senior Academic and Administrative Officer Tier-I: Chancellor [N.C.G.S. 116-11(4)]; vice chancellors, provosts, deans, and directors of major administrative, educational, research and public services activities designated by the Board of Governors [N.C.G.S. 116-11(5)].

1.2.4. Senior Academic and Administrative Officer Tier-II: Administrative positions that have been designated and approved by the president.

2. APPOINTMENT TO EPA POSITIONS

2.1. Method of Appointment

Every appointment to an EPA position shall be made by the chancellor or chancellor's designee by means of a letter of appointment that fulfills the requirements of Section 2.

2.2. Letter of Appointment

Reference the Administrative Manual of the University of North Carolina Chapter III-B-1 Section II. B

http://www.ga.unc.edu/publications/admin_manual/chapter_iii.pdf

2.3. Contingent Appointments

When an EPA position is funded in whole or substantial part from sources other than continuing State budget funds or permanent trust accounts, the letter of appointment shall state 1) continuation of the employee's service in that position is contingent upon the continuing availability of funds from such other sources to support that position, 2) specify the source of such funds, and 3) that the effect of such contingency may apply without the additional notice otherwise required by Section 3.1, 3.2, and 3.3 provided that the affected employee shall be informed at the earliest practicable date of the occurrence of such a funding contingency.

2.4. Individuals Covered by More than One Employment Policy

2.4.1. When an employee is to serve simultaneously in more than one type of EPA position as defined in Section 1.2, one position shall be designated in writing as the base that governs the conditions of employment and the rights and responsibilities of the employee. If appointment to an additional type of EPA position occurs subsequent to the initial appointment, the letter of appointment to the additional position shall embody the required designation of base employment. The designation of base employment shall specifically describe the different rights, duties, and compensation for each position and the relationship, if any, between/among the positions.

2.4.2. Any funding contingency of the type referred to in section 2.3 shall be set forth separately for the covered position and for the other position(s), since the operation of any such contingencies may be independent.

2.5. Terms of Appointment and Reappointment

2.5.1. An initial appointment and any reappointment(s) for a permanent EPA Professional position may be either "fixed-term" or "at will". All Postdoc appointments and any reappointments are made fixed-term.

2.5.1.1. Fixed-term appointment: An initial fixed-term appointment and any fixed-term reappointment(s) for a permanent EPA Professional may be for a period of no more than five years. Postdocs may not be in such status for cumulative period of more than three years.

2.5.1.2. "At will" appointment: An appointment may be designated as "employment at will" subject to continuation or discontinuation at the discretion of the chancellor or chancellor's designee. Such an appointment is for an indefinite term.

2.5.1.3. A fixed-term appointment may be converted to an "at will" appointment at the end of a fixed-term. An "at will" appointment may be converted to a fixed-term appointment at any time.

2.5.2. Visiting Appointments

An appointment and any subsequent reappointment(s) in a visiting EPA position shall be for a period(s) of no more than five years. If the visiting appointment is funded in whole or substantial part from sources other than continuing State budget funds or permanent trust accounts, the letter of appointment shall state that: 1) continuation of the employee's service in that position is contingent upon the continuing availability of funds from such other sources to support that position, 2) specify the source of such funds, and 3) state that the effect of such contingency may apply without the additional notice otherwise required by Sections 3.1, 3.2 and 3.3. Any subsequently proposed change from a visiting appointment to a regular appointment is subject to this policy (POL05.15.1).

2.6 Rank/Title, Appointment, Reappointment, and Promotion

Where applicable, a university unit may develop procedures and criteria regarding rank/title, appointment, reappointment, and promotion. Such procedures and criteria must be in accordance with the provisions of section 2.5 and approved by the executive officer to whom the unit reports.

3. DISCONTINUATIONS OF EMPLOYMENT

3.1. Discontinuation of Appointment

3.1.1. Discontinuation with Notice or Severance Pay

Employment within an EPA position that is established by the letter of appointment to be an employment "at will" is subject to discontinuation at any time at the discretion of the chancellor or chancellor's designee; provided, that such a discontinuation (as distinguished from discharge for cause, Section 3.4) shall be subject to advance timely notice of discontinuation, as follows: 1) during the first year of service, not less than 30 days notice prior to discontinuation of employment; 2) during the second and all

subsequent years of continuous service, not less than 90 days notice prior to discontinuation of employment. After consultation with the provost, vice chancellor, and/or dean as appropriate, the chancellor may determine, at his or her discretion, that it is in the best interest of the University to provide the employee with severance pay in lieu of notice. The severance pay amount must be directly related to the required notice period. Any agreement to compensate the employee in excess of amount set forth in this section must be approved by the Board of Trustees.

3.1.2. Retreat to a Faculty Position

An EPA employee who is employed at will and holds a concurrent tenured faculty appointment may assume the rights and responsibilities of that faculty appointment in the home department after voluntary or involuntary removal from an administrative appointment, unless a proceeding is initiated to discharge or demote the employee from the faculty position. At the discretion of the chancellor and after consultation with the Provost and/or dean as appropriate, the employee may be granted a paid leave of up to one year in order to prepare for the faculty responsibilities. Absent an agreement to the contrary, the funding sources will not change during the paid leave. Any administrative stipend paid during the administrative appointment must be removed once the employee assumes the duties and responsibilities of the faculty position. The employee's new salary must be adjusted to a 9-month or 12-month faculty salary that is commensurate with the salaries of comparable faculty members.

3.1.3. Reappointment of an Administrator without Faculty Retreat Rights

An EPA employee who is employed at will has no claim to a position at the University. The University may determine that it is in its best interest to assign an employee without faculty retreat rights to another administrative or teaching position. In the case of such reassignment, the employee must receive advance notice in accordance with Section 3.1.1 above, and the new salary must be appropriate to the assignment. Any exception to the above must be approved by the Board of Trustees.

3.2. Expiration of a Fixed-Term Appointment

Employment within an EPA position that is established by the letter of appointment to be for a stated definite term expires automatically at the conclusion of the stated term; such an appointment may be renewed or extended at the option of the employer, by a new appointment as required by Section 2. If the employer intends not to renew or extend the term contract: 1) with respect to an appointment of one year or less, no notice of intent not to renew shall be required; the letter of appointment is considered to be adequate notice of the expiration of the term; 2) with respect to an appointment of more than one year, notice of intent not to renew shall be transmitted in writing at least 90 days prior to the expiration date of the term. Failure to provide 90 days written notice shall result in the automatic extension of employment for a period that would equal the 90 day notice requirement.

3.3. Termination of Employment Because of Financial Exigency or Program Curtailment or Elimination

Employment within an EPA position that is established by the letter of appointment to be for a stated definite term may be terminated prior to expiration of the stated term because of: 1) demonstrable, bona fide institutional financial exigency, or 2) major curtailment or elimination of a program. "Financial exigency" is defined to mean a significant decline in financial resources of the University that compels a reduction in the institution's budget. The determination of whether a condition of financial exigency exists or whether there shall be a major curtailment or an elimination of a program shall be made by the chancellor, with advance notice to and approval by the president and the Board of Governors. If the financial exigency or curtailment or elimination of a program is such that the contractual obligation to an employee within an EPA position cannot be met, the employment of the individual may be terminated, subject to the following notice requirements; 1) during the first year of service, not less than 30 days notice prior to termination; 2) during the second and third years of employment, not less than 60 days notice prior to termination; and, 3) during the fourth and all subsequent years of service, not less than 90 days notice prior to termination.

3.4. Discharge for Cause

Any employee occupying an EPA position may be discharged for stated cause. Discharge for cause is to be distinguished from discontinuation of appointment with notice or severance pay (Section 3.1.1), expiration of a fixed-term appointment (Section 3.2.) and termination of employment because of financial exigency or program curtailment or elimination (Section 3.3.). Stated causes for discharge shall include, but not necessarily be limited to, incompetence, unsatisfactory performance,

neglect of duty, or misconduct that interferes with the capacity of the employee to perform effectively the requirements of his or her employment. Discharge for cause is to be preceded by written notice of intent to discharge and is subject to Section 4 of this policy. When an employee occupying an EPA position has been notified of the intention to discharge the employee for cause, the chancellor may suspend the employee's employment at any time and continue the suspension until the chancellor makes a final decision concerning discharge.. The power to suspend shall be invoked only in exceptional circumstances and such suspension shall be with full pay.

4. PROCEDURES FOR DISCHARGE FOR CAUSE

4.1. The penalties of discharge or suspension may be imposed only in accordance with the procedures set forth in this section. For purposes of this policy, an individual serving a stated term should be regarded as having the protection of these procedures until the end of the term. These discharge procedures shall not apply to cases of non-reappointment, discontinuation, or termination of employment.

4.2. The executive officer of the employee's division shall send the individual by certified mail, return receipt requested, a written statement of intention to discharge or suspend the individual. The statement shall include notice of the individual's rights, upon request, to both written specification of the reasons for the intended action and a hearing.

4.3. If, within five days* after receiving the notice referred to in Section 4.2 above, the individual makes no written request for either a specification of reasons or a hearing, the individual may be discharged without recourse to any University grievance or appellate procedure.

* The word "day" shall mean any day except Saturday, Sunday, or an institutional holiday. In computing any period of time, the day in which notice is received is not counted but the last day of the period being computed is to be counted.

4.4. If, within five days after receiving the notice referred to in Section 4.2 above, the individual makes written request, by certified mail, return receipt requested, for a specification of reasons, the executive officer shall supply such specification in writing by certified mail, return receipt requested, within five days after receiving the request. If the individual makes no written request for a hearing within five days after receiving the specification, the individual may be discharged without recourse to any University appellate procedure.

4.5. If the individual makes a written request for a hearing within five days, the chancellor shall appoint a hearing committee consisting of three persons who occupy EPA positions and who are not supervisors of the individual. The chancellor shall designate one of the three members of the hearing committee as chairperson. The hearing shall be on the written specification of reasons for the intended discharge. The hearing committee shall accord the individual twenty days from the time it receives a written request for a hearing to prepare a defense. The hearing committee may, upon the individual's written request and for good cause, extend this time by written notice to the individual and to the chancellor.

4.6. The hearing shall be closed to the public. The individual shall have the right to counsel, to present the testimony of witnesses and other evidence, to confront and cross-examine adverse witnesses and to examine all documents and other adverse demonstrative evidence. Formal rules of evidence shall not apply; relevancy of evidence shall be determined by the chairperson of the hearing committee. All proceedings shall be recorded; upon request, a copy thereof shall be furnished to the individual for a reasonable charge not to exceed the cost of producing the copy.

4.7. The burden of proof shall be on the Executive Officer, or the Executive Officer's designee of the employee's division, and they, with their counsel, may participate in the hearing to present evidence, cross-examine witnesses and make argument.

4.8. In reaching decisions on which its written recommendations to the chancellor shall be based, the committee shall consider only the evidence presented at the hearing and such written or oral arguments as the committee, in its discretion, may allow. The committee shall make its written recommendations to the chancellor within ten days after its hearing concludes.

4.9. If the chancellor concurs in a recommendation of the committee that is favorable to the individual, the chancellor's decision shall be final. If the chancellor declines to accept a committee recommendation that is favorable to the individual or concurs in a recommendation that is unfavorable to the individual, the individual may petition the chancellor to review the decision within ten days after receipt of notice of the chancellor's decision. Upon receipt of the petition for review, the chancellor shall meet with the individual and hear any argument that the appropriate procedures were not followed or that the individual was denied any opportunity to submit relevant evidence. Upon conclusion of this review, the chancellor may remand the matter to the hearing committee for further hearings or affirm the chancellor's prior decision. The affirmation of a decision is final. An individual may petition for a subsequent review of a decision pursuant to Section 501 C (4) of the UNC Code. Such petition must be transmitted to the president by the chancellor.

4.10. When an individual has been notified of the University's intention to discharge the employee, the chancellor may suspend the employee at any time and continue the suspension until a final decision concerning discharge has been reached by the chancellor. Suspension shall be with full pay.

5. REVIEW OF DISCONTINUATIONS OR NON-REAPPOINTMENTS AND OTHER EMPLOYMENT GRIEVANCES

Individuals occupying EPA positions shall have access to the NC State University Grievance Procedure for Faculty and EPA Professional Employees adopted by the Board of Trustees (Policy 24.01). Grievances concerning discontinuation of employment with notice or severance pay pursuant to Section 3.1.1 or non-reappointment pursuant to Section 3.2 may be brought only upon allegations of violations of applicable notice or severance pay requirements of Section 3.1 or 3.2 or violations of any provision of Sections 6 or 7 of this policy.

6. EQUAL EMPLOYMENT OPPORTUNITY

It is the policy and intention of North Carolina State University that there be equal employment opportunity and freedom from unlawful discrimination in all employment within the University. There shall be no discrimination in covered positions on the basis of race, color, national origin, sex, religion, creed, disability, veteran status or age.* Employment in covered positions shall be conducted in accordance with all provisions of state or federal law or regulation prohibiting any such discrimination, and in accordance with the University's affirmative action policy.

- Bona fide occupational qualifications or other exceptions to those general prohibitions, specifically provided for by State or Federal law are applicable to EPA positions.

7. PROTECTED ACTIVITY

Employment in EPA positions shall not be adversely affected by the exercise of rights guaranteed by the First Amendment to the United States Constitution or by Article I of the North Carolina Constitution; provided, that employees in EPA positions shall be subject to any limitations on political activity established by Article 5 of N.C.G.S. Chapter 126. The Board of Governors' policy in this regard, as adopted on January 16, 1976, and as it may be revised from time to time, shall apply to EPA positions.

8. HOLIDAY AND LEAVE ENTITLEMENT

8.1. Holidays

EPA employees shall be subject to the same number of days as given to employees subject to the State Personnel Act.

8.2. Annual Leave (effective July 1, 2001)

8.2.1. Basic Leave Policy

8.2.1.1. Annual Leave: Annual leave is accrued at a monthly rate and is adjusted proportionately for a part-time employee who works halftime or more (0.50 - 0.99 FTE). The monthly earnings amount is equal to one-twelfth of the annual rate for each month the employee works or is on approved leave with pay. Monthly leave is earned when an employee works or is on approved leave with pay at least half the working days of a month.

8.2.1.1.1. Permanent EPA Employees: The amount of annual leave to which a permanent full-time (1.00 FTE) EPA employee shall be entitled to accrue is twenty-four (24) workdays per year.

8.2.1.1.2. Postdoc Employees: A Postdoc employee is entitled to earn annual leave based on years of aggregate state service as a Postdoc employee. The amount of annual leave entitlement shall be as follows:

Years as a Postdoctoral Employee Per Year	Days of Annual Leave Earned Per Year
Less than 2 years	12
2 but less than 3 years	14

8.2.1.2. Definition of Year: NC State defines a year as the "calendar year" (January 1 - December 31). The scheduling of an employee's annual leave shall be subject to the approval of the employee's supervisor. With respect to an incumbent employee who is earning more than 24 days per year as of the date this policy becomes effective, such employee shall be entitled to continue to earn leave at that rate.

8.2.1.3. Leave Carry Forward and Conversion: The maximum number of unused days of annual leave that an EPA employee may accrue and carry forward from one calendar year to the next shall be thirty (30) days. Annual leave in excess of 30 days will be

automatically converted to sick leave at the end of the calendar year.

8.2.2. Transfer of Accrued Annual Leave

NC State does not accept the transfer of annual leave. This includes any leave from a UNC constituent institution or State of North Carolina agency or local North Carolina government.

8.2.3. Advancement of Annual Leave

Subject to approval by the employee's supervisor, an EPA employee may be advanced an amount of annual leave and/or sick leave up to a combined maximum deficit balance of twenty (20) days. Appropriate uses for sick leave are prescribed in the State Personnel Manual, Section 5, <http://www.osp.state.nc.us/manuals/man5.html>. A supervisor may approve a deficit balance of annual and/or sick leave, for extenuating circumstance or exceptional need. The permissible negative balance is adjusted proportionately for a permanent part-time employee who works halftime or more (0.50 - 0.99 FTE). If an employee separates from NC State and has taken more annual and/or sick leave than has been accrued, then NC State will determine the amount of annual and/or sick leave the employee must repay to NC State and make deductions from the employee's final salary check accordingly. However, if the employee has been advanced more leave than can be repaid in the employee's final paycheck, the employee will be billed accordingly.

8.2.4. Payout of Accrued Annual Leave

8.2.4.1. An EPA employee (excluding Postdoc employees) who has accrued unused annual leave upon discontinuation of employment from NC State and who either does not elect or is not eligible to transfer such accrued leave to another State or local governmental agency, shall be paid for such unused annual leave. A Postdoc employee with unused accrued annual leave as of the effective date of discontinuation or non-reappointment of employment shall be required to take the unused annual leave prior to the effective date of discontinuation or non-reappointment of employment.

8.2.4.2. The amount paid to an EPA employee (excluding Postdocs) who has been employed an aggregate of 24 months or less by one or more State or local governmental agencies is equal

to one day for each month worked less the number of days of annual leave taken during the employment period. An employee who has been employed for more than 24 months shall be paid subject to a maximum of 30 such days.

8.2.4.3. If an EPA employee (excluding Postdocs) changes contract status from 12 months to 9 months, then the employee's annual leave balance as of the effective date of the contract change will be paid out at the time of the appointment conversion. An EPA employee who transfers inside NC State to an SPA position shall have the annual and sick leave balances transferred to that position.

8.3. Sick Leave, Family and Medical Leave, Civil Leave, Military Leave, and Community Service Leave

8.3.1. Sick Leave

8.3.1.1. A permanent EPA employee and a Postdoc employee shall be subject to the same policies concerning sick leave as may be prescribed for employees subject to the State Personnel Act.

8.3.1.2. Subject to approval by the employee's supervisor, a permanent "at-will" EPA employee may be advanced an amount of annual and/or sick leave up to a combined maximum deficit balance of twenty (20) days. A permanent fixed-term EPA employee or Postdoc employee may be advanced an amount of annual and/or sick leave up to the amount that can be earned through the appointment end date or a maximum of twenty (20) days, whichever is less. Appropriate uses for sick leave are prescribed in the State Personnel Manual, Section 5, <http://www.osp.state.nc.us/manuals/man5.html>. A supervisor may approve a deficit balance of annual and/or sick leave, for extenuating circumstance or exceptional need. The permissible negative balance is adjusted proportionately for a permanent part-time employee who work halftime or more (0.50 - 0.99 FTE). If an employee separates from NC State and has taken more annual and/or sick leave than has been accrued, NC State will determine the amount of annual and/or sick leave the employee must repay to the institution and make deductions from the employee's final salary check accordingly. However, if the employee has been advanced more leave than can be repaid in the employee's final paycheck, the employee will be billed accordingly.

8.3.2. Family and Medical Leave, Civil Leave, Military Leave, and Community Service Leave

A permanent EPA employee and a Postdoc employee shall be subject to the same policies concerning family and medical leave, civil leave, military leave, and community service leave as may be prescribed for employees subject to the State Personnel Act.

8.4. Leave of Absence without Pay

A permanent EPA employee and a Postdoc employee may request a leave of absence without pay, subject to approval of such leave by the chancellor or chancellor's designee, as applicable.

8.5. Voluntary Shared Leave

A permanent EPA employee and a Postdoc employee shall be subject to the same provisions concerning shared leave as are applicable to employees subject to the State Personnel Act with the exception that the donation and acceptance of such leave shall be computed on the basis of days rather than hours.

8.6. Educational Entitlement

A permanent EPA employee is entitled to the same opportunities as other University employees to invoke the privilege of tuition waiver conferred by N.C.G.S. § 116-143. Educational entitlement does not apply to Postdoc employees.

9. STATUTORY AND OTHER RULES OF EMPLOYMENT

9.1. Privacy of Personnel Records

An EPA employee has the protections of and is subject to the provisions of Article 7 of N.C.G.S.126, entitled "The Privacy of State Employee Personnel Records."

9.2. Employment Preference for Veterans

An EPA employee has the protections of and is subject to the provisions of N.C.G.S.128-15 and 128-15.1, which provide for preference in employment for veterans of United States military service and their spouses and widows or widowers.

9.3. Employment of Related Persons

An EPA employee is subject to the policy concerning employment of related persons as adopted by the Board of Governors on April 13, 1973, and as it may be revised from time to time.

9.4. Retirement

An EPA employee may retire in accordance with the provisions of Chapter 135 of the North Carolina General Statutes ("Retirement System of Teachers and State Employees"). Nothing in this policy shall prevent an employee from retiring or an administrator with faculty retreat rights from participating in phased retirement consistent with existing policies.

Appendix 3: IRB Exemption Approval Letter

North Carolina State University is a land-
grant university and a constituent institution
of The University of North Carolina

Office of Research
and Graduate Studies

NC STATE UNIVERSITY

Sponsored Programs and
Regulatory Compliance
Campus Box 7514
1 Leazar Hall
Raleigh, NC 27695-7514

919.515.7200
919.515.7721 (fax)

From: Debra A. Paxton, Regulatory Compliance Administrator
North Carolina State University
Institutional Review Board

Date: February 17, 2005

Project Title: Managers' Perceptions of the Website Development Field : the Process of
Creation and the People Involved

IRB#: 043-05-2

Dear Ms. Gottlieb;

The research proposal named above has received administrative review and has been approved as exempt from the policy as outlined in the Code of Federal Regulations (Exemption: 46.101.b.2). Provided that the only participation of the subjects is as described in the proposal narrative, this project is exempt from further review.

NOTE:

1. This committee complies with requirements found in Title 45 part 46 of The Code of Federal Regulations.
For NCSU projects, the Assurance Number is: FWA00003429; the IRB Number is: IRB00000330
2. Review de novo of this proposal is necessary if any significant alterations/additions are made.

Please provide a copy of this letter to your faculty advisor. Thank you.

Sincerely,

Debra Paxton
NCSU IRB

Appendix 4: Interview Questions

Manager Interview Questions

- 1- Share all thoughts that come to mind when I say the word “WEBSITE”.
- 2- Define an effective Website.
 - Tell me about some Websites you know to be effective and why.
- 3- Describe your most recent experience overseeing the development of a Website from the planning stage through the finished product.
- 4- What did you intend your Website to do or accomplish?
 - What is your view of how people are utilizing your Website?
 - How do you determine whether your Website does what you intended?
- 5- What is your HTML coding experience?
 - What skills do you have and/or feel you should have?
 - What skills does your Web designer have and/or should have?
- 6- Do you see a distinction between CONTENT and INFORMATION? If so, please describe.
- 7- Share all thoughts that come to mind when you hear “WEB DESIGNER.”
- 8- What qualities would you seek and expect in a person who would work on a Website?
- 9- Do you communicate differently with your Website person(s)—Web designer—versus people you work with that do not create or maintain Websites?
 - If no, describe your managerial communication process and techniques.
 - If yes, why is it different? How is it different?

Web Designer Interview Questions

1. Share all thoughts that come to mind when I say the word “WEBSITE”.
2. Define an effective Website.
 - Tell me about some Websites you know to be effective and why.
3. Describe your most recent experience with the development of a Website from the planning stage through the finished product.
4. What did you perceive the Website should do or accomplish?
 - What is your view of how people are utilizing the Website?
 - How do you determine whether the Website does what was intended?
5. What is your HTML coding experience?
 - What skills do you have and/or feel you should have?
 - What skills does your manager have and/or should have?
6. Do you see a distinction between CONTENT and INFORMATION? If so, please describe.
7. Share all thoughts that come to mind when you hear “WEB DESIGNER.”
8. What qualities do you think you should have as someone who works on Websites?
9. Does your manager communicate differently with you than with others that report to this manager?
 - If no, describe your manager’s communication process and techniques.
 - If yes, how is it different? Why do you feel it is different?

Appendix 5: Glossary

Accessibility (Website) – is a general term used to describe how easy it is for people to get to, use, and understand things. In human-computer interaction, **computer accessibility** refers to the usability of a computer system by people with disabilities. Designing with accessibility in mind can often enhance usability for all users and for automated access to the site, such as by search engines. A key to accessibility is to let people access content in their preferred way. Accessibility is strongly related to universal design in that it is about making things as accessible as possible to as wide a group of people as possible. ~Wikipedia

Communication- the process of exchanging information usually via a common system of symbols. ~Wikipedia

Culture- exhibits the way that humans interpret their biology and their environment... culture becomes such an integral part of human existence [and] it *is* the human environment. ~Wikipedia

Discipline cultures – a term I use throughout the study representing the manager and Web designer populations in general with the precept that each group is an occupational culture within themselves.

Information Architecture - (IA) is the art and science of structuring knowledge (technically data), and defining user interactions. Information architecture often has an emphasis on usability studies and testing for Website compliance to community standards. the term information architecture describes specialized skill set which relates to the management of information and employment of information related tools. ~Wikipedia

Interpreter (communication) - is a practitioner of interpreting, an activity that consists of establishing, either simultaneously or consecutively, oral or gestural communications between two or more speakers who are not speaking (or signing) the same language. While any translation from one language to another can never be completely accurate, the trained interpreter tries to interpret not only the spoken words as accurately as possible, but also takes into account the intent of the message (cultural translation). ~Wikipedia

Language- most would agree that language is a system of communication or reasoning using representation along with metaphor and some manner of logical grammar all of which presuppose a historical and at least *temporarily* transcendent standard or truth from which it is derived. ~Wikipedia

Manager – For the sake of this study, I will use the term manager to represent those employed at a University in the capacity of hiring and managing personnel and participate in designing the mission of their department. The managers at the University will hold one of the following titles: Director, Associate Director, Assistant Director, Senior Director, Assistant Vice Provost, Associate Vice Provost, Dean, Assistant Dean, or Associate Dean. ~Wikipedia

Occupational community – *see discipline cultures*

Perception - the process of acquiring, interpreting, selecting, and organizing sensory information. We create a model of how the world works—we sense the objective world. But, it is provisional like scientific hypotheses, as we acquire new information, our percepts shift. An object can fail to give rise to any percept at all. If the percept has no grounding in a person's experience, the person may literally not perceive it. ~Wikipedia

Translation - is an activity comprising the interpretation of the meaning of a text in one language—the *source text*—and the production of a new, equivalent text in another

language—the *target text*, also called the *translation*. The goal of translation is to establish a relationship of *equivalence* between the source and the target texts (that is to say, that both texts communicate the same message)... ~Wikipedia

Usability (Website) - addresses the full spectrum of impacts upon user success and satisfaction. Usability can be accomplished through user-centered (not necessarily user-driven) design, although various techniques are employed. The usability designer provides a point-of-view that is not dependent upon computer programming goals because the usability designer's role is to act as the users' advocate. ~Wikipedia

Usability testing - is a means for measuring how well people can actually use something (such as a Web page) for its intended purpose. If users, or test subjects, have difficulty understanding instructions, manipulating parts, or interpreting feedback, then the developers must go back to the drawing board, improve the design, and test it again. The aim is to observe a real user use their product in as realistic a situation as possible, so as to discover errors and possible areas of improvement. A common mistake that some designers make, for instance, is to focus too much on creating designs that look "cool", but compromise on usability and functionality. This is often caused by pressure from the people in charge, forcing designers to develop systems based on market expectations instead users needs. But we cannot forget that designers' primary function is not only make things look cool, but make things work with people. ~Wikipedia

Web Design - is the design or designing of a Web page, Website or Web application. When the internet was first invented, Web design consisted of a very basic markup language (HTML) that included some formatting options, and the unique ability to link pages together using hyperlinks. As the Web and Web design progressed, HTML has become more complex and flexible. As in all professions, there are arguments on different ways of doing things. The seven C's of Web design are context, content, community, customization, communication, connection, and commerce. ~Wikipedia