SET THE STAGE OR CHANGE THE CHANNEL:

Content Redesign Recommendations for the HealthCare Channel

UNIVERSITY OF MINNESOTA

This is to certify that I have examined this copy of a master's project by

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and have found that it is complete and satisfactory in all respects,

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INTRODUCTION

This Plan B Master's project discusses content redesign recommendations for ISEEK Solution's HealthCare Channel, a Website that provides extensive healthcare career information to a wide range of audiences including career changers, educators, healthcare professionals, career counselors, kindergarten through twelfth grade students, and job seekers. The overarching research question proposed for this project is *Can ISEEK Solutions hope to reach multiple audiences with the HealthCare Channel while at the same time establishing trust with these audiences and building community among them?* In particular, this project studies two of the audiences presently targeted with the HealthCare Channel: career changers interested in healthcare occupations and healthcare professionals new to the industry. To answer the research question, I reviewed ISEEK Solution's previous research (discussed in section one); conducted an audience analysis of career changers and new healthcare professionals by analyzing postings to two message boards (discussed in section two); performed a broad literature review of rhetorical notions of audience and authors, reader and writer role playing, strategic communication, Web portals, trust, online community, and effective Web content for the genres of online education and online career development (discussed in section three); posed a questionnaire to Health Education-Industry Partnership Council members and qualitatively analyzed responses to this questionnaire; posed a Web-based questionnaire to HealthCare Channel end users and then statistically analyzed responses to this questionnaire (discussed in section four); and finally, created content redesign recommendations for ISEEK Solution's HealthCare Channel (discussed in section five).

SECTION ONE: BACKGROUND

This section introduces ISEEK Solutions the consortium, ISEEK's HealthCare Channel, and the healthcare environment in which the Channel is situated.

ISEEK Solutions the Consortium

Minnesota's Internet System for Education and Employment Knowledge (ISEEK Solutions) has a formidable task: to interest its wide-ranging audiences in healthcare careers using the HealthCare Channel (www.iseek.org/healthcare/), which went live in September 2001. ISEEK Solutions is a non-profit consortium of these high profile public and private healthcare organizations in Minnesota:

- Governors' Workforce Development Council

- Minnesota Department of Administration, Office of Technology

- Minnesota Department of Children, Families, and Learning

- Minnesota Department of Economic Security

- Minnesota Department of Trade and Economic Development

- Minnesota Higher Education Services Office

- Minnesota Private Colleges and Universities

- University of Minnesota

Based on the profiles of the above organizations, the HealthCare Channel may seem poised for success. A closer look at the planning and creation of the Channel, as well as the current healthcare environment, illuminates the Channel's rhetorical situation.

The HealthCare Channel

In winter 2001, ISEEK Solutions hired Barr Information Technology Services (or Barr) to build the HealthCare Channel after creating the main iseek.org site in 1997 (ISEEK staff 8). The HealthCare Channel is the first Website among several Targeted Industry Partnership sites to provide career information about specific industries. After ISEEK Solutions formed the partnerships to gather content for the Channel, Barr used that content and the general career information available on the main iseek.org site to draft the Channel. Barr then conducted four meetings with healthcare industry partners (members of the Joint Applications Design sessions) to further plan the Channel. Industry partners included delegates from ISEEK Solutions, Minnesota Hospital and Healthcare Partnership, Minnesota Colleges and Universities, HealthPartners, and Health Education-Industry Partnership (Barr Information Technology Services 2001).

The purpose, targeted audiences, content, and look of the HealthCare Channel are discussed in the functional specification Barr created for ISEEK Solutions. I discuss these important Channel elements and Barr's early planning specification over the next few pages. Please note that these elements are discussed topically in the order they are introduced in Barr's functional specification.

Purpose

Barr defined the purpose of the HealthCare Channel in terms of how its users would use it to make career decisions: "the ISEEK Website will provide a tool that the general public will use to access resources that will assist them in resolving issues such as jobs, careers, and classes" (Barr Information Technology Services 3). Barr also identified three life stages when a user might access the Channel: when one first enters the job market; during one's education when personal experiences start to influence career choices; and later in one's career when considering an occupational change. These definitions of the Channel's purpose seem, on the outset, complete; however, what is absent from the Channel's purpose is any consideration for how Channel users might meet one another, communicate, and build community. Perhaps this oversight is nowhere more apparent than in Barr's choice of the word, "channel," to describe the HealthCare Channel. This word implies a television metaphor for an Internet technology and, unfortunately, similar to a television program, the word implies that the "channel" can be ignored or changed when it does not meet viewers' or users' expectations.

Targeted Audiences

Barr defined two layers of audiences for the HealthCare Channel: a primary audience (Channel end users seeking healthcare jobs, careers, and education) and a secondary audience (the Channel "gatekeepers" Barr identified such as career counselors and educators). Within these kinds of audiences, Barr further defined specific audiences as listed in Table 1 on page 5. Interestingly, Barr notes that Channel content successfully targets only the primary Channel audience of adults interested in obtaining or resuming

healthcare careers, but unfortunately, Barr does not explain why this might be the case. I surmise that Barr assumed this audience might be one of the most self-directed when searching for career information. Consequently, Barr might have thought that this audience would be most accepting of the Channel. I question this assumption, and in the next section, I analyze this audience to determine their impressions and expectations of the Channel.

Table 1. HealthCare Channel Audiences

Primary Audiences	Secondary Audiences
• Adults interested in obtaining (or resuming after a lapse) jobs in healthcare • Healthcare professionals seeking continuing information resources to further their careers • Students kindergarten through twelfth grade • College students • Adults choosing a second career • Immigrants and those who speak English as a second language • Former welfare recipients • Healthcare-trained professionals not currently working in the industry	• High school math, science, and industry occupation teachers; guidance counselors; ESL instructors • Grade school teachers • Immigration center staff • Librarians • Scholarship officers • Career information/resources staff • School nurses • Outplacement services staff • Parents • Industry employees • Mentors • Work force center staff • Healthcare human resources professionals • Government agencies • Media professionals • Government agency staff • Military

Content

HealthCare Channel content comes primarily from Minnesota Career Information System (MCIS), a standalone software product produced by the Department of Children, Families, and Learning, and secondarily from ISEEK Solution's industrial partners.

Look

The HealthCare Channel looks much like the main iseek.org Website (see Figures 1 and 2). In addition, HealthCare Channel content is largely database-driven to ensure that ISEEK Solutions' staff can keep its content and look current. And this content and look remain separate because of their different sources: MCIS for the former and ISEEK Solutions / Barr for the latter.

Figure 1. HealthCare Channel

Figure 2. ISEEK Solution's Main Web Site

Today's Healthcare Industry Environment

The HealthCare Channel is situated in a unique environment that challenges its effectiveness as an educational and communication tool. Presently, there is a massive healthcare worker shortage in our nation caused in large part by a growing population of elderly Americans (Mitka 1; Minnesota Department of Economic Security 2000). This shortage offers career changers and the recently laid-off a chance to start anew in a variety of healthcare occupations. But unfortunately, healthcare occupations still suffer from negative perceptions, and these perceptions may be fueled by the feelings of largely overworked and under-appreciated healthcare professionals who struggle to keep up with an unrelenting managed healthcare system. This system places patient turnover and low-cost care before personalized patient care (JWT Specialized Communications 2). And the healthcare professionals who feel trapped in this system often encourage their own family members and friends to pursue less stressful non-healthcare professions (Nevidjon & Erickson 1). Furthermore, our nation and much of the rest of the world is experiencing an economic downturn that stresses the health and exhausts the savings of all whose livelihoods are caught in its path. All of these factors influence the success or failure of the HealthCare Channel.

Conclusion

The HealthCare Channel is the first Website of several Targeted Industry Partnership sites. In the next section, I analyze two of the HealthCare Channel's audiences: career changers who are considering healthcare occupations and healthcare professionals who are new to

the industry. These audiences best reflect the primary audience whose needs Barr considers to be met with current Channel content. I question this assumption and wonder whether Barr conducted a formal audience analysis before building the HealthCare Channel. By analyzing these audiences, I hope to learn more about HealthCare Channel users, their needs for healthcare career information, and their expectations and impressions of the Channel.

SECTION TWO: AUDIENCE ANALYSIS

I conducted an audience analysis by examining the general audience for career development Websites: Internet users who search for career information online. I then narrowed the analysis to two specific audiences of the HealthCare Channel: career changers who are considering healthcare occupations and healthcare professionals who are new to the industry. I modeled this two-part approach after the research of Swenson et al., who conducted a general and specific audience analysis of people afflicted with liver disease and the healthcare professionals, family, and friends responsible for their care (pp. 5, 10). General and specific audiences are discussed over the next several pages.

General Audience

To get a sense of Internet users who search for career information, I consulted one report on Internet use statistics by the U.S. Department of Commerce ("A Nation Online") published in 2002 and two Pew Internet & American Life Project reports ("Online Communities" and "Getting Serious Online") published in 2001 and 2002, respectively. These reports contained statistics about those who search for career and job information online and those who use Internet communication technologies such as chat, listservs, and message and bulletin boards.

Online Job Searchers

In "A Nation Online," researchers found in a survey of Internet users age fifteen and older that 16.4% use the Internet to conduct job searches (Victory & Cooper 37). Internet users with lower household incomes tend to use the Internet more for job searches, whereas those with higher household incomes tend to use the Internet less for job searches. See Table 2.

Table 2. Percentages of Internet Job Searchers by Household Income (taken from "A Nation Online")

Household Income	Percentage Who Use Internet for Job Searches
Under $15,000	23.0%
$15,000 to $24,999	20.6%
$25,000 to $34,999	20.5%
$35,000 to $49,999	17.4%
$50,000 to $74,999	16.0%
Over $75,000	14.6%

In "Getting Serious Online," researchers note how Americans are increasingly using the Internet for research in the workplace. For example, as of March 2001, 19% of those surveyed admitted that they use the Internet for job-related research over the course of a typical workday (Horrigan & Rainie 6). Overwhelmingly, veteran Internet users (those who have been online for over three years, according to the report) conduct job-related Internet research the most (32%), whereas novice Internet users conduct this kind of research the least (under 10%).

Online Communication Technology Users

According to "A Nation Online," Internet users with lower household incomes use chat

and listserv technologies more often than those with higher household incomes (Victory &

Cooper 34). See Table 3 on page 12.

Table 3. Percentage of Chat and Listserv Users by Household Income
(taken from "A Nation Online")

Household Income	Percentage Who Use Chat and Listservs
Under $15,000	23.0%
$15,000 to $24,999	20.0%
$25,000 to $34,999	18.8%
$35,000 to $49,999	16.9%
$50,000 to $74,999	16.5%
Over $75,000	16.5%

However, other researchers have found that among members of online groups, those in

work-related groups such as trade and professional organizations are more likely to

engage in online communication than are general Internet users (Horrigan et al. 20).

Furthermore, while daily email use is down four to nine percent for veteran and novice

Internet users alike, those who use email are doing so for more serious purposes, such as

seeking advice and discussing personal matters with friends and family. According to

researchers, this may be due to the "network effect" of increasing numbers of social and

professional networks online, which makes email a ubiquitous tool for all types of

communication and all kinds of communicators (Horrigan & Rainie 9).

Based on my literature review for establishing the general audience of the HealthCare Channel, I conclude that experienced and novice Internet users alike are comfortable searching the Internet for job and career information. Furthermore, Internet users are assimilating the use of communication technologies such as email, chat, and listservs into their personal and professional lives. Consequently, the communication that occurs via these technologies has become rich and personal. Also, I conclude that the higher percentages of Internet communication technology use and job-related Internet research by people with lower household incomes may be explained by two reasons. First, people with lower incomes may wisely choose the Internet as an important low-cost method for researching new careers. Those conducting such research would naturally have less established careers and thus lower incomes. Second, people with lower incomes are comprised of children and teens who have the leisure time to use Internet communication technologies. And while these children and teens are clearly not conducting job-related research, they are avidly using Internet communication technologies.

Specific Audience

To get a better understanding of the needs and concerns of career changers considering healthcare occupations and healthcare professionals new to the industry, I examined career changer and healthcare industry employment message boards on the popular career development Websites Vault.com and Monster.com over a two-month period. I kept a log of postings to these message boards and classified postings based on thematic content. To ensure that I coded themes in a meaningful manner, I carefully read each posting; then, I identified all of the general themes I found in the posting. In classifying postings by their general themes, I was able to strip personally identifying information such as names of posters, dates of postings, and quotes from postings. Doing so allowed me to analyze postings for their valuable content *and* to provide posters with the highest measure of privacy such as that advocated by social scientists for the study of Internet communities (King 121). Table 4 on page 15 lists the common themes I found in the approximately fifty initial posts (that is original postings, not individual responses to those postings) to the message boards. Note that most postings had multiple themes.

Table 4. Common Themes in Over Fifty Initial Postings to Message Boards

Theme	Count	Theme	Count
Age (for example, too old to make a change)	1	Intra-career change within healthcare	4
Beginning a practice concerns	2	Job satisfaction in healthcare	1
Career changer	7	Length / duration of education concerns	3
Career match to interests	2	Loss of income	2
Certification concerns	2	Medical degree from outside the U.S.	1
Choosing an educational program	15	Networking (unsure how to)	1
Choosing a healthcare career	6	Nursing options for good hours and salary	1
Choosing a healthcare facility for work	1	Online healthcare programs	1
Choosing a school	1	Path to RN (four- or two-year program)	2
Coursework	3	Re-entry into healthcare workforce	1
Degree is in non-healthcare field	5	Recent graduate concerns	3
Dental school application process	1	Relocation concerns	2
Difficulty finding a job	3	Scholarships	1
Disability concerns	1	Security in healthcare employment	1
Dislike current career	2	Time commitment for education	
Employment prospects / job demand	3	Training programs on the job	1
Family planning and support concerns	3	Typical workday of healthcare professional	1
Financing school concerns	4	Unemployed concerns	1
Finding first healthcare job	4	Wages / salary	7
General anxiety / not sure where to start	8	Work from home healthcare positions	1
Hours of work	1	Websites for healthcare career information	1
Internships	2		

Based on my analysis of message board postings, I found that the boards' most popular themes dealt with choosing educational programs, requesting wage and salary information, changing one's career, and choosing the right healthcare career. Another popular theme is one that I coded under general anxiety related to where one should start one's career search. Last, another very popular theme arose from those who identified as having college degrees in non-healthcare fields but who were nonetheless interested in healthcare careers. I conclude that HealthCare Channel users, particularly those who are considering healthcare careers or just starting these careers, have very similar concerns.

Conclusion

Based on my audience analysis, I conclude that HealthCare Channel users are comfortable with job-related Internet research. Also, these users have a proclivity for Internet communication technologies, and they are using them to communicate in increasingly rich and personal ways as evidenced by the postings I analyzed. Because communication technologies such as message and bulletin boards, chat, and listservs are presently unsupported by the HealthCare Channel, I surmise that users may be somewhat displeased with this aspect of the Channel. In the next section, I discuss my literature review. This review covers important concepts including writing for multiple audiences, trust in computer technology, online community, and features of effective Website content.

SECTION THREE: LITERATURE REVIEW

I conducted a literature review of several topics that contributed to my understanding of audience, trust, online community, and features of effective Website content. Each of these topics informs the rhetorical situation of the HealthCare Channel, an information-rich Website that lacks elements of reader and writer role playing such as explicit roles for Channel users, as well as an expressive authorial role. The Channel also misses opportunities to establish its trustworthiness as a career information source, to build community among its audiences, or to present effective content to Channel users. I use this literature review as the basis for the questionnaires I created and posed to HEIP Council members and Channel end users. These questionnaires are discussed in the next section starting on page 61.

For audience, I look at role playing of readers and writers, role playing on the Web, unique challenges of Web role playing, and strategies for dealing with these challenges (such as strategic ambiguity, layering, and Web portals). Next, I discuss interpersonal trust, trust in computer-mediated communication, and trust and distrust of computer technology. Then, I discuss Internet users' expectations of online community, unique features of online communities, the changing nature of these communities, and research into groups that resist such communities. Last, I look at Website communication features intended to target audiences and online communities. Specifically, I look at features that are considered effective for the online genres of distance education and career development, which are the two main genres of the HealthCare Channel.

AUDIENCE

Audiences or readers of published texts as well as Websites are studied, targeted, invoked, addressed, and imagined through dramatic roles by writers and designers. In this section, I discuss reader and writer role playing and the unique challenge that writers face when composing messages intended for multiple audiences. I find the idea of audience— particularly multiple audiences and the compositional problems and conflicts that arise from them—especially useful for my examination of the HealthCare Channel, which seems to do little to address its multiple audiences.

Reader Role Playing

The theory of audience as role player within the body of a text comes from research in the field of composition (Ede & Lunsford 156; Kroll 172; Thralls, Blyler & Ewald 47). Two early theories that contribute to the theory of reader role playing are addressed audience, which emphasizes the writer's research into his or her audience and subsequent shaping of a message for that audience, and invoked audience, which emphasizes the writer's creativity in imagining an audience and subsequent crafting of a message for that audience. According to Ede and Lunsford, these previous theories did not recognize the fluid, dynamic character of rhetorical situations and the integrated, interdependent nature of reading and writing (Ede & Lunsford 156). But within a role playing theory, these theories are synthesized and improved. For example, invoked audience includes roles such as self, friend, colleague, critic, mass audience, future audience, past audience, and anomalous audience; addressed audience includes the slightly different roles of self,

friend, colleague, critic, mass audience, and future audience (Ede & Lunsford 165). To invoke audiences, Ede and Lunsford suggest that writers use language to create the attractive roles that their audience members will want to enact.

A role-playing theory of audience allows audiences to overlap and to assume multiple roles. In addition, it allows invoked and addressed audiences to shift and merge based on the writer's particular rhetorical situation, aim, genre, and relationship with the audience, message, and world. Ede and Lunsford assert that writers' own reading and rereading of their texts monitors these rhetorical relationships, and writing and reading are creative and dynamic in that they allow writers to create readers and readers to create writers. It is within the rhetorical relationship between readers and writers, claim Ede and Lunsford, where communication truly occurs (169).

Building on Ede and Lunsford's role playing idea of audience, Coney elaborates on the rhetorical roles of readers of technical texts. Coney posits that there are two ways of viewing readers of such texts: empirically, in which readers are understood to be actual people who can be analyzed, understood, and accommodated; and rhetorically, in which readers are people who engage in literary roles constructed by the author (Coney 58).

While technical communicators have contributed to the understanding of readers through empirical categorizations of real readers, Coney argues they need to accept that readers are not just empirical objects but also rhetorical participants in the communication process

(59). To elaborate, Coney draws on reader response theory to create a broader view of technical readers; a view that allows readers to fulfill combinations of the roles of receiver of information, user, decoder, professional colleague, and maker of meaning.

Reader as a receiver of information comes from positivism, which suggests that the reader is a passive information seeker who wishes to further his or her professional work (Coney 59). Because of this passivity, it is the author's responsibility to understand the reader and give information with a predetermined meaning to that reader. In this role, a reader has no influence on the information that he or she is given.

Reader as user is a role that has emerged from the influence of computer technology (Coney 59). In this role, the reader is considered goal-driven and uninterested or unwilling to ponder what he or she reads. Rather, the reader wants only to complete a task or to learn information quickly. Accordingly, document design decisions emanating from this reader role are minimalist. For example, sentences are short and informal, but graphics are common. This "user-friendly" notion of reader (and writer) borrows from the idea of reader as pupil and writer as tutor. Readers in this role are discussed by Redish (289).

Reader as decoder comes from structuralist and information theories that hold that the reader is a decipherer of hidden meaning (Coney 60). The reader in this role possesses the code that he or she needs to interpret a cryptic message. This reader role is characterized by the research of Shannon and Weaver, who sought to improve communication across

telephone lines and radio waves. These researchers generalized their findings to all forms of communication—even interpersonal communication. Similar to the reader as receiver of information, the role of reader as decipherer of meaning characterizes the reader as a passive recipient.

Reader as professional colleague or member of a discourse community suggests that the reader belongs to the same intellectual community as the writer (Coney 60). The reader is equal or superior to the writer and is more interested with the terms of the argument than the facts of the message. Messages are forums by which ideas can be presented, debated, and tested, and the tone of these messages is respectful yet candid. In these messages, establishing community, rather than exchanging information, is key. Caricato relies on the notion of reader as professional colleague in her article about presenters and their audiences as copartners in the design of visual presentations (Caricato 497).

Reader as maker of meaning allows the reader to take on a central role of interpreting the meaning of the text (Coney 61). Within this role, readers are the ultimate determiners of truth and, as such, they form a sort of interpretive community.

Writer Role Playing

But readers are not the only role players for written texts, because writers construct roles that they enact throughout their texts. For example, Coney and Chatfield examine the authorial voice of primary and secondary software manuals (Coney & Chatfield 28). This

voice, they posit, sounds the role that the writer has constructed for himself or herself in a text. They compare primary software manual *The Microsoft Word User's Guide* with the secondary manual *Word for Windows 6 for Dummies*. Despite the fact that the former software manual comes with the word processing software, Coney and Chatfield note that readers are still willing to buy the highly popular *Dummies'* manual. They attribute this to the clear authorial voice of the *Dummies'* manual. They quote Goodwin, who suggests that a writer becomes a co-actor throughout the body of a text:

> [R]eaders are not considered so much recipients of information, but participants in a drama in which they play the lead role, a hero who enters into unknown territory in pursuit of specific goals. The author becomes not so much a removed sender of information, but a visible, persuasive presence, a fellow actor who aids and abets the hero/reader in his quest. (qtd. in Coney & Chatfield 25)

Coney and Chatfield argue that by viewing reader and writer roles in this manner, all manuals become persuasive documents. The main difference, then, between the two Word manuals is their different rhetorical approaches: whereas the proprietary software manual is authored by an anonymous, neutral writer, the *Dummies'* manual is authored by a named, expressive writer. And according to Coney and Chatfield, theories on social interaction suggest the reason why the *Dummies'* manual is more attractive to readers: people are wired for social interaction and therefore seek social voices (28). Because of this reason, Coney and Chatfield advocate for clear reader and author roles in manuals, and while they do not embrace the irreverent tone of *Dummies'* manuals, they nonetheless feel that technical writers should adopt a helpful, reliable, and credible mentoring voice in the manuals they compose.

Role Playing on the Web

In comparison to printed texts, the World Wide Web may be an ideal medium for reader and writer (or designer) role playing. In 2000, Coney and Steehouder extrapolated their earlier theory of audience role playing to the Web. The authors start with Coney's premise that people communicate using roles appropriate for their rhetorical purposes. That is, when speaking and writing, people present a version of themselves that they consider suitable for the time, place, and situation (Coney & Steehouder 327).

Accordingly, Coney and Steehouder examine the reader and writer roles that emerge on Websites. In these roles, readers or Website users or audiences, are active participants (rather than passive recipients of information) in a drama in which they play lead roles. Similarly, writers or designers of Websites take on roles, however subtle. Typically, they take on the role of helpful mentor, and popular terms such as "voice" and "tone" illustrate the writer's role or authorial persona (Coney & Steehouder 329). An analysis of the HealthCare Channel reveals that it too is written in an anonymous helpful mentor voice so popular in technical communication, yet it contains no reader or user roles from which audiences can choose.

According to Coney and Steehouder, Websites often allow readers to choose from multiple roles, and this multiplicity is an attractive feature. They state, "Indeed, the Web itself is designed to empower users to choose from a variety of roles offered them at a particular site, and to create their own meanings by following different pathways through the

information" (Coney and Steehouder 329). One example is the Dutch Tax Website, which is personalized for both younger and older taxpayers (Coney & Steehouder 330).

Coney and Steehouder give recommendations on how to design an authorial persona, a user persona, and their interrelationship on informational Websites. For example, when designing authorial persona, the most important element is establishing credibility (Coney & Steehouder 331); a second important element is establishing an inviting Website. An authorial persona, then, invites site users to read, understand, and use the information. By contrast, some Websites have anonymous authorial personas, since this anonymity can emphasize the neutral, informational character of the site and lend credibility to the site's content. Identifiable authorial personas, however, can be established with a statement of Website ownership; a description of the site owner's purposes; a Website address for feedback; use of the pronoun "we" to personify the organization; a description of the organization; and a profile of one or more organizational members (Coney & Steehouder 332).

To design a user's persona, users must first feel welcomed and acknowledged on the Website (Coney & Steehouder 335). To welcome and acknowledge users, the writer must create personas that users will willingly assume. This often means creating several reader roles from which the user can choose, as well as different reader goals or questions from which the user can choose to best meet his or her needs. It also means considering the

value attached to the roles provided to users. For example, Coney and Steehouder suggest that the more essential these values are, the more strongly users might resist their roles.

To design relationships between Website authors and users, Coney and Steehouder posit that one must consider the distance created between people in these roles (337). For example, Website author as professional and Website user as advice seeker sets up a distant, hierarchical relationship. To facilitate relationships with site users, authors should avoid strong adjectives and adverbs, especially when they do not have clear and factual meanings; let the facts speak for themselves; and be polite and avoid threatening statements (Coney & Steehouder 338).

Multiple Roles on a Website

Websites are not without their challenges for role players. Sometimes roles are not attractive to Website users and oftentimes multiple, poorly defined roles overlap on any one Website and create role conflicts for site users. When any communicator, whether a traditional writer or a Web writer or designer, must relay different messages to different audiences simultaneously, that communicator is faced with a multiple-audience problem (discussed on page 26). And while most of the literature I reviewed discusses this problem as it relates to spoken messages, the multiple-audience problem also exists for Web writers and designers who are accustomed to addressing multiple audiences on any one Website (Lin 36). This problem may be acute on the HealthCare Channel, which has a multitude of primary and secondary audiences according to Barr (listed in Table 1 on page 5). To

resolve the multiple-audience problem with speech, communicators may rely on ambiguity strategies (discussed on page 32); to resolve the multiple audience problem in technical documentation, communicators may rely on a layering strategy (discussed on page 35); and to resolve the multiple-audience problem in written messages on the Web, communicators may use a fairly new and undefined Web portal strategy (discussed on page 36).

The Multiple-Audience Problem

In 1991, Fleming and Darley conducted a study of mixed messages, the multiple-audience problem, and strategic communication. According to them, the multiple-audience problem arises when a communicator wants to convey different messages to multiple audiences simultaneously (Fleming & Darley 26). Initially, when these circumstances occur, communicators may equivocate or use strategic ambiguity; however, most communicators rely on audience design to craft a message to be understood by a target audience and not different audiences. Audience design involves use of concealment, which is rendering part or all of the message unintelligible to eavesdroppers but understandable for the target audience. To craft such a message, a communicator must determine the shared knowledge between the target audience and the communicator. From this knowledge, the communicator selects private keys shared only by the communicator and the target audience. These keys act as a kind of encryption system that the target audience can use to decipher the message. Another way that a communicator can relay multiple messages to several audiences is by using a specialized language (such as slang) that can only be understood by the communicator and the target audience.

To conduct their study, Fleming and Darley had groups of teenagers construct secret messages for four different kinds of audiences: other teenagers sending similar messages, other teenagers not sending such messages, the parents of the teenagers sending messages, and non-related adults who know the message-sending teenagers. Fleming and Darley found that for messages directed to other message-sending teenagers, the teenagers relied on hand signals, and for messages directed toward teenagers not sending messages, the teenagers relied on slang (39). Therefore, the teenagers were deft at creating messages that accommodated multiple audiences, and two of their target audiences were capable of decoding such messages. The audience that decoded messages best was other message-sending teenagers, followed by teenagers not sending messages, and last the adults and parents. Fleming and Darley conclude that in order for the decoding process to work, three conditions must exist: (1) the communicator must have some reason to doubt the message (that is, some aspect of the message must seem unbelievable or wrong); (2) the context of the communication must be suspicious; and (3) suspicion must arise from the interaction between one and two (pp. 42 - 43).

In 1994, Fleming again looked at the multiple-audience problem but this time from a relational-regulation perspective. This perspective holds that a communicator can distance himself or herself from certain behaviors while simultaneously embracing others, and the communicator can use mixed or hidden messages to do so (Fleming 216). In so doing, a communicator is able to adjust his or her behavior in relation to others' behavior, which allows the communicator to manage his or her image. Communicators manage their

images to protect themselves from others' criticisms and to shield themselves from the

consequences of their behavior. According to Fleming,

> It is now considered a virtual maxim of human social behavior that
> people engage in tactical communication—they "package"
> information or impressions for consumption by various audiences
> to create conditions that will further their own purposes or achieve
> their goals in relation to those audiences. Thus, in the broadest
> sense, tactical communication is social behavior designed to
> communicate something (a self-image, an opinion, an explanation,
> an internal state, or a piece of information) to a specific audience in
> order to further the communicator's purposes with that audience.
> (221)

Tactical communication, according to Fleming, has a role-playing quality: communicators

try to manage their images to make them appear as if they possess specific personalities,

attitudes, or attributes so that they will have legitimate claims to the roles they play. A

communicator manages his identity, according to Goffman, by situating his identity so that

he only acts in his role in the presence of the role's specific audience (Fleming 228). There

are times, however, when audiences cannot be controlled and manipulated with roles. This

occurs when audiences witness role performances not intended for them. And when

audiences witness such unintended role performances, states Fleming, a role conflict

exists (229). The greatest possibility for such a conflict is when there are several roles and

many audiences. It is possible that the HealthCare Channel suffers from role conflicts.

These conflicts are suggested by HEIP Council members' uncertainty of the Channel's

primary and secondary audiences. Unfortunately, ISEEK Solutions and Barr have made

little effort to address the different audiences of the Channel beyond acknowledging that

these audiences exist (Barr Information Technology Services 3).

Communicators may deal with role conflicts by segregating their audiences (that is, by separating audiences and addressing them one at a time); by distancing themselves from their roles; and by using mixed or hidden messages (Fleming 235). Of these ways of dealing with role conflicts, role distancing strategies are linguistic attempts to obscure the connection between the agent, action, and object in a message. These strategies carry over to written communications, as well, and include altering the noun-verb-object construction of sentences and using *that* instead of *this*, ambiguous descriptors or passive constructions, selective emphasis, hypotheticals, and automatic phrasing such as "you know" (Fleming 240).

Another way of dealing with role conflicts is to construct hidden or mixed messages. Communicators construct hidden or mixed messages by lying or by designing their audiences, which involves tailoring messages to specific audiences and not others (Fleming 256). Fleming cites research that shows messages prepared for friends are more efficient, effective, and less redundant than those prepared for strangers. Similarly, Fussell and Krauss found that when common ground or shared knowledge is low among communicants, messages tend to be longer, more literal, and less figurative (Fussell & Krauss 214).

To increase a message's efficacy, communicators can use shared knowledge and audience design to ensure that eavesdroppers are excluded from a message's meaning. Private keys come from two classes of shared knowledge: communal common ground (shared groups,

cultures, or communities) or personal common ground (shared experiences). This latter

class, according to Fleming, lends the greatest efficacy to covert communication (260).

However, using shared knowledge and private keys to construct messages can have

positive as well as negative consequences: while on the one hand these strategies can

enhance a message's effectiveness and observers' abilities to interpret messages, on the

other hand shared knowledge groups can be more biased (Fleming 268).

One famous capitalizer on the multiple-audience problem was industrialist Henry Ford,

who addressed multiple audiences effectively throughout his lifetime. Ford was

particularly adept at using a role distancing strategy to resolve the multiple-audience

problem (King & Fine 73). According to King and Fine, role distancing is common for

business leaders. They posit,

> The reputation of a business leader is a negotiation between the
> actions and intentions of the leader and the symbolic interpretation
> of the individual by the public. The reputations of business leaders
> belong both to the leaders and to those who view them. (83)

Business leaders such as Ford have multiple reputations that vary over time, and these

leaders shape their reputations by using strategic communication.

According to some researchers, the reality of multiple audiences need not be a problem on

large Websites where multiple audiences are common (Lin 36). In fact, one of the most

attractive features of large Websites is that they reach out to multiple audiences, making

them timely and cost-effective communication tools. However, because the needs of

multiple audiences are sometimes incompatible, Lin suggests that organizations that build

large Websites need to be innovative when organizing their content (40). In other words,

Lin advocates audience design for resolving any role conflicts that result from a multiple-

audience problem on Websites. Furthermore, Lin notes that not all audiences respond in

the same way to Website content, and the organizations that build large Websites are often

audiences of those sites as well (37). Because of these realities, Lin recommends careful

investigation of the organizational factors that influence Website design.

Lin draws several hypotheses about large organizations and their Websites: the larger the

organization, the larger its Website; as the size of an organization increases, the number of

its Website audiences increases, too; and organizational size and multiple audiences

encourage organizations to be innovative in their approach to Website design (37). Of the

multiple audiences of large Websites, Lin states:

> The organizational goal of retaining these multiple audiences
> despite those conflicts and reaching new audiences cannot be
> accomplished unless the organization exhibits enough innovative
> power to manage the incompatibility inherent in multiple
> audiences. (38)

Lin refines his hypotheses to make the following predictions about the design of large,

multiple-audience Websites by organizations. First, these Website will have few items

(and less text) on their homepages. In this way, a Website is like a book whose title

contains little information. This scarcity exists because information is segmented within

the book's (or Website's) hierarchy. Furthermore, most Website homepages are used only

to establish the sites' navigational features (Lin 38). This point of Lin's is illustrated by the HealthCare Channel, which has a minimalist homepage (see Figure 1 on page 6).

Second, large multiple-audience Websites will rely on strategic ambiguity and metaphor on their homepages. According to Lin, strategic ambiguity allows the Website to present content in a uniform way while allowing for minor audience differences and unifying these diverse elements. This uniformity, diversity, and unification is what Eisenberg calls unified diversity, which is commonly found in organizational missions, goals, and plans (Eisenberg 230). Websites, which Lin suggests are like national constitutions, are similar in their need for unified diversity (Lin 39). Lin's point about metaphor on homepages has some support on the HealthCare "Channel," which implies that the Website is similar to a television program.

Third, large multiple-audience Websites will be dynamic or graphically appealing. And fourth, these Websites will likely customize their appearance and language options to different audiences' needs (Lin pp. 39 - 40). This point of Lin's is illustrated by the main iseek.org Website, which offers content in four languages: Hmoob, Soomaali, Spanish, and English.

Strategic Ambiguity

Strategic ambiguity, the intentional practice of vagueness, is one way that communicators can resolve multiple-audience problems in an organizational communication setting or on large Websites. Eisenberg posits that strategic ambiguity is an essential part of

organizational life because it promotes unified diversity, facilitates organizational change, preserves existing impressions, and protects privileged positions (Eisenberg pp. 230 - 236). Eisenberg notes whereas in the past scholars believed good communication to be a communicator's clarity and openness, they now view good communication to be a communicator's ability to use symbols and language strategically to accomplish goals. In addition, because communicators' goals are multiple, inconsistent, and occasionally conflicting, these communicators often try to satisfy multiple goals at once instead of perfecting any one goal (Eisenberg 227). In trying to reach its many audiences simultaneously, it is likely that the HealthCare Channel has used the strategy of ambiguity. Because scholars consider strategic ambiguity a method for achieving communication goals, a message's clarity may not be an attribute of that message, but rather a relational variable that comes from a combination of communicator, message, and audience. That is, a message's clarity exists only when an communicator has an idea, encodes this idea into language, and has an audience that hears and understands the message as it was intended. Furthermore, clarity is a measure of communicative success only if the communicator has clarity as a goal. Therefore, ambiguity can arise from explicit detail as well as intentional vagueness (Eisenberg 230).

Strategic ambiguity, according to Eisenberg, supports unified diversity. That is, it fosters multiple viewpoints in organizations and encourages organizational members to agree on abstractions instead of specifics. In addition, organizational leaders use ambiguity to

encourage creativity and to guard against a singular view of the organization. Eisenberg

provides this example of unified diversity in organizations:

> The writing of group documents provides a final example of how
> unified diversity can be promoted through the use of strategic
> ambiguity. When a group composed of individuals with divergent
> perspectives on a topic convenes to author a document collectively,
> the final product is presumed to represent the will of the group.
> Strategic ambiguity is often employed to make the group appear to
> speak in a single voice. Group members appeal to a repertoire of
> increasingly ambiguous legitimations which both retain the
> appearance of unity and reasonably represent the opinions of the
> group. (232)

Strategic ambiguity facilitates organizational change by using shifting interpretations of

organizational goals and central metaphors (Eisenberg 232). According to Pondy as cited

by Eisenberg, organizations change when their members change their metaphors for

thinking about them. This changing of metaphors was examined by Eisenberg and Smith

in their case study of employees at Disneyland (Smith & Eisenberg 1987). Eisenberg also

suggests that, at the interpersonal level, strategic ambiguity can facilitate relationships

because of communicative partners' practice of projecting their own interpretations into

ambiguous messages (Eisenberg 233). For example, camaraderie in the workplace forms

between employees within "in" groups when they successfully interpret an ambiguous

message; however, alienation can result when employees incorrectly interpret the same

ambiguous message.

Last, strategic ambiguity facilitates relationships by allowing communicative partners to

hide personal opinions and feelings that can jeopardize their relationships. Also, strategic

ambiguity preserves existing impressions and protects privileged positions (Eisenberg 234). For example, highly credible communicators who speak ambiguously may be considered wise, whereas less credible and similarly ambiguous communicators may be considered foolish. To protect privileged positions, communicators may rely on strategic ambiguity because it is deniable. That is, it is a compromise between silence and clear but potentially offensive communication.

Layering

Layering informational content in documentation is one way that technical communicators can accommodate the needs of multiple audiences. Layering is the offering of multiple pathways through print and digital documentation to meet users' different needs for information (Farkas 250). This strategy has been popular since the late 1980s when digital delivery of manuals in portable document format, hypertext markup language, and online Help became expedient in the computer industry. Often, this strategy is a time-saving compromise that technical communicators strike with management when they do not have the resources to create documentation sets for individual audiences, which is the ideal form of technical communication by industry standards. And according to Farkas, while layering may be ideally suited for digital texts since these texts' hypertextual natures allow authors or designers the greatest control over content, layering also adds more complexity to the use and upkeep of these texts (pp. 251, 259). Layering and creating identifiable roles for Channel users are two ways that ISEEK Solutions might build personalized paths through HealthCare Channel content.

Web Portals

Using a Web portal strategy is one way that Website writers and designers can resolve

multiple-audience problems. Web portals channel content to specific audience roles using

the audience segregation and audience design techniques discussed by Fleming. Academic

institutions such as Big-Ten universities often use this strategy since they have a multitude

of distinct audiences (employees, faculty, and students) for their Websites. Yet based on

my review of Web portal literature, the definition of these portals is somewhat unclear,

perhaps because portals are a fairly new concept in Internet technology. For example, one

group of researchers went so far as to provide a standard dictionary definition of a portal

(Shepherd et al. 1); another researcher considered portals synonymous with commercial

Internet service providers such as America Online (Stalder 1). However, researchers are in

agreement about the fundamental purpose of portals: to communicate effectively to a

Website's multiple audiences by separating these audiences and presenting personalized

content for each.

Web portals evolved from search engines during the rise in electronic services (e-services)

(Zirpins et al. 502). According to Zirpins et al., integrating the portal concept with

e-services can streamline the process of shopping for e-services. They illustrate one such

integration effort with their discussion of a portal research project at the University of

Hamburg, the Gibraltar portal, which integrates e-services at that University. Zirpins et al.

suggest that a key feature of portals is that they can be customized both functionally and

superficially (for example, personal home pages) by Website users. Generally, there are two types of portals: horizontal or consumer portals and vertical portals or "vortals."

Horizontal or consumer portals serve as universal entry points to the Internet and are typically hosted by Internet service providers and large search engines (Zirpins et al. 501). These portals include searching capabilities, Web catalogs, messaging services, news, online shopping, and the creation of home pages. Vortals offer content services for a specific community or domain. They are often focused at consumers with specific tasks, people at certain locations, or communities with individual interests. One special kind of vortal—an Enterprise Information Portal (EIP) or corporate portal—integrates data and services for employees and customers of a corporation. There are also two kinds of EIPs: business portals and knowledge portals. The former are for consumers who wish to access an aggregate of related companies; the latter are business-to-business portals that enable information exchange. Yet another subclass of vortals is intranets, and an even more recent kind of vortal is an industry portal, such as the Gibraltar portal. Furthermore, a concept of the portal is the portlet, which Oracle Corporation introduced in 1999. Portlets are small portals that simultaneously offer services different from those offered by the larger portals of which they are a part. To the Website user's view, these portlets usually look like small, independent windows that can be resized or closed (Zirpins et al. 502).

Horizontal portals can further be distinguished from vortals using technological terms (Strauss 2000). Horizontal portals are used by commerce and are usually designed around

customization, which is the tailoring of Website content to audience or user roles with technologies such as cookies; vortals are used by large non-commercial institutions such as universities and are usually designed around personalization, in which the user defines his or her view of a Website. And according to Strauss, there are several features that portals must possess in order to be considered official portals: (1) personalization, which are users' abilities to tailor Website information to their needs; (2) search capabilities; (3) channels which are personalizable windows of information or applications that exist within the larger portal; and (4) links to other resources. For academic vortals, Strauss suggests these features in addition to the first four: (5) customization: the portalling software's tailoring of the Website content to different user roles using cookies; (6) role-based models and workflow; and (7) links to communication tools such as chat, message boards, and so on.

A quick review of the main pages of Big-Ten University Websites reveals that all implement at least a few of Strauss' seven portal features. Of particular interest is Michigan State University's Website, which lets users personalize their roles and the appearance of the Website's home page. ISEEK Solutions might similarly consider a Web portal approach for the HealthCare Channel. This approach might attract and retain the Channel's multiple audiences. The term *portal* might also suggest a more appropriate metaphor for characterizing the Channel's content: a doorway to personalized healthcare career information.

TRUST

Ancient rhetorical ideas about *ethos* (or the credibility or trustworthiness of a communicator) were based on speech, but contemporary research in rhetoric and human factors focuses on the importance of trustworthiness in computer-mediated environments. In this section, I look at a portion of this literature to get a better understanding of how people trust or distrust computer-mediated communication and computer technology such as interfaces and Websites. I find the notion of trust in Websites particularly useful for my analysis of the HealthCare Channel, which misses several opportunities to establish its trustworthiness with Channel users. To provide context for this discussion of trust, I first review literature on trust in interpersonal relationships.

Trust in Interpersonal Relationships

Several researchers have examined trust and theorized how it grows within interpersonal relationships (Giffin 104; McCroskey & Teven 90; Rempel et al. 95; Hwang & Burgers 67). Giffin defines trust as "reliance upon the characteristics of an object, or the occurrence of an event, or the behavior of a person in order to achieve a desired but uncertain objective in a risky situation" (105). After a thorough review of literature on trust in interpersonal relationships, Giffin finds the following five dimensions of trust between communicants: expertness, which is the knowledge, skill, or valid judgment related to the topic of discussion; reliability as an information source through dependability, predictability, or consistency; intentions towards the listener; dynamism, which are active communication skills by the speaker; and personal attraction of the

speaker to the listener (107). These dimensions of trust form the backbone of the research on trust in interpersonal relationships and computer technology that I discuss in this section.

Of Giffin's trust dimension of intent, McCroskey and Teven suggest goodwill, which is a communicator's intent toward his or her audience. They suggest from a rhetorical perspective that goodwill is one of the three elements of a speaker's *ethos* (along with intelligence and character) which has been left out of Giffin's credibility considerations (McCroskey & Teven 90). Within the trust dimension of goodwill there are three elements: understanding, which is knowing another person's ideas, feelings, and needs; empathy, which is a person's identification with another person's feelings; and responsiveness, which is a person's acknowledgement of another person's communication (McCroskey & Teven 92).

McCroskey and Teven study goodwill along five elements—believability, likeableness, trustworthiness, competence, and ethos/credibility—and conclude that goodwill is strongly associated with the other dimensions of credibility, particularly competence and trustworthiness, and goodwill is a good predictor of a communicator's believability and likeableness (101).

Other researchers define trust as confidence in the predictability of one's expectations and another's goodwill (Hwang & Burgers 67). Based on an analytical model, Hwang and

Burgers make several assertions about the nature of trust in interpersonal relationships: trust is necessary for cooperation, but it cannot guarantee cooperation; trust supports cooperation through easing two types of risks (risk of being victimized and risk of losing a trustworthy partner); full trust eliminates all fear, but not all greed; there is a point at which trust is neutral in influencing fear; fear grows faster than greed as trust decreases; fear and greed are equal when trust is at a midpoint; and greed is greater than fear when trust is above its midpoint (pp. 70 - 71). And based on the assertions of their model, Hwang and Burgers conclude that there is an element of trust in every transaction; even full trust cannot guarantee cooperation; trust eases fear, and full trust eliminates all fear; and trust helps control greed, but full trust does not eliminate all greed (pp. 71 - 72).

Trust in Computer-Mediated Communication

Trust can grow over time in relationships facilitated by computer-mediated communication. In their study, Walther and Burgoon found that computer-mediated groups' communication improved to nearly that of face-to-face groups. Walther and Burgoon suggest that much of the cues-filtered-out research that holds that computer-mediated communication is limited in its potential for relational communication is off the mark; rather, these limitations have more to do with conditions and the communicants themselves (54). Walther and Burgoon offer a social information-processing perspective that suggests short-term computer-mediated communication limits relational aspects, but longer-term exchanges allow communicants to develop interpersonal knowledge and stable relationships (55). The underlying assumption in their study is that the verbal and

textual behavior of computer-mediated communication can convey relational meanings. For verbal and textual behaviors, Walther and Burgoon find several: immediacy/affection; receptivity/trust; composure/relaxation-arousal; formality-informality; dominance/inequality-submissiveness/equality; and similarity/depth (56).

For receptivity/trust, Walther and Burgoon note in a previous study by Short and colleagues in 1976 that trust was low in initial computer-mediated communications. As relationships grew out of these communications, however, trust increased (62). Similarly, Walther and Burgoon's study bears this out: computer-mediated communication groups increased in receptivity/trust over time until their levels of trust matched that in face-to-face groups. To summarize, Walther and Burgoon state,

> [A] social information-processing perspective appears to explain the results more effectively: When computer-mediated communication and face-to-face groups are allowed to continue over time and accumulate numerous messages, this continuity has significant effects on groups' relational communication, and social penetration effects occur. (77)

Interestingly, Walther and Burgoon found that task-social computer-mediated communication exchanges were more social than in face-to-face groups. This sociability may exist because computer-mediated communication participants communicate at their leisure when they have thought out their messages, unlike their face-to-face peers; another explanation may be the extra efforts that computer-mediated communication participants expend to reduce uncertainty (Walther & Burgoon pp. 78 - 79).

Trust in Computer Technology

People may trust or distrust computer technology in much the same way they do other people. Lerch and Prietula conducted a study of the levels of trust (that is, the levels of predictability and dependability but not faith as taken from Rempel et al.'s study) in human experts, human novices, and a computer expert system to ascertain whether people trusted these sources differently.

Lerch and Prietula found that people may initially trust computer technology more quickly than they do other sources. For example, the users of the computer expert systems supplied their confidence (predictability) and agreement (dependability) more quickly than they did to other sources (Lerch & Prietula 417). They speculate that this quickness to trust computer technology may be so because users have a much less rich knowledge or sparsely developed schema of that source, and so they are able to make faster decisions. This quickness to trust has also been identified by Jarvenpaa and Leidner in their research on global virtual workgroups (1). Lerch and Prietula further also found that expert system users had levels of confidence equal to their confidence in human novices, but once unplanned errors occurred in the system, their confidence plummeted. Agreement factors, according to Lerch and Prietula, seemed to be based on specific problems, and confidence levels were influenced by past agreement levels (418).

Trust or distrust of computer technology is highly individualized. Tseng and Fogg posit that trust comes from users' perceptions of computer technology, not from the inherent

trustworthiness or untrustworthiness of the technology itself (40). For example, less expert users of computer technology tend to trust this technology more, whereas expert users are often more skeptical of the technology regardless of its actual expertness. Tseng and Fogg suggest that these qualities influence users' perceptions of the credibility of computer technology: (1) user expertise—those less experienced with a technology are more likely to trust it; (2) user understanding—one study suggests that more knowledge decreases credibility, while another suggests that more knowledge increases credibility; and (3) user need for information—those with greater need for information tend to trust technology more, and those in unfamiliar situations find information more credible (pp. 43 - 44). In a different study of users' perceptions of computer advice, Wærn and Ramberg found that these perceptions were related to users' initial attitudes towards computers as well as their experience of computer advice (26).

According to Tseng and Fogg, the credibility of computer technology is really a measure of two things: trustworthiness, which relates to the perceived goodness or morality of the source, and expertness, which is the perceived knowledge and skill of the source (40). Particularly, Tseng and Fogg list these seven situations in which the trustworthiness and expertness of computer technology is crucial: (1) when computers act as knowledge repositories; (2) when computers instruct or tutor users; (3) when computers report measurements; (4) when computers report on performed work; (5) when computers report on their own state; (6) when computers run simulations; and (7) when computers render virtual environments (pp. 40 - 41). Furthermore, Tseng and Fogg define four sources of

credibility: presumed, credibility based on the perceiver's notions, stereotypes, and assumptions; reputed, credibility based on the perceivers knowledge of what third parties say about the source; surface, credibility based on an initial inspection; and experienced, credibility based on person's first-hand experience.

Interestingly, Tseng and Fogg found that the size of mistakes made by computer technology is not proportional to the loss of credibility these mistakes cause. That is, whereas large mistakes cause a greater loss of credibility, small mistakes nonetheless have a strong influence on the perception of the technology's credibility (Tseng & Fogg 43). To regain lost credibility, Tseng and Fogg recommend that the technology must provide good information over time, or it must continue to make the same error so that users can anticipate it and work around it.

Many researchers believe that trust or distrust of computer technology can be measured (Swenson et al. 1; Bailey et al. 1; Kim & Moon 1). For example, Bailey et al. construct a matrix of trustworthiness sources and dimensions which they use to analyze the overall trustworthiness of three large e-commerce Websites: Ebay, Amazon.com, and Priceline.com. They elaborate on Tseng and Fogg's sources of trust by defining them as presumptions, which produce trust through general beliefs or levels of confidence that occur in the absence of doubt; surface inspection, which produces trust through a first impression of the interaction; experience, which produces trust through repeated interactions with the same site; and institutions, which are third parties such as governing

bodies, friends, or colleagues who provide positive recommendations (Bailey et al. 3).

From these sources of trust, they identify several dimensions: attraction, the physical

attractiveness of the site; dynamism, additional communication provided by the site

through oral, written, or visual means; expertness of a site's skill, ability, or knowledge;

faith that a site will fulfill its obligations; intentions of a site based on its perceived goals

and objectives; localness of a site's ideals, beliefs, values, or geography; and reliability of

a site's dependability, predictability, or consistency.

Other researchers who have measured the trustworthiness of computer technology are

Kim and Moon, who empirically studied the emotional appeal of computer banking

interfaces. They note the significant social roles of these interfaces:

> People not only regard the computer as a medium for interaction
> with other human beings, but also respond directly to the computer
> itself. In other words, people behave as if the computer were a
> social actor, even though they know that the machine does not
> actually possess human feelings. (2)

According to Kim and Moon, the emotion of trustworthiness is one of the most important

factors for completing commercial transactions, and emotions play an important and

understated informative role when completing transactions with interfaces: that is, these

emotions limit users' reasoning to choices that produce only positive feelings (4). Kim and

Moon compare interfaces to film, a strongly emotion-producing medium, and suggest that

interfaces can similarly influence emotion. But trustworthiness is also closely associated

with other feelings related to attractiveness, simplicity, elegance, and symmetry. This

explains why the users of the computer banking interfaces studied by Kim and Moon preferred three-dimensional clipart covering half of the screen's size and cool pastel colors of low brightness used symmetrically (17).

In another example of how people treat computer technology as social actors, Miller argues that tests such as the Turing test, which is used to gauge the human-like intelligence of computers, is really a test of rhetorical *ethos* in which communicators strive to establish the character and, thus, the trustworthiness, of computer technology (Miller "Ethos Online" 4). Miller describes the Turing test by noting what Sherry Turkle calls the "Eliza Effect," which is the human tendency to anthropomorphize computer technology and in so doing to credit it with more intelligence than it really possesses (10). People, according to Turkle, readily treat computers as social actors and in so doing take things at "interface value."

People may be hard-wired to anthropomorphize software interfaces. For example, researchers such as Nass and colleagues have found that human attributions can be made about software interfaces with even the subtlest of social cues (Miller "Ethos Online" 12). And according to Nass and Steuer, people need only be sufficiently cued that a computer technology is an independent social actor in order to attribute human-like qualities to it. According to them, there are four characteristics to such cues: language use; interactivity; the technology's function in a social role; and human-sounding speech (Nass and Steuer 508).

Because of the readiness by which people treat technologies as social actors, researchers suggest that efforts to construct human-like depictions of artificial intelligence are unnecessary. They further argue that the level of a technology's expressiveness might not indicate whether people will accept it, since even the slightest positive expressions can create a "persona effect" in which people will make positive attributions to the technology (Miller "Ethos Online" 13). And people furthermore tend to idealize their own presentations in computer-mediated communication, which is why some researchers suggest that highly personal (or "hyperpersonal") relationships can form online.

Miller agrees with scholars such as Nass who suggest that people really do not anthropomorphize computer technology but rather determine the character of the technology or *ethopoeia* (17). And, according to Miller, it may be an inescapable part of our human nature to anthropomorphize computer technology:

> Just as it is human nature to make tools to use language, it is our nature to simulate: to imitate, represent, construct, infer. And insofar as the direct exchange of meanings is impossible, it is our condition that the simulations of language are all we have to create a social world. (21)

ONLINE COMMUNITY

An online community is simply a social network whose members use computers for communication rather than speech (Andrews et al. 1). In this section, I discuss Internet users' expectations of these communities, unique features of online communities, their changing nature, and research into groups that resist them. I consider the idea of online community particularly useful for my analysis of the HealthCare Channel, because ISEEK Solutions and Barr have done little to encourage Channel users to meet, to communicate with one another, or to form social bonds.

Internet Users' Expectations of Online Community

Scholars argue that Internet users expect much more than information or material goods from their explorations of the Internet (Sproull & Faraj 35; Werry pp. 1 - 2). Rather, Internet users—particularly those who participate in bulletin boards or newsgroups—seek support, affiliation, and community (Sproull & Faraj 36). These Internet users may be seeking the elements that Miller argues are missing from contemporary social and political life: commitment, connectedness, solidarity, meaning, and significance (Miller "Rhetoric and Community" 83). And although Sproull and Faraj argue that an information-seeking view of the Internet predominates and influences policy decisions about the Internet, the community-focused view they propose calls for policies that encourage communication, community and democracy, and self-governance (Sproull & Faraj pp. 47 - 48; Valauskas 7). Such a community-focused view allows scholars to focus on the interactions

that create communities, or on social networks, rather than on the geographic places where communities are formed (Jones 10).

Online communities, such as computer networks, can strengthen social connections by fostering dialogue and deliberation and enhancing the bonds of trust, reciprocity, and connectedness that make up social capital (London 2). And some community-based Websites may even bridge and bond physical communities to virtual communities (Glogoff pp. 2 - 3). Vaughan and Schwartz confirm the intimacy of community-based Websites, discussing their own experiences with creating such a site (588).

Unique Features of Online Communities

Social networks or online communities are unique because, unlike traditional communities, they do not take up specific physical locations, and they are strongly symbolic in that their participants infuse them with meaning (Fernback pp. 214 - 215). However, like traditional communities, online communities are similarly nourished through language, ritual, history, and rules. Also, these communities support varying degrees of connectedness (Wellman 179); in fact, scholars have suggested that the Web may be ideal for supporting medium-strength ties between participants who do not meet in person (Wellman & Gulia 185).

The kinds of communication and identity formation that occur in online communities are special. For example, Baym argues that Usenet participants build community by using

new forms of expression, experimenting with public identity, developing relationships, and creating behavioral norms (138). Similarly, Turkle has studied how multiple-user domain (MUD) participants experiment with identity and form relationships (180). And Reid's study of MUDs supports these findings, as well. She suggests that MUD participants use computer-mediated communication in conventional and inventive ways to engage in virtual worlds and to define their places in them (107).

Changing Nature of Online Communities

Within online communities themselves, researchers may be seeing a few important changes. Whereas the earliest literature on computer-mediated communication focused on the fairly remote immersive communities of MUDs and MOOs, more contemporary online communities are Website-based and easier to find and to use (Preece 80). Furthermore, online communities themselves have become a permanent fixture in many Americans' lives. For example, in the 2001 poll of Internet users for "Online Communities," eighty-four percent of users claim that they have contacted an online group or gathered information about an online group (Horrigan et al. 2). Groups most popular with these online community seekers are trade associations/professional groups and shared interest/hobby groups (Horrigan et al. 20).

Groups That Resist Online Communities

Despite the growing popularity of online communities, not all Internet users may join them. Many users are reluctant to interact with those they have not met in person (Andrews 64; Andrews et al. 1). One such group is mid-life career changers, who use the Internet avidly for email and online information gathering but hold back from online community-building technologies like chat, message and bulletin boards, and listservs because of their strong distrust of these tools, concerns about privacy, beliefs that the Internet is inappropriate for forming relationships, and prior negative experiences with online forums. Unfortunately, Andrews and colleagues feel that this particular group has much to gain from online communities, including focused information, empathetic support from peers, and career advice from experts.

To reach resistant groups, Andrews builds a conceptual framework for starting online communities, encouraging early online interaction in these communities, and transitioning communities to self-sustaining environments (65). Her framework is built on her and her colleagues' earlier study of mid-life career changers' expectations of online communities. Specifically, Andrews suggests that in order to start online communities with resistant groups, Website designers ought to build their reputations through alliances with established groups, deliver focused content, and hold face-to-face outreach events (Andrews et al. 5).

In order to encourage interaction, Website designers should write policies that anticipate resistant groups' concerns for privacy, security, and discussion group rules and netiquette; implement technologies that guarantee privacy such as remailer email addresses that allow online community participants to communicate with one another without disclosing their real addresses; interweave Website content and discussion through the use of visible moderators and links deep into Website content; design member directories that allow participants to network with others anonymously; hold virtual conferences and meetings; and provide incentives for participants' volunteerism by allowing them to moderate discussion groups and create community policies and practices (Andrews 67). In order to allow online communities to develop into self-sustaining environments, Website designers should allow private discussion groups, encourage information sharing, and start recognition programs for volunteers (Andrews 68).

The research of Andrews and colleagues may be particularly useful for the HealthCare Channel, which has a primary audience (career changers) that may have similar reservations about online communities.

WEBSITE EFFECTIVENESS FEATURES

I reviewed literature on Website communication features for the online genres of distance education and career development to better understand which of those features might reach the HealthCare Channel's multiple audiences. This approach was modeled after that of Gurak et al., who used genre theory to ascertain the specific features that made children's advocacy Websites effective in reaching their audiences (1-2). After categorizing most Websites into three main genres or rhetorical purposes of distance or online education, online social action, and e-commerce, they conducted an extensive literature review of empirical Website studies within those genres. I combine their effectiveness features for the genre of online education with features I found for the new genre of career development Websites. Doing so allows me to build a comprehensive list of features that spans those genres and reflects the rhetorical purpose of the HealthCare Channel: to educate Channel users about careers in healthcare. The idea of effective HealthCare Channel content might be especially useful for ISEEK Solutions since the Channel misses opportunities to engage the emotions and interests of its users.

Effective Communication Features of Online Education Websites

Gurak et al. found and ranked the following effective communication features for online education Websites. The rank indicates the number of times a particular feature was mentioned in their extensive literature review of empirical studies.

Table 5. Effective Features of Online Education Websites
(taken from "The Effectiveness of Children's Advocacy Websites")

Effective Features	Rank
Interactivity (for example, two-way communication with other students, video, audio, and quizzes) with feedback (grading, surveys, guest books, comments forms, and email responses)	10
Perceived infrastructure (for example, user friendly) and technical support	9
Collaboration	8
Instructor's and student's technical competency/prior experience with computer-mediated communication	8
High quality content of lectures, CD-ROMs, and so on	6
Lends to convenience, efficiency, and autonomy	5
Constructivist mindsets instructors and students have about learning	4
Fun/enjoyment	3
Instructor's involvement and human-emotion skills	3
Supports both synchronous and asynchronous communication	3
Attractiveness of interface/graphics	1
Clear need for computer-mediated communication	1
Explicit and rigorous structuring of assignments	1
Participants know one another or have met	1
Participants understand and are permitted to negotiate the tasks of the course	1
Small group size of participants	1
Student access to computers/technology	1
Student shared purpose	1

Effective Communication Features of Career Development Websites

Career development Websites deliver information to remote areas and allow communication between career development professionals and information seekers (Sampson & Lumsden 22). Particularly, these sites improve users' access to assessments, instructional resources, and career counseling; allow discreet, anonymous information browsing; allow career development professionals to supplement the information and services they can provide their clients; and decreases costs of accessing information.

Unfortunately, users of these Websites often consider Web-based assessments as valid as traditional, face-to-face assessments. And because some assessment takers are more savvy with computers and Internet technologies than others, these assessments have the potential of becoming technological skills tests. Furthermore, Web-based career development, when compared to more traditional sources of print materials and non-Web computer-assisted career guidance systems, offers little to no personal guidance and support, is harder for users to assess in credibility, may not address users' emotional needs, and can overwhelm users with too much information (Robinson et al. 40 - 41). Yet researchers still believe that these Websites offer more than print-based and non-Web computer-assisted alternatives and are unique in their ability to deliver career information for specific audiences in an engaging multimedia format. I conducted a review of academic business journals to ascertain effective communication features of these Websites. The results of my review are shown in Table 6 on the next page.

Table 6. Effective Features of Career Development Websites[1]

Effective Features	Rank
Career planning information (assessment tests, occupational information, career exploration, and career decision making)[2]	3
Career information (employment trends, education, employers, job hunting)	2
Ask an expert / online career counseling	2
Newsgroups / bulletin boards	2
Resume posting and interview services	2
GIS (information on local crime, schools, health services, and so on)	1
Services for special workplace populations (for example, women, African Americans, disabled people, gays and lesbians)	1
Listservs	1
Virtual job fairs	1
Salary surveys	1
Quizzes	1
Three-dimensional graphics	1
Multimedia (audio and video)	1
Presentations	1
Animations	1

1. The literature I reviewed for the above effectiveness features came primarily from the Winter 2000 issue of the *Journal of Career Assessment* (Gore & Leuwerke pp. 11, 12; Robinson et al. pp. 40 - 45; and Sampson & Lumsden pp. 31 - 34) and the *Journal of Employment Counseling* (Kirk pp. 149 - 157).
2. Sampson and Lumsden discuss the ethical issues involved with assessment tests. These issues are reliability and validity of career assessments; individuals' readiness for career assessment; equity of access; and confidentiality and privacy (23).

Conclusion

In this literature review, I concentrated on the topics of multiple audiences, online community, communication strategies such as strategic ambiguity, layering, and Web portals, trust in computer technology, and Website effectiveness features. Each of these topics relates directly to redesign recommendations for the HealthCare Channel, which I discuss in section five starting on page 94. In the next section, I discuss the questionnaires I created based on my literature review.

SECTION FOUR: QUESTIONNAIRES

I distributed two questionnaires to HealthCare Channel users. The first was a paper- and email-based questionnaire given to Health Education-Industry Partnership (HEIP) Council members and University of Minnesota faculty; the second was a Web-based questionnaire given to HealthCare Channel end users. The former questionnaire gathered HealthCare Channel planners' opinions about the overall quality of the Channel and their thoughts on the primary and secondary audiences of the Channel; the latter questionnaire gathered end users' perspectives on the usefulness of the Channel to their needs. In particular, I wanted to know whether Channel end users who identified as either career changers or new healthcare professionals desired more community-building features from the Channel.

Questionnaire of HEIP Council Members

Many of the sixty-three HEIP Council members I surveyed were involved with the initial planning of the HealthCare Channel one year prior as a part of the Joint Applications Development (JAD) team. My reason for surveying these members was threefold: (1) to gather their opinions about the HealthCare Channel and to further guide my research, (2) to introduce my project, and (3) to distribute bookmarks that they in turn could distribute to HealthCare Channel end users I additionally wanted to survey. I had three approaches for distributing the questionnaire. First, I held initial face-to-face interviews with University of Minnesota faculty in February 2002 in which I posed questions and passed out consent forms. Second, I distributed paper questionnaires and consent forms to HEIP Council members during one of their regular meetings held on Thursday, March 14 in
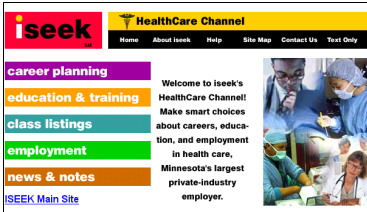
Bloomington, Minnesota. Last, because attendance was low at the March 14 meeting, I

sent an email version of the questionnaire to non-attending HEIP Council members.

Paper-based and email-based survey tools are shown in the following three figures. Using

these tools, I received fifteen responses, which are discussed over the next several pages.

Figure 3. Paper-Based Questionnaire of HEIP Council Members

Figure 4. Bookmarks Given to HEIP Council Members

Figure 5. Consent Form for Paper-Based Questionnaire

Dear HEIP Partnership Council member,

Greetings! I am a graduate student who is working with iSeek Solutions on redesign recommendations of the HealthCare Channel Website (http://www.iseek.org/healthcare/). You are invited to take a short, five-question survey pasted into the body of this email message. This survey is part of a larger study of the HealthCare Channel and is intended to gather your opinions about the Channel. You were selected as a survey participant because of your affiliation with iSeek Solutions and your expertise in the educational and/or healthcare professions. To take this survey, click the Reply button in your email software. Then, answer the following questions by editing the text of this email message. Your completed survey emailed to me indicates your consent to be a part of this study. Please rest assured that no identifying information will be gathered about you, and that your responses will be anonymous and analyzed in aggregate form only as a part of my Master's thesis project.

In the next few days, you will receive 20-40 bookmarks in postal mail. Please feel free to distribute these bookmarks to end users of the HealthCare Channel, particularly those who are considering a career in healthcare or those who are just starting healthcare careers. These bookmarks encourage end users of the HealthCare Channel to take a Web-based survey that will go live on the Channel in April.

SURVEY QUESTIONS

1. Briefly describe your involvement with the HealthCare Channel.

2. What are your impressions of the HealthCare Channel?

3. Who is the audience of the HealthCare Channel? If possible, indicate who you think is the primary audience and who you think is the secondary audience.

4. How accurately do the following statements match how you feel about the HealthCare Channel? Make only one selection for each statement.

a. "I feel that information on the HealthCare Channel is accurate." AGREE or DISAGREE

b. "I feel that information on the HealthCare Channel is well-organized." AGREE or DISAGREE

c. "I feel that information on the HealthCare Channel is easy to find." AGREE or DISAGREE

d. "I feel that information on the HealthCare Channel is compelling/engaging." AGREE or DISAGREE

5. If you had to rate the quality of the HealthCare Channel on a scale of 1 (lowest) to 5 (highest), what would you give it?

1 (lowest) 2 3 4 5 (highest)

Thank you for taking this survey!

Sincerely,

Louise Briggs
Graduate student
University of Minnesota
Department of Rhetoric

Figure 6. Email-Based Questionnaire of HEIP Council Members

Questionnaire Responses

1. Describe your involvement with the HealthCare Channel.

Response one	I do very little with the HealthCare Channel.
Response two	Brief, my tenure has been short.
Response three	I just looked at it for the first time today... maybe 10 minutes of browsing.
Response four	[I was] part of the original design team.
Response five	Through HEIP
Response six	[I was] member of the Joint Application Group [JAD team] that helped to develop iseek.org for healthcare
Response seven	None. I am involved with healthcare professionals already well established in their careers. They are attempting to advance their careers, thus know where and why they are going to school.
Response eight	I was part of a review team [JAD team] that gave feedback to the site
Response nine	I have surfed the site a few times to be familiar with its contents. [I] would like to use it as an information tool for the career awareness website being designed at Mayo.
Response ten	[I] helped organize the JAG committee [JAD team]. I urged iSeek to create the HealthCare Channel. I use it frequently. [We] have a link to it on our website.
Response eleven	I was part of the ISEEK healthcare Webpage design team [JAD team]. I continue to refer individuals to this site to review and research healthcare information.
Response twelve	I know of the HealthCare Channel through my work with the U of M's career center, which does Web-based advising
Response thirteen	I have been using information from their site for a few months
Response fourteen	Not involved—work for the U of M
Response fifteen	I was a member of the team [JAD team] who worked on the high school content of the [HealthCare] Channel

2. What are your impressions of the HealthCare Channel?

Response one	I believe it is a very informative site and fairly easy to navigate. I'm probably a poor judge though as I'm not a user so it would be more important that it meet the needs of younger people who are more in the need for the site.
Response two	It has potential...
Response three	It's got a lot of stuff about how to apply, how to look good, how to write a resume, etc. It took me a while to figure out how to find actual job listings. It seems like that the "openings" are what people would be looking for, rather than suggestions about looking in the paper... The search engine than allows you to search within a 5- 10- or 25-mile radius of your home is a good idea. Figuring out how to search for nursing home aide was more complicated, a two stage search. But I suppose that the nomenclature in health care is so complicated that this is a good solution.
Response four	Much quicker to get info on as compared to whole ISEEK. Still not personal to local community.
Response five	It has impressive functionality, but is inadequate in the content areas related to health careers. The information is not current, is stereotypical, and is not customized to Minnesota needs
Response six	Distilled version of ISEEK—needs more channel appropriate content
Response seven	None. Access to ISEEK isn't something I have found a need for—? Perhaps the marketing hasn't convinced me if it would be useful.
Response eight	Very positive. I've frequently directed others to it as a resource.
Response nine	I have not looked at it in a while, but I remember my first impressions were positive, very informative
Response ten	Big help in organizing the data and making it easier to use
Response eleven	Very happy it exists. This is a service we need in Minnesota. One-stop shop.
Response twelve	Shocked by the incorrect information on the HealthCare Channel (for example, occupational descriptions such as the one for pharmacists who are said to 'distribute drugs.' Information is not divided up by career and some occupations are missing altogether.
Response thirteen	Pharmacy occupation description is lacking. I don't understand how the HealthCare Channel information is updated, who owns it, or what purpose it serves.
Response fourteen	General information is good. The look and feel is nice. I don't like some of the functionality (having to check things off).
Response fifteen	Too much information all at once

3. Who is the audience of the HealthCare Channel? If possible, please indicate who you think is the primary audience and who you think is the secondary audience.

Response one	I would think that the primary audience would be high school students looking for a career to those in the[ir] 60s who are looking for a new employer, new careers, or information about health care occupations.
Response two	Primary audience may be non-traditional learners and job seekers (not degree track). Secondary audience will be to provide access via other portals (possibly also re-usable learning objects) or from other job services.
Response three	People looking for a job are number one; Employers seeking new employees are number two.
Response four	Primary: job or career changers, high school [students], general seekers.
Response five	This is the important question—currently the site is attempting to serve too many audiences, as a result, [it] is serving none of them well
Response six	Good question. [This is] unclear. This is something we struggled with defining. Ideally, the audience is broad, but most likely just serves the general ISEEK user.
Response seven	Those seeking initial entry into healthcare careers
Response eight	Primary: those seeking career and related educational info. Secondary: schools and educators.
Response nine	Primary: adults looking for change or advancement. Secondary: would like to see it used for high school students.
Response ten	Primary: students K-12, workforce centers, college and university staff and students. Secondary: healthcare industry, regular folks thinking about going back to school or a new job.
Response eleven	Primary: career seekers, adults, students, teachers, counselors. Secondary: industry, [those] seeking additional information such as trends, searching school info.
Response twelve	Who knows? This is not a priority for us [U of M]. The focus should be on students who want preparatory information for getting into medical schools.
Response thirteen	I cannot tell. Maybe this is because of a lack of ownership.
Response fourteen	Adults thinking about jobs in healthcare. People changing careers. K-12 students.
Response fifteen	Each audience is of equal importance. Who are the primary users? I believe job seekers. This group can be broken down into adults and 9 through 14 grades.

4. How accurately do the following statements match how you feel about the HealthCare Channel?

a. I feel that the information on the HealthCare Channel is accurate.

Response one	Agree
Response two	Agree
Response three	Agree
Response four	Agree, but needs constant update
Response five	Disagree
Response six	Agree and Disagree. I'm somewhere in the middle. More review of occupational info is needed by people in the healthcare field.
Response seven	No comment
Response eight	Agree
Response nine	Agree
Response ten	Disagree somewhat. Needs updating on occupational descriptions.
Response eleven	Agree
Response twelve	Disagree. Not accurate for professions in academic health or for pharmacists, which is now considered a clinical position. Registered nursing at the U of M is not represented on site, and nursing information could be misleading (for example, transfers into the U of M's nursing program).
Response thirteen	No comment
Response fourteen	Agree, except for data on education/training
Response fifteen	Agree

4. How accurately do the following statements match how you feel about the HealthCare Channel?

    b. I feel that the information on the HealthCare Channel is well-organized.

Response one	Agree
Response two	Agree
Response three	Agree, pretty well organized, but seems there's a lot of extraneous stuff in there.
Response four	Agree
Response five	Disagree
Response six	Agree
Response seven	No comment
Response eight	Agree
Response nine	Agree
Response ten	Agree
Response eleven	Agree
Response twelve	Disagree, but it has potential
Response thirteen	Disagree. Information needs to be kept up to date.
Response fourteen	Agree
Response fifteen	Disagree

4. How accurately do the following statements match how you feel about the HealthCare Channel?

    c.   I feel that information on the HealthCare Channel is easy to find.

Response one	Agree
Response two	Agree
Response three	Disagree
Response four	Agree
Response five	Disagree
Response six	Agree
Response seven	No comment
Response eight	Agree
Response nine	Agree
Response ten	Agree
Response eleven	Agree
Response twelve	No comment
Response thirteen	No comment
Response fourteen	Agree
Response fifteen	Disagree

4. How accurately do the following statements match how you feel about the HealthCare Channel?

d. I feel that information on the HealthCare Channel is compelling/ engaging.

Response one	Agree except for the news which is not kept current. Most current postings are 12-01
Response two	Disagree
Response three	Disagree. Not compelling exactly, but pretty clean-looking. Some of the print—on the left-hand column—is way too tiny for my monitor.
Response four	Disagree
Response five	Disagree
Response six	Disagree
Response seven	No comment
Response eight	Agree
Response nine	Agree
Response ten	Agree and Disagree—neutral
Response eleven	Agree
Response twelve	Agree. It has improved; it has potential
Response thirteen	No comment
Response fourteen	Agree
Response fifteen	Agree

5. If you had to rate the quality of the HealthCare Channel on a scale of 1 (lowest) to 5 (highest), what would you give it?

Response one	4
Response two	3
Response three	2
Response four	4
Response five	2
Response six	4
Response seven	3
Response eight	4
Response nine	4
Response ten	4
Response eleven	4
Response twelve	3
Response thirteen	1-2
Response fourteen	2
Response fifteen	3
Median response	**3**
Modal response	**4**

Questionnaire Analysis

Of the sixty-three questionnaires I sent to HEIP Council members, I received fifteen for a response rate of twenty-four percent. Of these fifteen responses, six respondents mentioned that they took part in the original JAD sessions that planned the HealthCare Channel's content. In general, respondents had positive overall impressions of the HealthCare Channel (eight positive responses) rather than negative impressions (six negative responses). Interestingly, respondents varied in their answers for whom they felt were the primary and secondary audiences of the HealthCare Channel. For example, while most responded that career changers, kindergarten through twelfth grade students, and job seekers were members of the primary and secondary audience, three responded that they were not sure whom these audiences were. Perhaps this uncertainty reflects their lack of knowledge of the popular writers' terms (primary and secondary audience) I thoughtlessly used, but more likely these three respondents were truly uncertain. One respondent's comment suggests as much: "Good question. [This is] unclear. This is something we struggled with defining. Ideally, the audience is broad, but most likely just serves the general ISEEK user."

Despite the uncertainty of some respondents, the most common primary audience responses were job seekers, followed by career changers, and then kindergarten through twelfth grade students; the most common secondary audience responses were kindergarten through twelfth grade students followed by career changers. Furthermore, with nine responses of agreement, HEIP Council members felt that Channel content is accurate. In

addition, they agreed even more strongly that this content is well organized (ten responses of agreement). In general, Council members also agreed that Channel information is easy to find (nine responses of agreement), and that this information is compelling and engaging (seven responses of agreement). Last, Council members consider the Channel to be of average to slightly above average quality. For example, the median score was 3, where three is average quality, and the modal response was 4.

Questionnaire of HealthCare Channel End Users

I created a Web-based questionnaire using ISEEK Solutions' Web-based survey tool by *RightNow Metrics*[®], a software interface that creates simple HTML surveys and generates the Common Gateway Interface scripts that collect survey responses. I used the questionnaire to assess three predictions discussed on the next page.

Research has shown that response rates to Web-based questionnaires can be as low as eight to nine percent and that such questionnaires may be appropriate for very specific and hard-to-reach populations only (Smith 11; Gurak et al. 9-2; Coomber 1). In addition, response rates are low despite the fact that those who prepare them often send email invitations with embedded questionnaire links to potential respondents, which encourages easy and fast participation. ISEEK Solutions does not solicit individual Channel users, so I could not rely on email invitations to encourage participation. Rather, I had to hope that Channel visitors would notice the link to the questionnaire on the Website and choose to participate. To increase the odds that Channel users would complete the questionnaire, I did three things. First, I had the questionnaire posted to both the main iseek.org Website and the HealthCare Channel; second, I left the questionnaire up for a full month; and third, I sent out questionnaire invitations in the form of bookmarks (see Figure 4 on page 61) to workforce centers and HEIP Council members.

After deactivating the questionnaire, I exported the responses to *SPSS*[®] for statistical analysis.

Questionnaire Predictions

Using the questionnaire, I hoped to gather end users' perceptions of the HealthCare

Channel. Specifically, I wanted to determine whether career changers and new healthcare

professionals desired more community-building communication features from the

Channel. I thought that these particular Channel users would desire these features based

on my audience analysis. Furthermore, I hoped to assess three predictions about Channel

users' responses.

- **Prediction One**: HealthCare Channel users seek more than just information on the

  Channel. They additionally seek affiliation, community, and support. This

  prediction pertains to the online community portion of my literature review and is

  addressed directly in question thirteen, "How accurately does this statement match

  how you feel about the HealthCare Channel? 'I want a sense of community and

  support when I use the HealthCare Channel.'" I speculated that Channel users

  would desire a sense of community and support when using the Channel.

- **Prediction Two**: HealthCare Channel users are a subset of the larger healthcare

  community. As such, they are a sparsely knit and loosely bounded group. Because

  of these suppositions, users may want community-building technologies such as

  chat rooms, message and bulletin boards, and listservs from the HealthCare

  Channel. This prediction pertains to the Website effectiveness features and online

  community portions of my literature review and is addressed by questions thirteen,

  fifteen, (How accurately does this statement match how you feel about the

  HealthCare Channel? 'I would use chat rooms, listservs, bulletin boards, and

message boards if they were available on the HealthCare Channel'), sixteen (What other career information Websites and newsgroups do you use?), seventeen, eighteen (For the Websites and newsgroups that you chose in question sixteen, please check all the features that you use), and nineteen. I speculated that Channel users would be very specific about their preferences for community-building technologies on the Channel and that these preferences would be illustrated by their use of such technologies on other career information Websites and newsgroups.

- **Prediction Three**: If HealthCare Channel users think that their needs for career information, support, community, and affiliation are being met on the Channel, they will feel more strongly that Channel information is accurate. This prediction pertains to the trust, rhetorical roles of readers/writers, multiple-audience problem, and strategic communication portions of my literature review and is addressed by questions ten (How accurately does this statement match how you feel about the HealthCare Channel? 'I feel information on the HealthCare Channel is accurate'), eleven (How accurately does this statement match how you feel about the HealthCare Channel? 'I feel the HealthCare Channel meet my needs'), twelve (How accurately does this statement match how you feel about the HealthCare Channel? 'I enjoy using the HealthCare Channel'), and fourteen (How accurately does this statement match how you feel about the HealthCare Channel? 'I am able to find what I am looking for on the HealthCare Channel'). I speculated that users of the Channel might consider its content inaccurate, feel it does not meet their

needs, not enjoy their experience of it, and have difficulty finding what they were looking for.

Questionnaire

On April 9, 2002, an ISEEK Solutions staff person posted the Web-based questionnaire to the main www.iseek.org Website as well as the HealthCare Channel. Each of its questions is presented over the next few pages.

Are you an adult who is considering a healthcare career? Or, are you a professional who is working in the healthcare industry? If so, please take this short survey about the HealthCare Channel. This survey will only take 10-15 minutes to complete. This survey is anonymous. You will not be asked for your name or any personally identifying information about yourself, your family, or your friends.

1) What is your age?

○ Under 20

○ 21 to 25 years

○ 26 to 30 years

○ 31 to 35 years

○ 36 to 40 years

○ 41 to 45 years

○ 46 to 50 years

○ 51 to 55 years

○ 56 to 60 years

○ 61 to 65 years

○ Over 65 years

2) What is your gender?

○ Male

○ Female

3) Which phrase describes you best?

○   I am an adult learner or college student.

○   I am a career changer who is considering a healthcare career.

○   I am a counselor.

○   I am a healthcare professional working in the healthcare industry.

○   I am an educator.

○   Other.

4) If you checked Other in question three, please describe yourself.

5) What is your highest level of completed education?

○   High school or equivalent.

○   Vocational/technical school (2 year degree).

○   Some college.

○   College graduate (4 year degree).

○   Master's degree.

○   Doctoral degree.

○   Professional degree.

6) Have you been to the HealthCare Channel Website before?

○   Yes   ○   No

7) In the past six months, how many times have you used the HealthCare Channel?

○   One to four times.

○   Five to eight times.

○   Nine to twelve times.

○   Thirteen or more times.

○   I have never used the HealthCare Channel. (Please skip the remaining questions.)

8) What have you looked for on the HealthCare Channel? Check all that apply.

☐   Skill assessments and tests.

☐   Course listings.

☐   School and program information.

☐   Business/employer descriptions.

☐   Minnesota workforce center information.

☐   Interview and resume services.

☐   Career and job descriptions.

☐   Job listings.

☐   Industry news.

☐   Other Websites and links.

☐   Salary and wage information.

☐   Employment and training programs.

☐   Other.

9) If you checked Other in question eight, please describe what you look for on the HealthCare Channel.

10) How accurately does this statement match how you feel about the HealthCare Channel? "I feel the information on the HealthCare Channel is accurate."

- ○ Strongly agree.
- ○ Agree.
- ○ Don't know/not sure.
- ○ Disagree.
- ○ Strongly disagree.

11) How accurately does this statement match how you feel about the HealthCare Channel? "I feel the HealthCare Channel meets my needs."

- ○ Strongly agree.
- ○ Agree.
- ○ Don't know/not sure.
- ○ Disagree.
- ○ Strongly disagree.

12) How accurately does this statement match how you feel about the HealthCare Channel? "I enjoy using the HealthCare Channel."

- ○ Strongly agree.
- ○ Agree.
- ○ Don't know/not sure.
- ○ Disagree.
- ○ Strongly disagree.

13) How accurately does this statement match how you feel about the HealthCare Channel? "I want a sense of community and support when I use the HealthCare Channel."

- ○ Strongly agree.
- ○ Agree.
- ○ Don't know/not sure.
- ○ Disagree.
- ○ Strongly disagree.

14) How accurately does this statement match what you think about the HealthCare Channel? "I am able to find what I am looking for on the HealthCare Channel."

- ○ Strongly agree.
- ○ Agree.
- ○ Don't know/not sure.
- ○ Disagree.
- ○ Strongly disagree.

15) How accurately does this statement match how you feel about the HealthCare Channel? "I would use chat rooms, listservs, bulletin boards, and message boards if they were available on the HealthCare Channel."

- ○ Strongly agree.
- ○ Agree.
- ○ Don't know/not sure.
- ○ Disagree.
- ○ Strongly disagree.

16) What other career information Websites and newsgroups do you use? Check all that apply.

☐ BioViews.com

☐ Health Careers Institute (http://www.hciminnesota.com)

☐ Google Newsgroups

☐ Monster.com

☐ Health Occupations Students of America (HOSA), Minnesota site

☐ ChooseNursing.com

☐ Medzilla.com

☐ Hospital Jobs Online

☐ Medhunters.com

☐ Minnesota Hospital and Healthcare Partnership Jobs Bank/Careers

☐ Nursingnetwork@topica.com

☐ Vault.com

☐ Yahoo Newsgroups

☐ Others

17) If you chose Others in question sixteen, please describe the other Websites and newsgroups that you use.

18) For the Websites and newsgroups that you chose in question sixteen, please check all the features that you use.

☐   Ask an expert.

☐   Skill assessments and tests.

☐   School and program information.

☐   Chat rooms.

☐   Business/employer information.

☐   Interview and resume services.

☐   Bulletin or message boards.

☐   Career and job descriptions.

☐   Job listings.

☐   Listservs.

☐   Industry news.

☐   Other Websites and links.

☐   Salary and wage information.

☐   Other.

19) If you checked Other in question eighteen, please describe those other features.

Questionnaire Analysis

I received one hundred responses to the questionnaire. Of these responses, eighty-three were valid; seventeen were incomplete or duplicative, so I excluded them from statistical analysis. Overall, I was pleased to discover that nearly 40% of all questionnaire respondents identified as career changers, one of the groups I was most eager to question. But only a small percentage of respondents identified as healthcare professionals, the other group I wished to reach. See Figure 7 below.
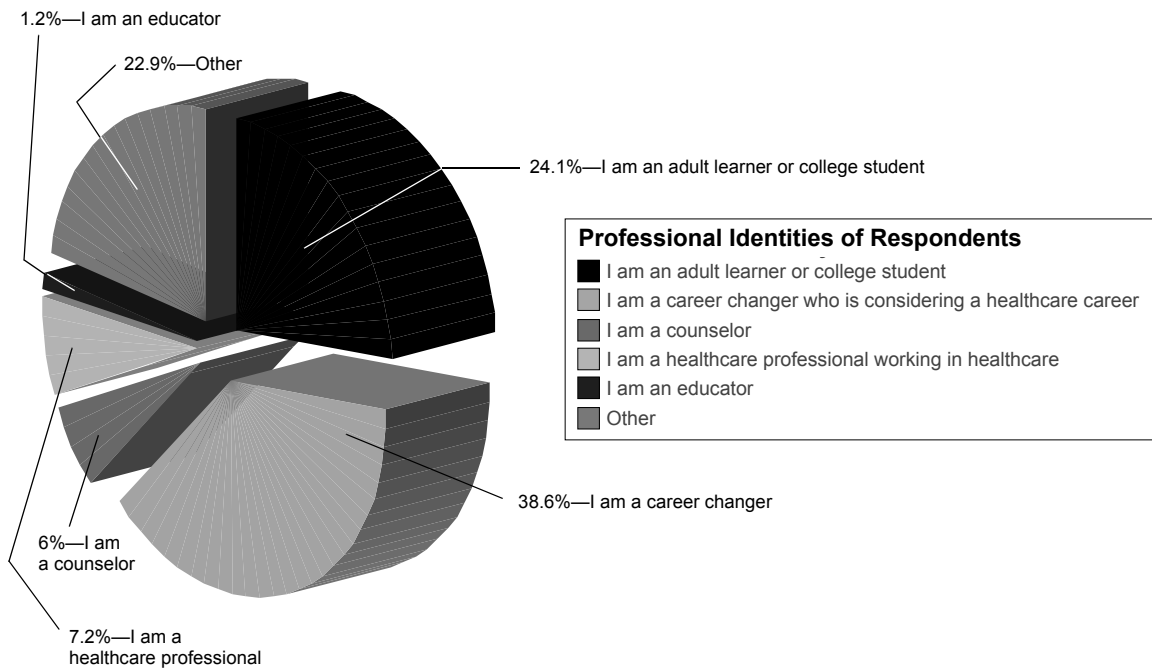
Figure 7. Respondents' Professional Identities

Not surprisingly, most respondents were women (see Table 7), who have traditionally

been the workhorses of the healthcare profession. In addition, a majority of respondents

were under twenty years of age and had a high school diploma or GED

(see Tables 8 and 9). Another large percentage of respondents indicated that they had some

college education.

Table 7. Respondents' Genders

Female		Male	
N	*%*	*N*	*%*
69	83.1	14	16.9

Table 8. Respondents' Ages

Age	*N (83)*	*%*
Under twenty	25	***30.1***
21 - 25 years	12	14.5
26 - 30 years	6	7.2
31 - 35 years	15	18.1
36 - 40 years	4	4.8
41 - 45 years	6	7.2
46 - 50 years	6	7.2
51 - 55 years	6	7.2
56 - 60 years	2	2.4
61 - 65 years	1	1.2
Over 65 years	0	0

Table 9. Respondents' Levels of Education

Highest Level of Completed Education	*N (83)*	*%*
High school or equivalent	35	***42.2***
Vocational/technical school (2 years)	8	9.6
Some college	27	***32.5***
College graduate (4 years)	10	12.0
Masters degree	2	2.4
Doctoral degree	0	0
Professional degree	0	0
Missing response	1	1.2

Despite the strong showing of respondents who are twenty years of age or younger, these

young respondents were some of the least likely to have used the HealthCare Channel

before taking the questionnaire, and most did not venture beyond question seven, which

instructed first-time Channel visitors to skip the remaining questions. And unfortunately,

only ten respondents had prior experience with the Channel (see Table 10); in fact, most of

these ten had used the Channel four times or less (see Table 11). Of the ten experienced

Channel users, nine were middle-aged or younger.

Table 10. Respondents' Previous Experience with the HealthCare Channel

No Experience	Experience
73	*10*

Table 11. Experienced Respondents' Channel Usage

I have used the Channel:	*N (82)*	%
One to four times	9	*11.0*
Five to eight times	2	7.0
Nine to twelve times	0	0
Thirteen or more times	0	0
I have never used the HealthCare Channel	71	87.0

I chose to analyze only the responses of the ten experienced Channel users. These

responses were the most complete and informed; most of the responses from those who

identified as first-time Channel visitors indicated uncertainty, especially in the Likert-style

questions that allowed "Don't know/not sure" responses. And while I cannot say that my

predictions are true based on the responses from such a small pool of respondents, the

responses illuminate my predictions and lead me to a few conclusions about Channel

users' expectations that I discuss over the next few pages.

For the first prediction, I speculated that Channel users desire a sense of community and support when using the Channel. I look at the responses to question thirteen to assess this prediction. The alarmingly high rate of agreement (77.8%) to this question indicates Channel users have a strong desire for a sense of community and support from their experience of the Channel (see Table 12).

Table 12. Experienced Respondents' Desire for a Sense of Community and Support on the HealthCare Channel

I want a sense of community and support when I use the Channel	N (9)	%	
Strongly agree	2	*22.2*	77.8%
Agree	5	*55.6*	
Don't know/not sure	1	11.1	
Strongly disagree	1	11.1	

For the second prediction, I speculated that respondents would be very specific about their preferences for community-building technologies such as chat rooms, message and bulletin boards, and listservs on the Channel and that this would be illustrated by their use of other career information Websites and newsgroups with these technologies. I look at the responses to questions thirteen, fifteen, sixteen, and eighteen to assess this prediction. I do not examine the responses to questions seventeen and nineteen because of low response rates and poor data.

While the responses to question thirteen (discussed on the previous page) are very

encouraging, responses to question fifteen indicate that most respondents are neutral about

their use of these communication technologies on the Channel. For example, identical

percentages of respondents agreed and disagreed with the question's statement (see

Table 13).

Table 13. Experienced Respondents' Hypothetical
Use of Communication Technologies on the
HealthCare Channel

I would use chat rooms, listservs, bulletin and message boards if they were available on the Channel	N (7)	%	
Strongly agree	2	*28.6*	←
Don't know/not sure	3	42.9	
Disagree	2	*28.6*	←

This finding suggests respondents may not connect a desire for community and support on

the Channel with the communication technologies that could encourage those things as I

assumed they would. However, to question sixteen, two respondents indicated that they do

use such communication technologies on other career information Websites and

newsgroups: Google Newsgroups and Yahoo Newsgroups (see Table 14 on page 89).

Also, there was a total of six communication technology-supportive responses to question

eighteen, which asked respondents the features they use on other career information

Websites and newsgroups (see Table 15 on page 89). These supportive responses included

chat rooms, bulletin or message boards, and listservs (highlighted in the table).

Table 14. Other Career Information Websites and Newsgroups Experienced Respondents Use (multiple-response question)

What other career information Websites and newsgroups do you use?	N (10)	%
BioViews.com	1	10.0
Health Careers Institute (www.hciminnesota.com)	3	30.0
Google Newsgroups	*2*	20.0
Monster.com	1	10.0
Health Occupations Students of America (HOSA), Minnesota site	1	10.0
Medzilla.com	1	10.0
Hospital Jobs Online	1	10.0
Medhunters.com	2	20.0
Minnesota Hospital and Healthcare Partnership Job Banks/Careers	2	20.0
Yahoo Newsgroups	*2*	20.0
Others	4	40.0

Table 15. Features Experienced Respondents Use on Other Websites and Newsgroups (multiple-response question)

What features do you use on other career information Websites and newsgroups?	N (9)	%
Ask an expert	2	22.2
Skill assessments and tests	3	33.3
School and program information	5	55.6
Chat rooms	*3*	33.3
Business/employer information	3	33.3
Interview and resume services	2	22.2
Bulletin or message boards	*2*	22.2
Career and job descriptions	5	55.6
Job listings	4	44.4
Listservs	*1*	11.1
Industry news	1	11.1
Other Websites and links	2	22.2
Salary and wage information	5	55.6

Clearly, respondents do use communication technologies such as chat rooms, listservs, and bulletin or message boards—just not on the HealthCare Channel, where they are unsupported. However, popular responses to question eighteen indicate that school and program information, career and job descriptions, job listings, and salary and wage information may be even more important to respondents than community-building technologies. This finding is corroborated by respondents' answers to question eight,

which asked them which kinds of information they look for on the Channel (see Table 16

on page 90). Again it is course listings, school and program information, career and job

descriptions, and job listings that Channel users seek on the Channel.

Table 16. What Experienced Respondents Look for
on the HealthCare Channel (multiple-response question)

What have you looked for on the HealthCare Channel?	N (10)	%
Skills and assessments	3	30.0
Course listings	5	*50.0*
School and program information	8	*80.0*
Business/employer descriptions	2	20.0
Minnesota workforce center information	2	20.0
Interview and resume services	1	10.0
Career and job descriptions	8	*80.0*
Job listings	7	*70.0*
Industry news	1	10.0
Other Websites and links	2	20.0
Salary and wage information	4	40.0
Employment and training programs	4	40.0

For the third prediction, I speculated that Channel users would consider the Channel's

content inaccurate, feel it does not meet their needs, not enjoy using it, and have difficulty

finding what they are looking for on it. I compare the responses to question ten (see

Table 17 on page 91) to those of questions eleven, twelve, and fourteen. I was surprised

and pleased to find that a majority of respondents agree or strongly agree that the

HealthCare Channel is accurate (66.7%), meets their needs (55.5%), is enjoyable to use

(62.5%), and allows them to find the information they are looking for (62.5%).

Table 17. Experienced Respondents' Perceptions
of HealthCare Channel Accuracy

I feel the Channel is accurate	N (9)	%
Strongly agree	1	11.1
Agree	5	55.6
Don't know/not sure	2	22.2
Strongly disagree	1	11.1

66.7% (Strongly agree + Agree)

Table 18. Experienced Respondents'
Feelings that HealthCare Channel Meets
Their Needs

I feel the Channel meets my needs	N (9)	%
Strongly agree	1	*11.1*
Agree	4	*44.4*
Don't know/not sure	2	22.2
Disagree	1	11.1
Strongly disagree	1	11.1

Table 19. Experienced Respondents'
Feelings of Enjoyment Using the
HealthCare Channel

I enjoy using the Channel	N (8)	%
Strongly agree	2	*25.0*
Agree	3	*37.5*
Don't know/not sure	1	12.5
Disagree	1	12.5
Strongly disagree	1	12.5

*Table 20. Experienced Respondents'
Abilities to Find What They Are Looking
for on the HealthCare Channel*

I am able to find what I am looking for on the Channel	N (8)	%
Strongly agree	1	*12.5*
Agree	4	*50.0*
Don't know/not sure	1	12.5
Disagree	1	12.5
Strongly disagree	1	12.5

Clearly, Channel users have positive feelings of satisfaction, enjoyment, and information

retrievability when they use the Channel. This finding is backed up by HEIP Council

members' questionnaire responses. These members generally agreed that Channel content

was accurate, well-organized, easy to find, and compelling (see page 71 for a discussion of

Council members' questionnaire responses).

To my overarching research question about whether career changers and new healthcare

professionals desire community-building communication features on the Channel, I cross-

tabulate the responses to question fifteen against respondents' professional identities. This

cross-tabulation shows that career changers are neutral to community-building

communication features (see Table 21). Furthermore, while six respondents identified as

healthcare professionals, none of these respondents answered question fifteen. Because of

this poor showing, I conclude that both of these kinds of Channel users are indifferent to

chat rooms, listservs, and bulletin and message boards when using the Channel. The

reason for the low response rate to this question and the indifference to these technologies might be explained by the research of Andrews, who found that mid-life career changers are reluctant to use Internet communication technologies that build online community. Her research is discussed under the heading, "Groups That Resist Online Communities" on page 52.

Table 21. Cross-tabulation of Respondents' Professional Identities to Their Hypothetical Use of Communication Technologies on the HealthCare Channel

		HC Channel I would use			
		Strongly agree	Don't know/not sure	Disagree	Total
Professional identity	I am an adult learner or college student			1	1
	I am a career changer who is considering a healthcare career	1	3	1	5
	I am a counselor	1			1
Total		2	3	2	7

Conclusion

HEIP Council members and HealthCare Channel end users are pleased with the Channel. They feel overall that the Channel is accurate, is compelling, has well-organized content, and is enjoyable to use. While Channel end users strongly desire a sense of community and support when using the Channel, they do not seem to connect these things to the communication technologies such as chat rooms, listservs, and message or bulletin boards that could encourage them. And unfortunately, career changers and new healthcare professionals are indifferent to these technologies. Overall, it is information rather than community that end users desire from the Channel.

SECTION FIVE: REDESIGN RECOMMENDATIONS

I derive content redesign recommendations for the HealthCare Channel out of my questionnaire results and literature review topics of audience roles, trust, online community, and features of effective Website content. Each set of recommendations is discussed over the next several pages.

Audience Roles Recommendations

In an effort to reach all HealthCare Channel audiences at once, ISEEK Solutions may not be reaching these audiences as well as they could. This finding is exemplified by HEIP Council members' questionnaire responses, which suggest that Channel primary and secondary audiences are hard to determine. Despite this finding, both HEIP Council members and Channel end users seem satisfied overall with the Channel's content.

To clarify the Channel's audiences and to engage these audiences in the Channel, I recommend that ISEEK Solutions redesign the Channel's content around the rhetorical roles of its three primary audiences: healthcare professionals, career changers, and students. My literature review revealed that audiences of texts and Websites readily assume roles when attractive roles are provided, and role playing might be particularly attractive on Websites where an interactive, electronic medium encourages role experimentation and self-paced progress through site content (Coney & Chatfield 28; Coney 62; Coney & Steehouder 329). Furthermore, people may be wired to respond to

identifiable roles and authorial voices and to attribute human-like qualities to the computer

technology that delivers those roles and information (Coney & Chatfield 28).

One way that ISEEK Solutions can think of rhetorical roles is as a Web portal strategy.

From a technological perspective, this strategy is a costly and time-consuming process

that involves restructuring Website content and implementing cookies for the purpose of

customization, but from a rhetorical perspective, this strategy is a much less expensive

process of crafting several attractive roles from which site users can choose. To implement

this strategy for the HealthCare Channel, I have suggested three roles for the Channel's

primary audiences and the accompanying authorial voices, or writer and designer roles,

that could effect audience roles (see the table below). Between audience and author roles,

I have attempted to make relationships as close and non-hierarchical as possible.

Table 22. Audience and Writer Roles

Audience	Audience Role	Writer Role or "Voice"
Healthcare professionals	Authority	Resourceful assistant
Career changers and job seekers	Peer	Caring mentor
Students grades kindergarten through twelve	Smart adolescent	Knowledgeable big brother or sister

These roles should be apparent on the HealthCare Channel's homepage. Figure 8 on

page 96, Figure 9 on page 97, and Figure 10 on page 97 illustrate versions of the

homepage with audience and writer roles "written in." Note that these roles are the first

design and navigation elements that site users will see, and they serve to create a

welcoming and acknowledging atmosphere and to establish the Channel's navigation

(Coney & Steehouder 335). These roles are also a form of audience design that uses

concealment and layering: that is, those who choose a role and follow its personalized path

through the Channel's content will not see most of the content for another role until they

choose that role. While much of the content would be similar between roles, some would

necessarily be different. For example, since healthcare professionals might desire reports

on staff hiring statistics and students might enjoy virtual tours of a healthcare

professional's typical workday, these kinds of content would be unique to their respective

roles. Effective Channel content based on role is discussed in greater detail under the

heading, "Website Effectiveness Features Recommendations" on page 108.

Figure 8. HealthCare Employment Portal Homepage

Figure 9. HealthCare Employment Portal for Professionals

Figure 10. HealthCare Employment Portal for Career Changers

Figure 11. HealthCare Employment Portal for Students

Trust-Building Recommendations

Based on studies of trust in computer technology discussed in my literature review, I conclude that computer users and even more specifically Website users may trust these technologies much as they trust or distrust other people (Lerch & Prietula 417). Moreover, people readily treat computers as social actors (Miller 12; Nass & Steuer 508; Kim & Moon 2). And while trust within computer-mediated environments can grow over time as relationships develop, trust can be hard to reestablish once it has been lost, it can drop quickly when unplanned errors occur, and it can be harmed disproportionately by insignificant interface problems (Walther & Burgoon 54; Rempel et al. 111; Tseng & Fogg 43). Also, career development Websites such as the HealthCare Channel may have more difficulty establishing trustworthiness when compared to traditional sources such as face-to-face career counseling and non-Web computer-assisted career information systems (Robinson et al. 43). And mid-life career changers in particular may be highly distrustful of these sites and the communication technologies that they support (Andrews et al. 1; Andrews 64).

With these things in mind, I used the matrix constructed by Bailey et al. to assess the HealthCare Channel's trustworthiness. To make this assessment, I first determined features of trust on the current Channel and then plotted these features on the matrix. The features are

- Clear and simple navigation (Nav)
- Links to other resources and career assessment tests (Li)

- Attractive, fast-loading graphics used on homepage (G)

- Non-profit status of ISEEK Solutions (Non)

- Feedback forms (F)

- Simple language (La)

- Sponsors of ISEEK Solutions (Sp)

- MyAccount, which allows personalization of Channel content (MA)[3]

- Privacy policy (P)

- Terms of use statement (Trm)

- Search function (Se)

The trustworthiness features are plotted on Table 23 on page 101.

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3. While MyAccount may lend to the overall trustworthiness of the HealthCare Channel, in a study of mid-life career changers, personalization features were found to be some of the least important to this group (Andrews et al. 5). Rather, career changers preferred venues for meeting others, desired specific information about career alternatives, and wanted career success stories.

Table 23. HealthCare Channel Trustworthiness Matrix (Current Channel)

Dimensions of Trust

	Attraction	Dynamism	Expertness	Intentions	Faith	Localness	Reliability
Presumed	Li	Li; G	Li	Non	Non		
Surface	G; La; Nav	Li; G; Nav	Sp	Trm; P; Sp	Sp; Nav	Sp	Trm; Nav
Experience	G; La; Nav	Li; G; Nav; Se; MA	Se	Trm; P; MA; F	Nav; F		Trm; Nav
Institutional			Sp	Sp	Sp	Sp	

Sources of Trust

101

Based on my assessment, I conclude that ISEEK Solutions is missing several

opportunities to establish the Channel's trustworthiness. In particular, I recommend the

following features to lend greater institutional and surface sources of trustworthiness to

the Channel. Please note that trustworthiness features I recommend are in italics; current

trustworthiness features are in nonitalics.

- Alliances (*All*)—presently, the main www.iseek.org homepage provides a link to

  alliances with its industrial partners, the *Star Tribune*, and SkillsNet. ISEEK

  Solutions will also want to provide such a link on the Channel homepage.[4]

- Awards (*Aw*)—ISEEK Solutions will want to display awards it has received for the

  HealthCare Channel on the Channel's homepage just as Margaret Dikel prints

  accolades from JobHuntersBible.com and Careerjournal.com on her homepage for

  the Riley Guide.

- Ask a career expert (*Ask*)—a way of asking a healthcare career expert questions

  (via a message board as discussed below) will contribute to users' perceptions of

  the Channel's goodwill. The expert should make sure to provide any certifications

  that he or she has as a career counselor in the healthcare industry.

- Communication tools (*Com*)—communication tools such as chats and message

  boards will provide Channel users with a forum for discussing their career

  concerns. These tools are discussed under the heading, "Online Community-

  Building Recommendations" on page 106.

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4. Mid-life career changers self-reported that affiliation/alliances could be fostered with the use of
   links to other Websites and promotional emails (Andrews et al. 6).

- Testimonials (*Tst*)—ISEEK Solutions will want to provide testimonials of Channel users and healthcare industry professionals much like those provided on the Coalition for Nursing Careers in California's Choose Nursing Website. Also, success stories from career changers will be particularly helpful for those considering occupational changes (Andrews et al. 5).

- Certifications (*Cert*)—if available, ISEEK Solutions will want to display certifications or to indicate that it follows Internet guidelines for providing career information and planning such as those outlined by the National Career Development Association (Caulum et al. 2002). These guidelines could include stating the credentials of those who provide Channel content; stating the career counseling certifications of Channel discussion board moderators; providing referrals to face-to-face career counselors; ensuring that assessment tests have been Web tested; validating assessments for self-help use; and forbidding discussion board spam.

- Languages (*Lan*)—if possible, ISEEK Solutions should provide translations of the Channel into Hmoob, Soomaali, and Spanish as it does the main iseek.org Website. Doing so improves Channel access to local communities of color and to lower literacy communities for whom English is a second or third language. It also follows Lin's suggestion that large, multiple-audience Websites offer language options (pp. 39 - 40).

- Recognition (*Rec*)—if possible, ISEEK Solutions should recognize Channel users who contribute to message board discussions and who take part in creating discussion board policies.

These new trustworthiness features (italics) as well as existing features (nonitalics) are plotted on Table 24 on page 105.

Table 24. HealthCare Channel Trustworthiness Matrix (Future Channel)

Dimensions of Trust

Sources of Trust	Attraction	Dynamism	Expertness	Intentions	Faith	Localness	Reliability
Presumed	Li	Li; G	Li	Non	Non		
Surface	G; La; Nav; Cert	Li; G; Nav; Tst; Ask; Com; Lan	Sp; All; Aw; Cert; Tst; Ask	Trm; P; Sp; Cert; Tst; Ask; Com; Lan; Rec	Sp; Nav; All; Aw; Cert; Tst; Ask; Com; Lan; Rec	Sp; All; Ask; Lan	Trm; Nav; All; Aw; Tst; Cert; Ask
Experience	G; La; Nav	Li; G; Nav; Se; MA; Ask; Com; Lan	Sp; Se; Ask	Trm; P; MA; F; Ask; Com; Lan; Rec	Nav; F; Ask; Com; Lan; Rec	Ask; Lan	Trm; Nav; Ask
Institutional	Cert	Tst	Sp; All; Cert; Tst	Sp; All; Cert; Tst	Sp; All; Cert; Tst	Sp; All	All; Tst

Online Community-Building Recommendations

Internet users are quickly becoming savvy community seekers, and these seekers have come to expect technologies that support their needs for sociability and information. My analysis of postings to a healthcare career message board illustrates that career changers and new healthcare professionals seek good advice from experts, encouragement from peers, and high-quality career information. Yet Channel users' responses to my Web-based questionnaire indicate that it is information rather than community-building technologies such as chat, listservs, and message and bulletin boards that these users prefer. Because of these findings, I conclude that while fostering online community on the Channel might be a good idea that in the long run will attract and retain Channel users, it is an option that ISEEK Solutions can forego.

However, ISEEK Solutions should pause to consider its excellent position for fostering online community: because the Channel presently offers good content that its users enjoy, and these users desire a sense of community and support from the Channel, ISEEK could make good use of community-fostering tactics that direct users to Channel content. One tactic could be a message board visibly and actively moderated by an ISEEK staff person. The moderator could use the board to guide participants to content within (and without) the Channel and to enable these participants to communicate with one another and to build relationships. Furthermore, such a message board benefits those with low readiness to make career decisions and follows Strauss' communication technology recommendation for academic vortals (Sampson & Lumsden 26; Strauss 2000). And to anticipate mid-life

career changers' reluctance to use such a board, ISEEK will want to include clear guidelines for message group etiquette, to use remailer email addresses that keep message group participants' real email addresses private, to provide a participant directory of remailer email addresses, to allow participants to create their own discussion groups, and to recognize and reward message board volunteers (Andrews pp. 67 - 68).

Last, ISEEK Solutions will want to provide community-supportive information on the Channel such as resources for workforce populations like women, people of color, recent immigrants, people with disabilities, and gays and lesbians who may have special needs relating to hiring and promotion, healthcare benefits, workplace accessibility, discrimination, and corporate culture (Robinson et al. pp. 42 - 43; Kirk pp. 156, 157). This information would lend goodwill to the Channel and place it in league with much larger career development Websites that provide reports, workplace groups listings, employer information, and links to other resources for these populations. ISEEK Solutions will want to additionally tailor this information to a healthcare industry setting.

Website Effectiveness Features Recommendations

According to Gurak et al., online education Websites should contain features that serve to establish a Website's presence, to inform users of the Website, to engage the interest or emotions of these users, and to educate them (10-4). ISEEK Solutions will want to provide these features of effective online education and online career development content to establish the Channel's Web presence and to inform, engage, and educate their users about healthcare careers.

- To establish a presence: ISEEK is currently doing good job of establishing the Channel's presence with a thorough privacy statement and disclaimer, but they should also provide their mission statement and postal address.

- To inform users of the Channel: ISEEK provides an excellent resource on the HealthCare Channel—an Industry News area. Unfortunately, as of mid-April 2002, this news was over one and one-half years old.

- To engage the interest or emotions of Channel users: ISEEK will want to provide engaging and emotionally appealing content for its three main audiences of healthcare professionals, career changers and job seekers, and students. The content that these audiences find engaging and appealing will no doubt vary. For example, while professionals might prefer downloadable files such as research reports about the healthcare industry, career changers might find the personal narratives and success stories of other career changers inspiring, and students might enjoy taking interactive quizzes or games about healthcare careers or taking virtual tours of the typical workdays of profiled healthcare professionals. This

audience-specific engaging and appealing content is discussed in the following

table.

Table 25. Engaging and Appealing Channel Features by Audience

Audience	Engaging and Appealing Content
Healthcare professionals	• Downloadable files such as research reports and hiring statistics • Video and audio related to healthcare industry hiring and promotion • Geographic Information Systems (GIS) that let professionals research regions before relocating for new jobs • Personalized content such as that facilitated by the HealthCare Channel's MyAccount
Career changers and job seekers	• Personal narratives or success stories of others who changed their careers • Profiles of healthcare professionals • Information about alternative careers • Directory for networking with experts or other career changers • Audio and video for virtual interviews • Virtual conferences and meetings • Ability to create discussion groups
Students kindergarten through twelfth grade	• Interactive graphics • Audio and video on how to plan education and career goals • Interactive games and quizzes about healthcare careers • Virtual tours of typical workdays of profiled healthcare professionals • Narratives of other students who hold after-school jobs and hobbies in healthcare • Downloadable posters, postcards, and screensavers

• To educate Channel users about healthcare careers: ISEEK Solutions might want

to create a link named Frequently Asked Questions (FAQs) on each of the three

audience portal pages illustrated in the three previous figures. These links would direct users to the Find Answers and Ask a Question portions of the Help Webpages where a database of FAQs is presently stored. And as previously mentioned, a discussion board moderator could use the board to direct participants to career information inside the Channel and outside the Channel at other Websites.

Conclusion

In conclusion, I return to my original research question: Can ISEEK Solutions hope to reach multiple audiences with the HealthCare Channel while at the same time establishing trust with audiences and building community among them? I answer this question with a resounding yes. ISEEK Solutions is in a wonderful position to reach HealthCare Channel users with the information-rich content it publishes on its Channel, and these users are quite satisfied with the Channel as it is today. But by implementing the recommendations discussed in this section and researched throughout this Plan B Master's project, ISEEK Solutions will be better prepared to reach its Channel audiences with a trustworthy, effective, and community-centered message of career development in the healthcare industry.

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