A Conceptual Framework for Demographic Groups Resistant to On-line Community Interaction

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ABSTRACT: Demographic communities can become on-line communities if their members have common interests, needs, and goals, a desire for mutual communication, and can easily find one another to establish relationships. People are sometimes quite resistant to interacting on-line even when they regularly use the Internet for information gathering and e-mail. With mid-life career changers as a representative demographic group, this paper discusses the factors causing this resistance, ways to mitigate it and bring group members into on-line community environments, and mechanisms for sustaining their on-line interaction. Several methods for improving the sociability and usability of on-line communities are proposed, and it is recommended that the selection and implementation of technology be directed by the group's sociability and usability requirements .

KEY WORDS AND PHRASES: Audience analysis, behavioral change, computer-mediated communication, on-line community, on-line social network, on-line sociability, on-line usability, resistance to change.

A community is not a physical place but a set of social relationships. An on-line community is a social network that uses computer support as the basis of communication among members [11, 26]. On-line communities are made up of people who interact socially to satisfy their own needs or to perform special roles with a shared purpose, and whose interaction is guided by tacit and explicit policies using computer systems to support and mediate the social interaction [15].

Although the members of a demographic group may share common interests, needs, and goals, they do not comprise a community unless the group establishes a network of social relationships. The creation of an on-line community environment that can facilitate such relationships has many possible benefits, as shown in an earlier study by Andrews of a representative demographic group, mid-life career changers [1]. That study, using serial case study in-depth interviews with 25 mid-life career changers in the United States, confirmed that these individuals had important needs for networking with peers to share information, learn from one another's experiences, and make contacts in potential new career disciplines [3, 12, 14, 17, 24]. Most of the subjects regularly used the Internet for information gathering and e-mail, but the study found that they would much rather meet people face-to-face to establish and maintain supportive relationships. Many expressed feelings of distrust and concerns about the privacy and appropriateness of the on-line community medium. A deeper understanding of this demographic group's resistance to on-line interaction was needed in order to identify ways to mitigate their resistance to on-line community and inform the design of an on-line community solution that would meet their requirements for usability and sociability.

As reported in this paper, a second study attempted to answer five questions as clearly and accurately as possible: (1) How often did the members of

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this group use the Internet, and how did they use it? (2) Why did they use or not use on-line community discussion forums? (3) Did they trust on-line community discussion forums? (4) Would a technique that restricted access (i.e., a subscription fee) increase trust and be attractive to them? (5) What would increase their interest in using on-line community discussion forums, both initially and in the longer term? It was hypothesized that a holistic Web site offering a wide variety of tools, including on-line synchronous and asynchronous community forums, would dramatically expand opportunities for career-change success by increasing the number and types of people with whom career changers could communicate and build relationships.

What was learned about mid-life career changers by means of this study may well apply to building on-line communities for demographic groups with similar characteristics and on-line interaction-resistance issues.

Definitional Foundation

On-line communities differ from face-to-face communities in important ways (e.g., the lack of real-world physical cues, the ability of members to change their identity, social order and control, and purpose) that raise challenges for on-line community builders [11, 19, 25]. Early work in this area by Hiltz and Turoff found that on-line groups required active leadership or facilitation, a desire of participants to communicate with members of a peer group, and information exchange that members found valuable [6]. Additional factors for a successful on-line community include security and confidentiality, a code of conduct, governance policies, and the community culture—its language, interactional dynamics, member daily-life patterns, interactional modalities, member diversity, and physical and nonphysical manifestations (networked, virtual, or hybrid) [15].

The concepts of usability and sociability are important in a discussion of on-line communities. An on-line community has usability when people can access and use its discussion capabilities intuitively and easily with few mistakes, and when the on-line features that support the community are consistent [15]. On-line communities can be supported by a variety of Internet technologies, including Usenet newsgroups, listervers, bulletin board systems, and Web sites. With Web sites, usability is attained through such strategies as information and graphics presentation, page navigation, search functionality, page design, link use, Web site architecture, and predictive systems. How to design a human-computer interface that accomplishes these seemingly simple tasks has been the subject of much discussion, experimentation, and theorization [2, 13, 16, 17].

Sociability, on the other hand, is the social interaction that occurs in an on-line community. Good sociability creates an on-line culture where people feel comfortable and their expectations are met. It includes designing policies that support the community's purpose and are understandable, acceptable, and practicable to the user [15]. Some studies show that group sociability is influenced by user knowledge of who is participating and how they are participating [3, 23]. The importance of satisfying these seemingly simple requirements

makes interface design of the on-line community an element that can enhance or inhibit sociability.

Good sociability should promote trust, the expectation or belief that arises from regular, honest, cooperative behavior based on positive past performance and truthful future guarantees for interaction [15]. In some ways, the development of trust is a chicken-and-egg dilemma: Does trust build sociability, or does sociability build trust? Early work using the off-line Delphi Method suggests that trust can be established among group members who have never met if they trust whoever is sponsoring the exercise (e.g., the community) and know what to expect from the process [4, 5, 6]. Another study suggests that on-line trust can be quickly established through task-communication behavior, is strengthened by social communication, and that responding behaviors are as critical as initiating behaviors to explicitly verbalize commitment, excitement, and optimism [7]. Trust is influenced by the norms of behavior established early in a community's life and by its policy on whether material shared by members will remain private or be distributed outside the group [4]. Research also shows that writing styles influence sociability [5] and that learning how to communicate (e.g., how to write and use language on-line) can take up to 20 hours of reading before members feel they have sufficient understanding to begin to participate [8, 9].

In light of the findings of the earlier study and the questions outlined above, the concepts of sponsorship and ownership were used in defining trust for the purposes of the present study. The survey used in the study described trust as "an individual's ability to feel comfortable with the Web site/on-line community owner's ability to protect users' personal safety and privacy; that their personal information, identity and physical well-being are appropriately protected from unauthorized access and use by those external to the community."

Study Method

Arguing that the fluid and social nature of mediated communication always make comprehension less than efficient, Sudweeks and Simoff maintain that it is important to apply multiple, scalable methods and triangulation of methods in studies of the Internet [20]. Since the previous study used a qualitative serial case study method, a quantitative survey method was selected for the present study. The research focused on individuals who were already Internet users. The survey was distributed on-line using a URL embedded in an e-mail invitation to participate. No paper version of the survey was provided.

Subject Demographics and Selection

Thirty-five mid-life career changers, ranging in age from 35 to 59, participated in the study (*see Table 1*). The participants were either exploring a career change, in the process of making a change, or had completed a career change within the past two years, and, of course, they all had access to the Internet. More than 20 different old career fields and as many new career fields were repre-

Age range:	35–39:	14%
	40–49:	26%
	50–59:	60%
Gender:	Male:	31%
	Female:	69%
Career redesign status:		
Exploring:		43%
In progress:		34%
Completed:		23%

Table 1. Study Population Demographics (N = 35).

sented. A full listing of the subjects' old and new fields will be found at virtual.cendex.com/code/dorine.andrews/study/SRreportgenerator.html (choose Subject Demographic Summary Report). Sixty percent of the subjects were identified through the primary researcher's professional, academic, and personal networks (e.g., active and former members of Forty Plus, a nonprofit group that helps people over 40 years old find work). The other subjects (40 percent) self-selected to participate after being told about the study by the researcher-identified subjects and reading the qualification requirements posted at the beginning of the survey. Subjects completing the survey had to supply their names and contact information for telephone follow-up. There was no overlap between participants in the previous study and those who participated in this one.

Participation in both studies was skewed toward the oldest age group (60 percent were age 50–59) and female (69 percent). Nonparametric chi-square tests were calculated for age and gender against the questions. The only significant result was that the larger number of females than males could have influenced the mix of career-change status if the sample was random. In all other tests the distributions were not significant for either gender or age range. Since the study sample was not randomly selected, its findings cannot be generalized to the total population of mid-life career changers. However, the results do provide important insights for capturing requirements or building a testable prototype, which was the overall objective of the project of which these two studies were elements.

Survey Questionnaire Development, Distribution, and Result Calculations

The previous study's findings were used to develop language, selection lists, and other topical data for the on-line survey questionnaire (virtual.cendex.com/code/dorine.andrews/study/survey.html). After field testing with seven individuals using both observational and post-completion interview techniques, revisions were made to the introduction, question language, question sequencing, survey screen display format, and submission confirmation. The survey was built using HTML, an Access database, and *Cold Fusion* software.

Experience	Daily	Weekly	Monthly	Never
Information gathering	63%	31%	6%	0%
E-mail	91%	9%	0%	0%
Entertainment	23%	20%	11%	46%
Purchasing	0%	3%	43%	54%
Bulletin board	3%	3%	11%	83%
Chat room	3%	3%	3%	91%

Table 2. Internet Usage (N = 35).

	Generally trust	Trust if monitored	Don't Trust
Asynchronous	34%	40%	26%
Synchronous	23%	28%	49%

Table 3. Trust in On-line Community Media (N = 35).

Findings

The study results cover five areas: Internet usage, trust in on-line communities, subscription fees as a trust builder, interest in on-line community, and attracting people to on-line communities.

Internet Usage Experience

As expected, the study subjects were avid Internet information gatherers and e-mail users but not on-line community participants (*see Table 2*). Almost all of them (94 percent) used the Internet daily or weekly for information gathering, and 100 percent used it for e-mail communication. Eighty-three percent never used asynchronous on-line community discussion forums, and 91 percent never used synchronous on-line community discussion forums.

Trust and On-Line Discussion Forums

The study subjects reported that they generally trusted on-line community discussion forums or would trust them if they were monitored (asynchronous: 74 percent; synchronous: 51 percent) (*see Table 3*).

Synchronous forums were much less trusted than asynchronous ones. Some of the subjects commented that asynchronous forums allowed them more time to read and respond to messages.

Trust Is an Issue But Not the Only Issue

If the study subjects trusted on-line community discussion forums, why weren't they participating in them? Apparently there is a difference between what people say and what they actually do. An analysis of the subjects' explana-

tions of why they felt trust or nontrust revealed that those with no on-line discussion forum experience had neutral or negative perceptions of e-forums, and that the few who were experienced tended to have negative views of them.

Trust was an issue of perceptions and experience for this demographic group. Many of the subjects commented on their lack of experience. For example, one wrote, "I am actually not familiar with on-line message boards; it just seems to make sense that one should moderate them." The many statements expressing distrust emphasized three themes: (1) inability to identify with interlocutors, (2) lack of privacy and security of personal information, and (3) a general presumption that other participants in electronic media could not be trusted.

The inability to identify with interlocutors was reflected in a fear that, to quote one subject, "weird people inhabit these forums." Some subjects expressed suspicion of people they had not been introduced to or referred to by someone they know. One, writing about bulletin boards, said, "I have seen messages, which demonstrate such passion that, had the messages been directed at my postings, I would have been concerned for my safety." Another wrote, "I have heard from other people that you can get some pretty weird people in discussion groups, I don't have much free time and when I want advice, I want it from experts." Another said, "I think that some of them foster a too easy intimacy with people that you don't know." And another commented, "The anonymity of the Internet allows anyone to act like an expert whether or not they have the education and/or experience to back it up."

The lack of privacy and security of personal information created fear of information misuse and manipulation. News articles about hackers and the selling of user information, and the personal experience of some group members, apparently fed this fear. For example, one subject wrote, "I'm in marketing; I know how they can be manipulated." Another expressed fear about chat rooms: "I am afraid that the immediacy of the situation might cause me to reveal more than I want. Also, there has been so much bad publicity that I am frightened of this." Still another said, "I've had experiences of feeling intruded on personally in the few general chat rooms I've used."

The presumption that electronic media cannot be trusted bleeds over into on-line community discussion forums. This is expressed in comments like this one: "I never give out personal information. I would not reveal information that I consider too personal or potentially damaging."

About half the subjects wrote statements that pointed to issues other than trust as reasons for not using on-line community discussion forums. As one subject said, "I have a healthy skepticism toward all methods of communications. . . . I trust myself to evaluate the value of any message." Others cited issues of inappropriateness (e.g., "Most chat rooms I have investigated are a waste of time"), structure (e.g., "I have been in a few and found it to be totally confusing in following any coherent conversation or topic"), purpose (e.g., "It is the computer version of CB radio: You get what you're paying for, which is nothing"), and interest (e.g., "I haven't found them all that helpful"). The following two comments encapsulate the attitudes of the study subjects: One of them said, "I might consider a group of people I already know when I have a

specific question," and another said, "Usually, face-to-face or e-mail or phone suffices for sharing ideas."

In summary, trust in on-line community discussion forums was a significant issue for the members of this demographic group and was influenced by what they had read or heard, by personal experience with on-line community discussion forums, and by bleed-over beliefs about other electronic media. When trust was not an issue, willingness to participate was influenced by such factors as dislike of the structure, lack of appropriate topics, and lack of forums whose purposes matched the subjects' interests.

Trust and the Issue of Subscription Fees

The study hypothesized that introducing a subscription fee would increase trust in using on-line community discussion forums, based on the reasoning that having to pay a fee would discourage frivolous participation by persons who had mischievous or exploitative purposes. There were several factors that made a subscription fee seem an appropriate mechanism for this demographic group. Its members were accustomed to paying to join professional associations, attend training classes, and receive newspapers, magazines, and journals. As people with business experience, many of them knew that businesses customarily paid for research and access to data not generally available to the public. Finally, perhaps they would see paying a fee as mechanism that would bring them "something special" (e.g., no advertisements). This hypothesis was tested by asking the study subjects to select one or more items from a list of items that might enhance their trust of on-line discussion forums. The outcome was rather dramatic (*see Table 4*). The subscription fee was not selected as a trust enhancer, and was overwhelmingly rejected by 91 percent of the subjects.

Subscription fees were also examined from the perspective of features of the fee. The selection list was generated from a review of a broad range of Web sites. For each item, the subjects were asked to rate, on a five-point scale, the likelihood that it would make a subscription fee worthwhile. The findings confirmed the rejection of subscription fees. No feature was perceived as overwhelmingly worth a fee, and more than 50 percent of the subjects designated as very important or important features that enhanced the potential for face-to-face relationship building, the ability to make specific contacts, and the possibility of obtaining some sort of economic advantage through discounts (*see Table 5*). The features considered least important were generally personalization features emerging from new Internet software technologies. There was little interest in removing advertisements from the Web site, presumably because the subjects had learned to ignore ads and regarded their presence as the price of free access.

A cautionary note is needed concerning the substantial number of neutral responses. Upon seeing the default neutral radial selection, subjects may have not bothered to change it. However, acceptance of the neutral default selection is just as likely to indicate that the feature was simply not stimulating enough to be worth the switch to another rating. In summary, the subscription fee hypothesis must be rejected.

Results	Potential trust enhancer
74%	Monitoring and facilitation by professionals
60%	Directory of other members and career profiles
57%	Clear policy statements and discussion usage rules
57%	Recommendation from someone I know that the forum can be trusted
46%	Registration
9%	Small subscription fee ($5–$15/month)

Table 4. Potential Trust Enhancers (N = 35).

	Very important	Neutral	Not important
Local chapter meetings	63%	20%	23%
Peer mentoring program	60%	37%	3%
Restricted access	60%	29%	12%
Discount counseling	57%	37%	6%
Discount on-line training	51%	43%	6%
A print periodical	35%	46%	20%
Personalized home page	34%	40%	26%
No advertisements	31%	40%	29%
Personal Web site	29%	20%	43%
24/7 hotline access	26%	40%	34%
ISP service	9%	49%	43%

Table 5. Features for Subscription Fees (N = 35).

Interest in On-line Community Discussion Forums

The next question had the subjects sidestep the issue of trust and look directly at what might increase their interest in joining an on-line community during their career change. They were asked to select from a list of features that might increase their interest. Their top choices involved contacts with specific persons for specific topic-related reasons, information about career alternatives, and telling of success stories (*see Table 6*).

The subjects expressed little interest in generalized support and empathetic conversation with other career changers. This may have been because they lacked experience with on-line community discussion forums, as shown in the literature, or because they were already receiving sufficient support from people they knew.

Attracting People to the On-line Community

In essence, the demographic group of mid-life career changers stood outside the world of on-line communities. The positive statements that members of on-line communities make about the benefits they obtain from participation meant little to the survey subjects. Because of this, attracting mid-life career changers to the on-line Web site community will most likely be challenging.

When asked a series of open-ended questions about how they would like

Results	Potential interest enhancer
86%	A forum where I could meet people from the career field in which I am interested
69%	Help in getting the first job
63%	A forum where I could have access to experts
57%	Information about alternative careers
54%	A forum that can recommend peers with whom I may want to communicate
54%	Interviews and case histories of people who redesigned their careers
46%	Help in surviving the transition (e.g., problem solving and encouragement.)
40%	Forums only with people like myself who are or have changed their careers
37%	Help with finances, school, and plans for making a career transition
31%	Ways to better know myself, my needs, my interests (e.g., exercises, assessment tests)
26%	A forum where I could control access to the discussions. (e.g., create my own groups)

Table 6. Potential Interest Enhancers.

to learn about an on-line community dedicated to career change and what they would want to hear when the group's availability was announced, the subjects responded that they would learn about it from three sources: The first source, established and respected groups, was the vehicle most often suggested for promotional communications. The subjects named organizations dedicated to serving and supporting their members, such as nonprofit self-help groups, professional associations, alumni associations, universities, established listservs, and trade associations. The second source was friends and colleagues, used in combination with e-mail campaigns. The third source, Internet job-search Web sites and often-read print media, was suggested less frequently. In other words, the members of this demographic group would consider an on-line community worth visiting, trustworthy, and credible if it is associated with an entity that they personally recognize as reputable. They do not want to hear, as one subject said, "fluff and cheering squads" from strangers. Typical comments included: "This will be an efficient way for me to use my time; There is specific, concrete, fact-based content about career alternatives"; and "I will have access to a network of peers and professionals for guidance and local contacts."

A Conceptual Framework

One subject summarized the attitudes of the members of this demographic group when she wrote, "I see the Internet as a primary source for information, but only a supporting source for relationships. Those are formed and nurtured in person with the Internet providing continuity and reach." In light of the study results, it is appropriate to ask whether this particular demographic group is capable of joining an on-line community. Is information gathering sufficient for its members? Are they missing opportunities for success by not using on-line communities?

The optimistic view is that a holistic Web site approach that offers tools, information, and an on-line community can be of great benefit to this demo-

graphic group. A Web site of this kind could expand opportunities for career-change success by exposing participants to a greater number and range of contacts . The goal would be to provide an opportunity for group members to build a weak-tie on-line social network for informational fact-finding and problem-solving [26]. With time, more empathetic strong-tie social networks may evolve in the event of a difficult, chronic, or crisis situation in the career-change process [11, 15].

Innovative approaches to bridge the inexperience of group members, overcome their lack of trust and interest, and provide forums with appropriate topics and structure must be found. The approach must enable participants to do things they cannot easily accomplish in a face-to-face environment or through people they already know. To that end, a conceptual framework to mitigate the resistance barriers is offered for examination (*see Figure 1*). The framework is made up of three components.

First, to start the on-line community, the gap between the familiar, comfortable, and trusted face-to-face world and the new on-line virtual world must be closed. Second, to encourage early on-line interaction, on-line community capabilities must be introduced in a trust-building, nonthreatening, and nurturing manner. Third, to move the on-line community into a self-sustaining mode, a balance must be struck between fact-finding/problem-solving and empathetic support [14]. These ideas come directly from the study results as well as from the researchers' interpretation of the study findings.

Suggestions for Starting On-line Communities

Based upon the findings of this study, three specific efforts to attract first-time users are recommended (*see Table 7*).

Trust in an on-line community should be significantly enhanced by an association between the community and an established, reputable organization that is focused on serving and supporting its own members [5, 15]. The members may not know one another, but as members of the same organization they share a common set of values and affiliations, an important aspect of sociability. The study subjects suggested links on sites and promotional e-mails as mechanisms to promote affiliation.

The findings of this study and the earlier one emphasize that the Web site must offer information-rich content specifically focused on matters of primary interest to the members of the demographic group. If they consistently find new and meaningful information, they are likely to return to the site and perhaps to explore various features of the on-line community. Usability is critical in keeping them at the Web site. This includes everything from rapidly loading pages and easy access (menus, graphics, and navigation) to clear and unambiguous language, forgiving yet accurate search functions, constantly renewing information and databases containing topical information, and access to professional support and services [13].

In a "tangible-touch" event (e.g., a hosted meeting or seminar of about three hours), users can experience direct social interaction in a familiar and comfortable fact-to-face format. A transitional event of this kind makes it easier to develop trusting perceptions of the on-line community. If the event is cosponsored

Figure 1. A Conceptual Framework for Communities Resistant to On-line Interaction

1. Endorsements and affiliations with respected groups (SF)
2. Specifically focused, in-depth information content and databases with easy access to enhance Web site usability for user primary focus (SF)
3. "Tangible-touch" event to jump-start community sociability and create critical mass (RI)

Table 7. Starting On-line Communities.

SF=Direct from study findings RI=Researcher interpretation

by established organizations that have credibility in the eyes of the group, the trust-building experience is even stronger. Participants in the event have a chance to air their concerns, have their interests and needs addressed, and learn the purpose and values promoted by the on-line community. Norms around security and confidentiality, codes of conduct, governance policies, and the culture of the community can be discussed and experienced firsthand. Participants have a chance to experience the community's structure, content, and features, to register, and to bond with people in their localities who will also use the Web site community. Printed reference materials and follow-up e-mail could reinforce the experience once they leave the event. Incentives can help build word-of-mouth interest to visit the on-line community at the Web site.

Suggestions for Encouraging Early On-line Interaction

Presenting a button labeled "Begin chatting" or "On-line Community" most likely will not be effective in bringing this demographic group into the community. The study findings clearly indicate that general conversation is neither trusted nor wanted. Therefore, to encourage early on-line interaction, the features listed in Table 8 are suggested.

The on-line community's purpose must parallel the needs of the demographic group. Based on the study results, the purpose for an on-line community for mid-life career changers should be threefold: (1) to support topic-based fact-finding and problem-solving, (2) to find people with whom members could

1. Visible purpose and policies (SF)
2. Visible moderated asynchronous topic-specific discussion forums (SF and RI)
3. Directory-based profile-match system (SF and RI)
4. On-line events that simulate "physical-world" experience. (RI)
5. User-driven quality-assurance activities (RI)

Table 8. Encouraging On-line Interaction.

SF=Direct from study findings RI=Researcher interpretation

discuss career alternatives, and (3) to provide help in working through the career-change process. A purpose overly focused on empathetic support will not succeed, given this group's perceptions and their reliance on face-to-face relationships for empathetic support. Prospective participants need to learn at the outset what they can get and what they can give through a particular on-line community [22]. A career change is a very personal life passage. Seeking empathetic support from individuals one has not met face-to-face may be difficult until the on-line community establishes that it is trustworthy by proving itself safe and respectful of personal privacy.

Policies that will encourage early interaction by this demographic group include: (1) free access with no subscription fees, (2) strong privacy and security rules, (3) avid and visible discussion-group monitoring, and (4) user-driven rules for behavior within the community.

Privacy for this community is a complex issue. The members of this demographic group want to protect themselves against unwarranted intrusions but also want to know with whom they are communicating. A policy prohibiting the selling of individual personal and Web site usage data is suggested for increasing trust in the Web site's security. For personal identity privacy, user-defined screen names (e.g., stable pseudonyms) can be assigned at registration time. Users' actual e-mail addresses identify them to the Web site moderators, but members are known to other members only by their screen names and a special Web site e-mail address. Web site technology can route Web site e-mail to the user's actual e-mail address without revealing it. For those who want complete data security (i.e., who do not want their personal data aggregated with other users' data in order to attract advertisements to the Web site), an information-privacy guarantee option could be purchased for a small fee.

With a group as inexperienced with on-line community interaction as the demographic group involved in this study, topic-based, visibly moderated on-line community discussion forums would provide a way for users to safely "stick their toes in the water." Access to discussion forums could be woven directly into the Web site's information content and also provided by a direct link to the forum's home page. The following activities are suggested for incorporation into the Web site: (1) contribute or comment on displayed informational content, (2) contribute one's own experience, (3) respond to what someone else has contributed, (4) find out what to do next, (5) contribute an article, review, or other reference to the Web site.

A directory-based profile-matching system is suggested. This system could

offer greater communication privacy to support subjects' stated interest in meeting people from career disciplines, in getting the first job, having access to experts, and finding peers with whom to communicate. Members, at their option, would make themselves known by creating interest and need profiles. The directory system invites other profiled members to make contacts based upon profile comparisons. Users are free to begin these contacts via e-mail. The directory could include profiled representatives from industry associations, companies, and organizations who are available to answer questions and support people interested in their disciplines.

Another feature that would encourage participation is the virtual conference. This asynchronous technology, which has many characteristics of a real-world conference, is a good vehicle for novice on-line community users [10]. For example, an on-line conference titled "Mid-Life Career Changer Career-Friendly Alternatives" could be offered at the Web site. Just like a physical conference, this virtual conference would have structured agendas with specific topic presentations, handouts, guest speakers, registration (e.g., passwords and conference badges), opportunities to meet other attendees, specific time frames for discussions, and limited attendance. This format provides an opportunity to become involved but avoids ongoing meandering discussion threads.

Lastly, people can be actively solicited to evolve policies, practice, and topics for on-line community discussion forums. They can be given incentives to volunteer as forum moderators. Research shows that when subjects are actively involved in community moderation and standards, the community becomes self-sustaining [15, 22].

All of the features discussed above must be clear and easily visible to users through printed and other promotional materials, prominent displays on Web pages, and the Web site's language and graphics.

Suggestions for Moving to a Self-Sustaining Interactive Environment

The third component of the conceptual framework steps beyond the study results. Its purpose is to provide rich interactive features that will help the members of this demographic group become self-sustaining participants in the on-line community. These features enhance the on-line community experience in personally significant ways. To identify these features, new technologies used in commercial and noncommercial Web sites were reviewed, and six career coach practitioner experts were consulted. The features are listed in Table 9.

It is important to balance the on-line community's purpose by providing a discussion forum that allows members to add and structure their own on-line forums for empathetic support. The need for forums should evolve from relationships developed in fact-finding discussion forums. As trust increases, and it becomes apparent that the community's discussions and information are helpful and interesting, participants will begin to share their feelings in empathetic ways [14, 15]. They should be able to establish their own forums, making them open to all or only to invited participants.

1. Balanced on-line community purpose and forums for empathetic support (RI)
2. Career change information management (RI)
3. User rewards and recognition (RI)

Table 9. Moving Toward a Rich Interactive Environment.

SF=Direct from study findings RI=Researcher interpretation

Career coaches and counselors said that (1) they deliver much of their guidance to career changers by telephone and e-mail, and (2) career changers are sometimes disorganized, have difficulty with multiple activities, and lose papers and notes. Using electronic notebooks, information-management services can be provided to help career changers and the people who help them. This feature would enable members to save Web site information, test results, resumes, lists, ideas, and notes in an organized portfolio accessible only to themselves and others to whom they allow access. Career changers and their coaches and mentors could review the same information at the same time. Another information-management feature might be to provide storage of information for indefinite periods. These features do not directly support the on-line community, but they will help members communicate with others who are helping them and thereby reinforce continued use of the Web site.

Lastly, reward and recognition opportunities for career changers who have made successful transitions should be promoted in the on-line community. Individual career-change success stories, interviews, and on-line conference-panel participation are examples of ways to involve people who have "graduated" into their new careers.

Conclusions

Through this study, a great deal was learned about on-line community requirements for a demographic group whose members had in common their age, interest in mid-life career change, and resistance to on-line interaction but were not participants in existing face-to-face or on-line social networks. The conceptual framework presented in this paper can be used to develop on-line communities for demographic groups that resemble the one in this study. A thorough understanding of a group's characteristics is an important element in building a sustainable on-line community that will attract members. This includes appropriate informational content, selecting the right on-line community technology, attracting people to the community, encouraging continued participation, and evolving the right balance of fact-finding and empathetic opportunities.

The next step in on-line community development for the demographic group of mid-life career changers is to translate its requirements into a prototype that can be tested and refined. More than 90 percent of the study subjects were willing to continue to work with the researchers as they move from conceptual framework to prototype. The overall objective is to learn more about specific aspects of the sociability and usability of on-line community issues that have an impact on this demographic group and others like it.

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