

**Strengthening Social Capital through Computer-mediated Community  
Participation**



A Proposal to build an exclusive online professional and social networking community  
for The National Association for Multi-ethnicity in Communications' Executive  
Leadership Development Program members

**Presented by Andrew Williams  
January 22, 2008**

<b>Introduction.....</b>	<b>3</b>
<b>Project Site / Project Description .....</b>	<b>5</b>
<b>Audience.....</b>	<b>6</b>
<b>Situation / Current Problem .....</b>	<b>7</b>
<b>Solution / Strategy .....</b>	<b>8</b>
<b>Qualifications.....</b>	<b>10</b>
<b>Benefits.....</b>	<b>11</b>
<b>Timeline .....</b>	<b>12</b>
<b>Budget .....</b>	<b>13</b>
<b>Literature Review .....</b>	<b>13</b>
<b>Theory .....</b>	<b>21</b>
<b>Research Design .....</b>	<b>27</b>
<i>Methodology .....</i>	<i>27</i>
<i>Variables.....</i>	<i>28</i>
<b>Validity.....</b>	<b>29</b>
<i>Construct Validity.....</i>	<i>29</i>
<i>Content Validity.....</i>	<i>30</i>
<b>Reliability.....</b>	<b>32</b>
<b>Information Analysis .....</b>	<b>32</b>
<b>Conclusion .....</b>	<b>33</b>
<b>WORKS CITED: .....</b>	<b>34</b>
<b>APPENDIX A .....</b>	<b>36</b>
<i>Survey Questions.....</i>	<i>36</i>

## Introduction

With the help of the Internet, people are able to maintain active contact with sizable social networks, even though many of the people in those networks do not live nearby. The Internet has the capacity to help maintain and cultivate social as well as professional networks that many people find beneficial. At their most basic usage, online networks help people stay in contact. At the broad end of the Internet social network spectrum, people use the Web to find support and information as they face important decisions.

Individuals who are already connected through offline ties have a higher likelihood to create online ties and then use these connections to create social and professional opportunities for themselves and for their contacts. (Mergel 10) Professional and trade organizations like The National Association for Multi-ethnicity in Communications (NAMIC) can experience benefits such as increased member loyalty and membership retention by providing Internet tools that allow members to use their organizational ties to interact. Web 2.0 technology components, which include discussion boards, blogs, RSS (Really Simple Syndication) feeds, event calendaring and group e-mailing, comprise the community tools that allow people to take advantage of existing ties, form new ties and use these connections to affect their social and professional status. This document is a proposal to build an online community for a subset of the NAMIC membership population by using Web 2.0 components on NAMIC's web site.

This document begins with an introduction to NAMIC and the project site description, and a discussion of the audiences and goals for the project. Next, the current

problem that the project addresses is explained, followed by an overview of the proposed solution, benefits for the main audiences, consultant qualifications, and the project timeline, which outlines the milestones and deadlines.

The literature review, which follows, discusses related research that supports the project goals. The theory section attempts to explain the theoretical underpinnings of the project, and the methodology section, which is supported by the literature review section, details the research that will be performed that will help define the project direction and lay the groundwork for continuing project evaluation. Lastly, the conclusion section outlines next steps required to move the project forward.

NAMIC is a 501(c)(6) trade association that educates, advocates and empowers for multi-ethnic diversity in the telecommunications industry. NAMIC was founded in 1980 and currently has a staff of ten that creates and implements national programs for its more than 1,500 members in 17 national chapters. NAMIC's Executive Leadership Development Program (ELDP), in association with UCLA Anderson School of Management, was launched in Fall 2001 as a result of a NAMIC research study that found that people of color are severely underrepresented in the cable industry's executive suites. ELDP provides education and mentor programs designed to help members develop their potential to gain access to the industry's executive level positions.

The ELDP targets upper-middle managers who have a minimum of two years experience at the director level and above from the telecommunications industry, and who are seeking senior-level positions. Their superiors who believe that their performance and potential puts them on track for future executive-level responsibilities must nominate members. Only a select few applicants each year are granted entrance to

and graduate from the ELDP, which develops a pipeline of leaders of color who will be well prepared to take the next steps up the executive ladder.

The core values of the ELDP curriculum are areas that are critical to sustained success in the telecommunications industry: marketing and financial analysis; corporate strategy; organizational behavior; managing innovation; operations management; achieving optimal results from diverse teams; communication strategies in a multi-cultural context; change management; and entrepreneurship. Additionally, participants spend time in guided examination of individual leadership styles, strengths and "blind spots," emotional intelligence, and the unique experiences that executives of color have with power—acquiring it; using it wisely; comprehending in all its cultural and organizational complexity. (NAMIC.com)

#### Project Site / Project Description

Consultants created the NAMIC web site, NAMIC.com, and NAMIC administrative staff updates site content items as needed. The site is a largely informational site that prospective members, current members and donors can get information about past and present NAMIC events and initiatives. While the site does have a job bank component supplied through a third-party provider, NAMIC.com generally lacks any substantial interactivity. Because NAMIC does not have an internal IT department, they periodically solicit consultants to support various technology initiatives.

James Jones, Senior Director of NAMIC Education Programs and ELDP programs director, would like to create a membership-only virtual community area on

NAMIC.com that will be exclusive to the ELDP alumni, and that will offer access to group e-mailing, discussion boards, event calendars, and blog creation tools. EDLP exclusivity of the virtual community on NAMIC.com is expected to support and reinforce the unique ties of the ELDP members as well as sustain the energy and enthusiasm that the alumni experienced during their coursework.

Of major importance to NAMIC is that the proposed online community imparts to the user at all levels of functionality and look-and-feel the NAMIC.com experience. Therefore, a high-level requirement of the proposed virtual community is that it displays a seamless visual design into the current NAMIC.com web site.

In my role as a technical and design consultant for NAMIC, I present this proposal to remedy the technological barriers to virtual community participation and networking by offering a plan to create a community and networking solution for the ELDP on NAMIC.com. In addition to managing all aspects of the project that include budget and scheduling, I will survey the ELDP, create and test the design of the online community, select the technologies to be used, and perform the technical implementation.

#### Audience

The primary audience of the virtual community is the ELDP alumni. ELDP alumni will receive a place on NAMIC.com to network and to share information and ideas with other members. As a repository for social and professional data on the ELDP, the online community will hold the thoughts, ideas and challenges of members as it shows their progress since ELDP graduation. Additionally, through the loyalty that the

virtual community nurtures, the community will provide an additional outlet for alumni donations for the program.

The secondary audience of the virtual community is the ELDP program director who creates and oversees programs for the ELDP. The program director's main goal in creating a virtual community for the ELDP is to provide services to members that support, encourage and sustain group participation and organizational loyalty. The tertiary audience for the online community is the NAMIC president. The president requires substantive programs for members that also may translate into member giving, as well as programs that encourage future large funder donations. The Walter Kaitz foundation, the major donor for the ELDP, is a fourth-level audience of the virtual community in that the foundation has an interest in seeing its donor dollars spent in ways that reap benefits both for the ELDP membership base as well as for NAMIC.

#### Situation / Current Problem

Presently, the ELDP is NAMIC's best-funded and most prestigious program. According to a September 2007 NAMIC study conducted by the Oliver Wyman Group, ELDP participants reported the highest program satisfaction of all program participants surveyed. The Wyman survey results also showed that 72% of NAMIC's members joined the organization in search of networking opportunities. In feedback comments from the survey, 23% of respondents stated that they desired more networking opportunities, and 21% desired better communication with other members across the country. (Wyman 14)

At each level of professional organizations, that now include the C-suites, using Web 2.0 technologies has become a part of the way that people network professionally

as well as personally, with the boundary often blurring between the two on professional networking Web sites. Web 2.0 components are advantageous tools that bolster the professional's ability to prosper and remain in place at the top of the corporate food chain. The Internet's current crop of community tools is about inclusion where people gather insights from others and allow for unprecedented interactivity that harnesses the wisdom of many.

However, the NAMIC Web site, NAMIC.com, presently offers members no outlet for networking or community interaction. Membership organizations such as NAMIC sell their "members to each other--their knowledge, their networks, their opinions, their camaraderie. Still, the technological tools, processes, and approaches of today's associations do not fully support the realization of that goal." (Della Rocca)

#### Solution / Strategy

The solution provided herein is to utilize Web 2.0 technologies to develop a membership-only virtual community for the ELDP alumni on NAMIC.com. The strategy is two-fold; the first phase is to perform the research and design of the community, and the second phase is implementation and integration of the Web 2.0 technologies onto NAMIC.com. The research results will inform the design and structure of the online community as well as lay the foundation for the configuration that will take place in the implementation phase.

The deliverables for Phase One is the survey findings report, the research and selection of Web 2.0 technologies, and the layout, navigation and architecture design of the online community. The survey findings report will provide an assessment of the

ELDP membership's Internet habits as well as provide a basis for evaluating the alumni's ability to engage the online community to utilize the latent social ties of the ELDP that may result in increased social and professional opportunities. Since we have data from the Wyman Survey that indicate ELDP alumni's desire for increased networking opportunities, the proposed survey will investigate the alumni's overall Internet habits, online community activities and preferences, as well as behaviors in and expectations from online community involvement. Survey findings will initially inform the design and navigation of the online community, and ongoing, the findings will provide a basis for continual community evaluation and improvements as needed. See Appendix A for the survey questions. The proposed design will use the NAMIC branding and style guides to instill visual continuity from NAMIC's main web site to and throughout the community area.

During the period of survey response collection, the research will take place for Web 2.0 solutions that will integrate into NAMIC Web server infrastructure. Specifically, I will investigate, target and recommend integration solutions for discussion board, event calendaring and blog creations tools for purchase or development. To support NAMIC's desire for seamless visual and navigational transitions between NAMIC.com and the ELDP online community, technologies will be assessed and then designed to support functionality as well as look-and-feel that encapsulate the NAMIC.com experience for the end user. To ensure a user-centered community experience, ELDP members who agree will be contacted for participation in usability testing of the online community.

The deliverables for Phase Two, implementation, includes front-end programming of the layouts and style sheets, back-end programming that includes the configuration and

integration of the Web 2.0 technologies, and all miscellaneous code development. Because NAMIC.com is currently configured in a shared hosting server environment, there is a limitation to the kinds of software that may be installed on the Web server. NAMIC is therefore constrained to either develop proprietary programming or utilize third-party hosted Web 2.0 technical solutions. However, technical integration of the final solutions that are chosen will utilize NAMIC.com's existing Microsoft .NET environment and Microsoft SQL database infrastructure.

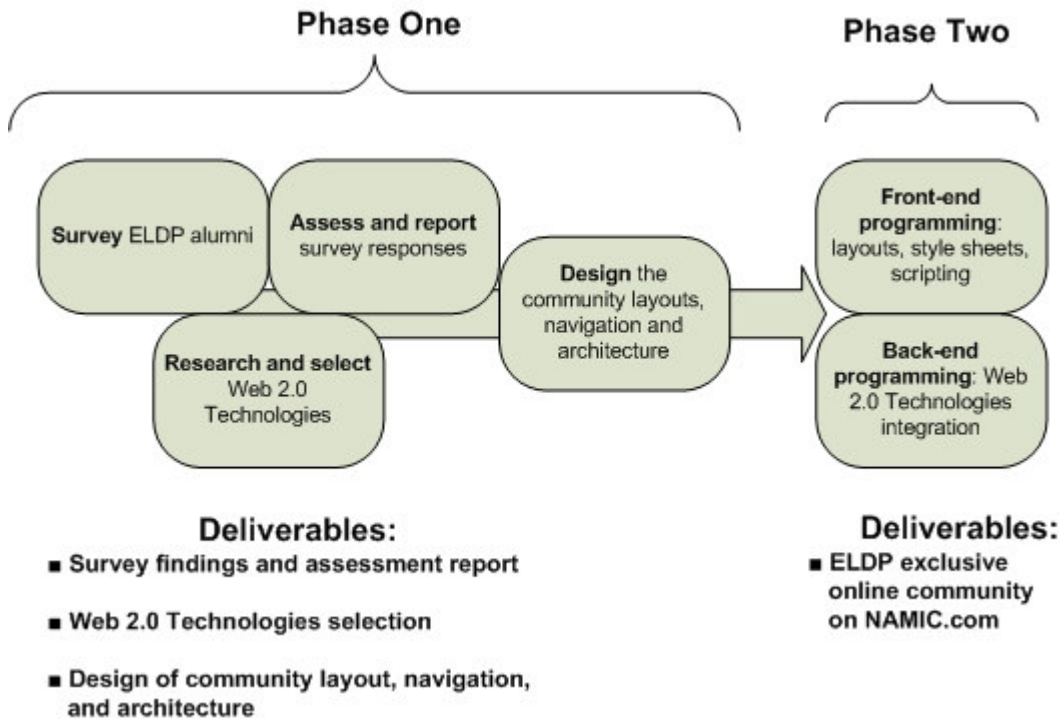


Fig. 1. Strategy for ELDP online community on NAMIC.com

### Qualifications

A combined twenty-five-plus years in the design and web programming fields that is supported by the core competencies of the New Jersey Institute of Technology Master's program in technical communication lay the solid creative and technical foundation that will build the online community. The expertise to be used in building the

community is sharpened through years of project managing and developing media assets for print and electronic media, in both the corporate and non-profit sectors. The client list includes non-profits such as Urban Youth Alliance International and Harvest Fields, as well as corporations such as Earl Graves Publishing, McGraw-Hill and The Economist.

### Benefits

There is benefit from the online community for both NAMIC and the ELDP membership. NAMIC can use the community as an example to its funders of the kind of progressive programs implemented to service its members. As well, NAMIC can use the success of the ELDP online community to solicit funding for community areas for its other program areas. As ELDP members discuss topics of interest in the online community, NAMIC can discover how its members genuinely feel about the content, direction and scope of programs, as well as what kinds of programs and activities members would like NAMIC to sponsor in the future. Unlike responses to a NAMIC survey or questionnaire, the community discussions will be unsolicited and unalloyed comments from members, from which NAMIC can glean valuable information.

The online community can also serve as a tool to increase NAMIC membership loyalty and member retention. As ELDP members network professionally and socially, build stronger ties online and possibly convert those online ties to offline ties, membership loyalty to NAMIC as the facilitating organization will undoubtedly increase.

The implementation of the community will allow NAMIC to be seen as a technically relevant organization to both its funders and its members. As NAMIC is an organization that caters to the needs of those in the fast-moving telecommunications

industry, NAMIC needs to be seen as an organization that is capable of providing communications tools on or above par with the industry.

Of major benefit for the ELDP membership is that they will have a place to network. Members can create new professional and social contacts with other ELDP alumni or strengthen their existing ties. The community will be a place to transfer and sustain the momentum and enthusiasm of the ELDP classes, and use the energy to inform discussion. The content of the community will be member driven and therefore totally focused on member needs. In discussion areas, members can post questions and receive answers to a range of topics to help resolve career and industry-related issues. The blog area will allow members to create diaries of their career journey to share their stories and document their progress. Members can also publicize event information on event calendars and send group e-mailings to the entire ELDP database as needed.

### Timeline

Table 1  
Project Timeline

<i>Phase One</i>	
Create and deploy survey to ELDP alumni database	January – February
Research and select Web 2.0 applications	February
Evaluate and assess survey responses, and report survey findings	March
Design layouts, navigation and architecture of online community	March – April
Usability Testing	April
<i>Phase Two</i>	
Front-end programming	April - May
Back-end programming	May
Launch ELDP online community	June

### Budget

The Walter Kaitz Foundation is the major donor of the EDLP. NAMIC requested and received from the Foundation \$5,000 for the first year and \$2,500 for each year thereafter to support the online community. The costs are based on preliminary estimates of third-party Web 2.0 integration solutions that include initial setup, configuration and yearly recurring maintenance and support fees. Maintenance and support costs of the Web 2.0 technologies that are selected for final implementation will be within the allotted budget.

### Literature Review

Online communities are a new phenomenon relative to the research that has been performed in social network theory. The computer-mediated communication (CMC) field of study offers contrasting and differing views on the effects of CMC on community and social networks. Of the many studies that have examined CMC, there has not been many that address the substance of online community that can affect social networks.

Moreover, even today there is not a consensus of agreement on the effect that online communities have on social networks. Early studies forwarded that any level of Internet usage negatively affected social networks. Subsequent studies indicated that CMC exhibited neither a positive nor negative affect on social networks. (Quan-Haase and Wellman 19) However, due to the recent proliferation of social networking sites and the incorporation of community functionality into many existing sites' architectures, there is now a small body of work that examines CMC and its direct and positive impact on social networks. These studies examine the substance of computer-mediated

communication that potentially strengthens social capital as well as both online and offline social ties.

The residuals that emerge from the dynamics of formal or social group interactions can be used to facilitate future social exchanges, and these residuals are known as social capital. Individuals and communities draw on these residuals to achieve ends that could not otherwise be accomplished by “relying on physical, financial, and human capital alone.” (Best and Kreuger 395) The type of activity that users engage in online positively correlates with social capital; users who participate in chat, bulletin and discussion boards expand their social network and strengthen social ties. In “Online Interactions and Social Capital,” Best and Kreuger investigated usage and time patterns on the Internet as well as time spent in online and offline social activities, and found that contacts made in online communities increase social capital. Their study results suggest that online communities “foster connections critical to expanding networks and producing residuals such as generalized trust.” (Best and Kreuger 404-406)

Best and Kreuger conclude that the trust that participants develop is a result of:

- their involvement with a group of like-minded individuals with whom they share information and opinions
- the closed social structure of the group that helps to facilitate the establishment of social norms
- the expansion of social networks and potential to increase social ties that would otherwise be unavailable (Best and Kreuger 397)

Similar to Best and Kreuger, Shanyang Zhao’s investigation of social contacts also pays particular attention to the different types of online community activity that users engage in and their resultant net effect on social capital, as well as the overall benefit to the social network that each type of activity imparts. Zhao examined the results

of the 2000 General Social Survey, which questioned respondents on Internet usage and time patterns as well as the levels of interpersonal contact through traditional means of communication. (Zhao 850)

Zhao's study reports that nonsocial Internet use is negatively related to the number of social ties, and social use of the Internet is positively related to interpersonal connectivity. The amount of time that a user spends online was also found to be related to social ties differently in that the relationship is positive if online time is spent on interpersonal contact, but the relationship is negative if spent on solitary activities. (Zhao 858-859)

While Zhao cautions that increased social ties should not be inferred, he does assert that the type of activity performed online determined the likelihood of whether the online contacts became offline contacts; social users of the Internet who engaged in chat, bulletin or discussion boards were not only more likely to have a larger social network than non-social users of the Internet, but were also more likely to convert online contacts into offline contacts. (Zhao 859)

Discussion groups are a place where participants socialize and in so doing, create communities of practice, wherein members regularly share experience and expertise. Discussion participants are a self-directed autonomous group that are "seen in the business world as important means for generating value and motivating contribution." Within the groups, each participant enacts a distinct role in the discussion that may be in the form of "local experts, answer people, conversationalists, fans, discussion artists, flame warriors, and trolls." (Welser et al.)

Welser et al. coded the content of thousands of discussion board messages to identify three social roles defined in terms of behaviors: answer related behaviors included seeking clarification, giving advice, offering support, and sanctioning norm violators; question asking related behavior was defined as explicit requests for information; discussion related behaviors included all other exchanges such as playful banter, story-telling, bragging, confrontation, announcement and promotion of events, products, or services. In their role, the answer people propel the discussion and generally keep the progress in the group as they provide “prompt, accurate, and thorough help ... to potential strangers without direct compensation or expectation of reciprocity and, often, without thanks.” (Welser et al.)

However, altruism is not necessarily the motivator that drives the answer person to contribute. Status seeking is a social passion that drives certain discussion participants to invest time and effort in “giving the gift of their experience to others without direct benefit to themselves.” The social passion is a source of continuing participation in discussion groups and helps to sustain the longevity of the group. The motivation to contribute content online is strongly associated with building online identity and status seeking. As well, reciprocity is significantly correlated with both identity building and status seeking. Status is embedded in the answer person’s communication of information and, intentionally or unintentionally, the answer person manipulates the exchange to establish a particular identity that makes a bid for status:

...because status seeking online cannot be done by display or by asserting rank, it takes a different form of identity enactment: The gift comes with a message about the gift giver, a message that contains the identity that the giver wants to establish as a way of communicating status. (Lampel and Bhalla 444-450)

CMC that takes place in the context of an organizational structure provides additional motivators for users to contribute. Users who have a particular interest in contributing to the organization's success and also to solving problems of others in the organization report a high degree of organizational motivation in their role as answer person. There may be no direct personal benefit for the answer person in supplying information, but the motivations may be grounded in organizational citizenship. In Constant et al's study of information exchange through organizational weak ties, the strength of the answer people's social ties to whom they gave answers was low. The measurements for the answer people's motivations displayed that reciprocity and altruism was highly correlated with organizational motivation. Answer people enjoyed helping others because they expected others to do the same for them and as well, they felt it important to be a "good company citizen." (Constant et al. 129) That the social ties were weak ties in Constant et al.'s CMC network study is notable in that the computer network was used to draw on weak ties to link people "across distance and time and hierarchical level and organizational subunit," yet the network proved useful to the degree that it put people in touch with those offering superior resources. (Constant et al. 130)

Blogs are personal journals on the Internet that are displayed in reverse chronological sequence, and facilitate interactive computer mediated communication through text, images, and audio/video objects. (Huang et al. 473) The term weblog was first applied to online personal journals in 1997 and blogging as an online activity has been increasing exponentially since mid-1999, fueled by the release of the first free blogging software and also encouraged by reports from the mainstream media of the grassroots power of blogs as alternative news sources. (Herring et al. 143) Specialized

search engines and meta-directories like blogpulse.com or technorati.com have tracked between 50 and 85 million blogs as of June 2007, although the exact number of blogs is impossible to state at any given point in time due to the highly dynamic and decentralized character of blogs. (Schmidt)

Blogs written in the context of an organizational structure also contribute to the social ties within blog communities. While there is still some debate over the interactivity aspect of blogs, blog conversational practices and blog networks have been documented. For example, blog rolls that list links to the blog author's favorite blogs, RSS blog feeds that aggregate blog content, and weblog conversations in the form of comment posts or replies to the original blog posting, not only indicate community but also provide a level of interactivity to the blog experience. (Efimova et al. 5) An individual blog, however, is not likely to represent a community; blog communities emerge from connections between blogs and their authors, as opposed to a single shared space, as in discussion boards. (Efimova et al. 2)

In "Blogging Motivations and Behaviors: A Model," Huang et al. researched bloggers and their reasons for starting and maintaining blogs (n=311). Huang et al.'s literature review reported that more than half of bloggers are under the age of 30, 84 percent of bloggers keep blogs that are largely of the personal journal type as a hobby or pastime, and most bloggers are both heavy users of the Internet and highly engaged with tech-based social interaction. The findings in Huang et al.'s research study were consistent with past studies, revealing that most bloggers actually use blogs for individualistic expression and communication, and have a mean age of 23. (Huang et al. 473)

Based on previous literature, Huang et al. began their study with five blogging motivators in their model. The five motivators were: to document life experiences, to provide commentary and opinions, to express deeply felt emotions, to articulate ideas through writing, and to form and maintain community forums. However, for a blogger, “these motivations may not be mutually exclusive and may play out simultaneously.” (Huang et al. 474) Huang et al.’s study findings bore out that, “to express deeply felt emotions,” and “to articulate ideas through writing” were intertwined in the process of self-expression through blogging. Additionally, Huang et al. discovered that information seeking had been neglected in previous literature and studies as a motivator. Blog site features such as comment fields, blog rolls, also known as RSS feeds of external blog links, and general external hyperlinks, indicate information seeking in blogging. These features help bloggers to gather the information they need in a convenient way and information searching is thus another motivation that drives them to create and manage their blogs. (Huang et al. 475) The presence or absence in blogging software or blog services of specific features that encourage information seeking is determined in part by the blog software used by the blog author and also partly by the blogger’s familiarity with negotiating and displaying desired aspects of the software’s feature set. (Scheidt et al. 156)

Because online communities are continuously evolving, the user interface design should be adaptable to the evolving needs of the community and flexible to accommodate growth and change. “Involving participants in software design helps to ensure their social and political needs are taken into account” (Preece 617) Jenny Preece refers to the process of involving the user in the design process as participatory community-centered

development (PCCD), which is composed of designing usability and supporting sociability.

Designing usability includes a community needs assessment and user task analysis requires, which involves understanding the community's social needs, individuals communication task needs and any technical constraints that must be considered. (Preece 618) In designing usability, the basic requirements are that the software should have a consistent look and feel throughout the community area. Also, users should be in control of what the software does, not controlled by it, and the way the software responds should be predictable. In short, the interface should be: "effective to use, efficient to use, sage to use, have good utility, be easy to learn, and easy to remember how to use." (Preece 623)

Information display should be intuitive for users; information should be easy to find and performing tasks with information-oriented goals should be done with few or no errors. As well, users should be satisfied with and like the information design and how it is structured. Navigation is a key usability issue for online communities because of the large amount of information exchange. Of particular importance is the time users take to navigate through the community and its associated information resources, and the ease that particular information can be found or a part of the community can be reached. (Preece 624)

Supporting sociability is concerned with planning and developing social policies and supporting social interaction, and involves developing a conceptual model of the community space and then either building or selecting software with suitable usability, and planning the sociability support that will be needed. The needs of the individual as

well as the needs of the community must be taken in to consideration. To support sociability, community members should be involved in the formation and development of policies and procedures that govern community interaction. The guidelines must be strong enough to guide community behavior but flexible enough to change as the community evolves. (Preece 625)

### Theory

Social network analysis theorists address interaction patterns of computer-mediated social networks through concepts that include network structure, social ties, social capital, and homophily.

A social network is a social structure between actors, mostly individuals or organizations. The social structure of social networks displays little or no formality in delineating positions and rules and in allocating authority to participants; the occupants, positions, resources, and rules and procedures are fluid. The actors arrive at mutually agreed upon norms for participation and interaction, which defines participants' roles. A network may evolve naturally or may be socially constructed for a shared focus or interest around a resource. (Lin 38)

Mergel and Langenberg's topology of social networks defines two major network types: physically existing networks and virtual/online networks. The virtual/online network is composed of informative networks and collaborative networks. Although there is no consensus on the distinction between these two networks, Mergel and Langenberg's proposal for the distinction rests on prior theory that separates e-mail networks from general discussion networks. (Mergel and Langenberg 6)

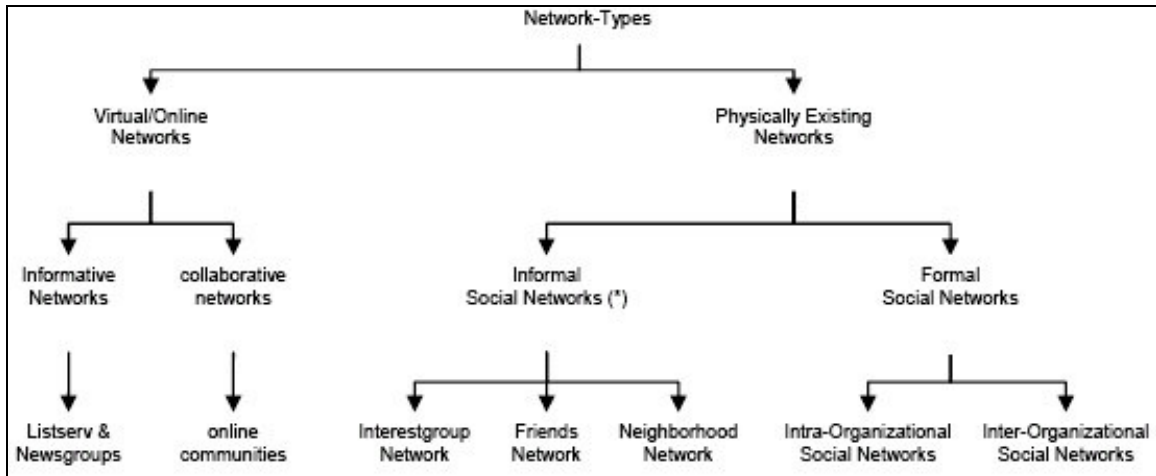


Fig. 2. Topology of social networks from Ines Mergel and Thomas Langenberg, "What makes online ties sustainable? A Research Design Proposal to Analyze Online Social Networks." PNG Working paper No. PNG06-002. (Cambridge. 2006) 5.

Informative networks are those that refer to information sharing and knowledge transfer networks. Network members visit the platform regularly and extract the information that is most valuable for them, and although discussion and interaction takes place among network members, the major concern of the individual is to extract valuable insights, information, or knowledge. Members of this kind of online community are most likely to have strong ties and a functioning social network in the real world. Stronger offline social networks indicate that the same or similar people will be found in an online social network, and the Internet therefore serves to increase information and social ties on both a personal and professional level. Collaborative virtual/online networks are networks wherein shared interests drive online relationship development, and there is a high degree of interactivity among participants. The main goal of participants in collaborative networks is to contact and interact with new acquaintances with the potential for offline relationship development. (Mergel and Langenberg 7-8)

Contemporary social network analysis theory builds on earlier social network theories that address the impact of the behavior of individuals on the social networks, in

which they are imbedded, or the ways that behavior is shaped and constrained by one's network, as well as the ways that individuals can manipulate their networks to achieve specific goals. (Granovetter 1973) Social network analysts look beyond the specific attributes of individuals to consider relations and exchanges among social actors. Analysts ask about exchanges that create and sustain work and social relationships. (Garton et al )

Each type of social network is composed of relations, ties and roles. Relations are characterized by content, direction and strength. The content of a relation refers to the resource that is exchanged, such as different kinds of information about administrative, personal, work-related or social matters. The strength of relations differ with respect to communication frequency between pairs; pairs may communicate several times a day or several times a week; they may exchange large amounts of information or trivial amounts.

A tie connects a pair of actors by one or more relations, and varies in content, direction and strength. Pairs may maintain a tie based on one relation only, or based on many relations. Tie strength, referred to as weak or strong, varies in context. Weak ties are generally infrequently maintained, non-intimate connections that share no joint tasks or friendship relations. Strong ties include combinations of intimacy, self-disclosure, provision of reciprocal services, frequent contact, and kinship, as might exist between close friends or colleagues.

While pairs who maintain strong ties are more likely to share their resources, what they have to share is generally limited by the resources entering their networks. Weak tie pairs are less likely to share resources, but they provide access to more diverse types of

resources because each person operates in different social networks and has access to different resources. (Garton et al.)

Granovetter's seminal work in 1973 on the concept of tie strength addresses what he saw as a "fundamental weakness of current sociological theory ... to relate micro-level interactions to macro-level patterns in any convincing way." Specifically, how interaction in small groups aggregates to form large-scale patterns through the circular process of small-scale interaction becoming translated into large-scale patterns, and these, in turn, feeding back into small groups. (Granovetter 1360)

Granovetter defined the strength of a social network tie as:

a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie. Each of these is somewhat independent of the other, though the set is obviously highly intracorrelated. (Granovetter 1361)

The hypothesis of Granovetter's strength of weak ties is that weaker ties tend to form bridges that link individuals to other social circles for information not likely to be available in their own circles, and such information should be useful to the individuals. (Lin, Social Networks 469) Prior theory on tie strength attributed value of strong ties over weak ties; Granovetter theorized that since weak ties promote access to different and new information, they are socially valuable as well.

A set of relations or ties comprises a social network that is either ego-centered or whole. The ego-centered network type centers around relations reported by a focal individual. Their specific relations with ego define members of the network. The whole network type is based on population boundaries such as a formal organization, department, club or kinship group. The ties that all members of a population maintain with all other group members define a whole network type. (Garton et al.)

Roles are identified by members' behavior that suggests the presence of a particular network role. Members enact their roles according to the resources that each member brings to the group. Regularities in the patterns of relations across networks or across behaviors within a network allow the empirical identification of network roles. The role is not identified by a title and cannot be found on organization charts. (Garton et al.)

Social capital theory focuses on the actions taken by actors, who are either group members or a collective group, for the purpose of either maintaining or gaining valued resources. The collectivity, or the community, promotes its self-interest by conferring relatively higher statuses on individual actors who possess more valued resources. The resources are valued goods that may be tangible or intangible, and are generally considered to be societal status symbols. All actors take actions to promote self-interests for survival and preservation by maintaining and gaining valued resources if such opportunities are available. When the existing valued resources are secured, only then do actors seek to gain additional valued resources. (Lin, Social Networks 31-55)

For James Coleman, social capital is defined by its function. It is a variety of entities, with two elements in common: “they all consist of some aspect of social structure, and they facilitate certain actions of actors...with in the structure. Like all forms of capital, social capital is productive, making possible the achievement of certain ends that in its absence would not be possible.” (Coleman S98)

The concept of social capital applied by Quan-Haase and Wellman is:

1. Social contact: Interpersonal communication patterns, including visits, encounters, phone calls, and social events.
2. Civic engagement: The degree to which people become involved in their community, both actively and passively, including such political and organizational activities as political rallies, book, and sports clubs. (Quan-Haase 1)

Homophily is the principle that a contact between similar people occurs at a higher rate than it does among dissimilar people. Homophily is also known as the like-me hypothesis, and forwards that social interactions tend to take place among individuals with similar age, lifestyles and socioeconomic characteristics. It requires greater effort for

actors to find and engage others of dissimilar resources. (Lin, Social Capital 39) The implication of homophily in social networks is that distance, in terms of social characteristics, translates into network distance, and represents the number of relationships that a piece of information needs to travel to connect two individuals, and as a result, represents weaker ties. (McPherson et al. 416)

Among actors, the types and the amounts of resources are positively related to similarity of social positions. Actors with dissimilar resources may interact provided that their resources are of equivalent values. However, given the empirical evidence supporting the prestige principle, which states that people prefer to associate with others of somewhat higher social status, weaker ties provide access to heterogeneous resources and increased social capital. (Lin, Social Capital 68) The motivation for a higher status actor to engage a lower status actor is contingent upon the “relative utility or payoff to each in each transaction,” i.e., the benefits in social capital for each actor. (Lin, Social Capital 145)

## Research Design

### *Methodology*

An online survey will be used as the instrument to establish a quantitative basis for assessing the effectiveness of an ELDP online community to strengthen social capital. Additionally, answers that respondents provide to survey questions will determine the structure and content of the online community. The sample size of the survey will be the entire ELDP database of past and present participants. The entire database will be used because the historically low response rate for Internet surveys makes it advantageous to deploy the survey to as large a sample size as is possible.

### *Variables*

There are four independent predictor (x) variables that will determine the dependent (y1) variable. The dependent variable is an ELDP online community that strengthens social capital. The four major types of independent variables are Internet activity (x1), community behavior (x2), motivators for computer-mediated community participation (x3), and participatory community-centered development (x4).

#### *Internet activity variables*

No distinction will be made between work-related Internet activities and non-work related because of the potential for increased social capital when participating in informative networks as well as collaborative networks.

*Overall Time spent online.* The overall time spent online will be used as a baseline measurement against the time spent on individual Internet activities.

*Time spent online in social activities.* The time spent online in social activities is positively related to social capital

*Time spent online in non-social activities.* The time spent online in non-social activities is inversely related to social capital

*Types of computer-mediated community activities engaged.* Online community activities are positively related to social capital. Roles vary by the specific community activity of e-mail, chat, discussion board, bulletin board or blog.

#### *Online community behavior.*

*Online community behavior.* Each participant enacts a behavioral role in communities of bulletin, chat and discussion boards that helps to determine the direction

of discussion. The roles are enacted through the behaviors of answer person behaviors, question behaviors, and discussion behaviors.

*Motivators for computer mediated community participation variables*

*Organizational motivation.* CMC that takes place in the context of an organizational structure provides additional motivators for users to contribute. Organizational motivation measures participants' interest in contributing to the organization's success and also to solving problems of others.

*Self-expression.* 84 percent of bloggers maintain blogs that are largely of the personal journal type that enables them to express deeply felt emotions and to articulate ideas through writing.

*Information Seeking.* Information management features help bloggers to gather the information they need in a convenient way and information searching is a motivation that drives bloggers to create and manage their blogs.

*Participatory Community-centered Development*

*Designing Usability / Supporting sociability.* Designing usability and supporting sociability involves the user in the community design and policy and procedure development processes to ensure that the community experience is user-centered.

## Validity

*Construct Validity*

The construct that is being measured is the effectiveness of the ELDP online community to strengthen social capital. The instrument being used to measure the construct are the variables that will reveal the extent that ELDP members will engage the

latent ties of the ELDP in the online virtual community to result in increased social capital. Each of the variables measures an aspect of the tendency to utilize computer-mediated community to affect social capital.

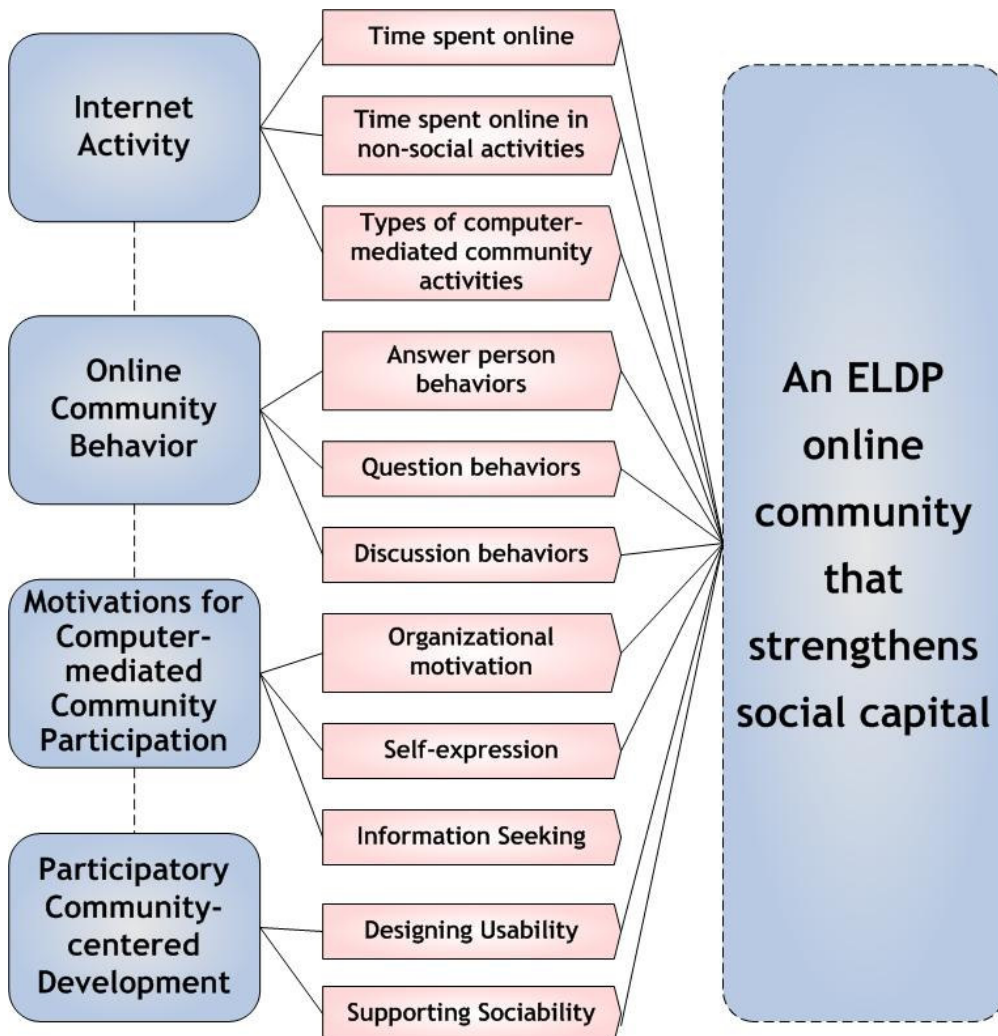


Fig. 3. Model: An ELDP online community that strengthens social capital

#### *Content Validity*

The instrument to be used is an online survey to be deployed to the entire ELDP alumni database. The questions in the survey provide appropriate content for measuring the construct.

Table 2  
ELDP Alumni Online Community Survey Questions

<i>Variable</i>	<i>Question</i>	<i>Literature Review</i>	<i>Question Type</i>
<b>Internet Activity Variables</b>			
Overall time spent online	How much time do you spend online?	The overall time spent online will be used as a baseline measure	Multiple choice
Time spent online in non-social activities	How much time do you spend online engaged in non-social activities?	Time spent online in non-social activities is inversely related to social capital	Multiple choice
Types of computer-mediated community activities engaged in	How much time do you spend online engaged in social activities (e-mail, chat, discussion board, social networking site)?	Time spent online in social activities is positively related to increased social capital	Multiple choice
	What types of community activities do you participate in online (check all that apply) E-mail, chat, discussion board, blog, social networking	Time spent online in social activities is positively related to increased social capital	Multiple choice
	If you had more time to spend online, in what types of community activities would you participate? (check all that apply) E-mail, discussion board, blog, social networking		Multiple choice
	How often do you read blogs?		Multiple choice
Do you currently author a blog or have you authored one in the past?	Yes / No		
<b>Online Community Behavior Variables</b>			
Answer behaviors	In discussion or bulletin boards, I often provide answers to other's requests for information	Answer people propel the discussion and generally keep the progress in the group	Likert, 5 scale
Question behaviors	In discussion or bulletin boards I often post questions	Question asking related behavior is defined as explicit requests for information	Likert, 5 scale
Discussion behaviors	In discussion or bulletin boards, I often contribute to discussion threads	Discussion related behaviors include exchanges such as playful banter, story-telling, bragging, confrontation, announcement and promotion of events, products, or services	Likert, 5 scale
<b>Motivators for CMC Participation Variables</b>			
Organizational motivation	It is important to me to help other NAMIC members resolve problems	Affinity strength for the ELDP as an organization	Likert, 5 scale
Self-expression	Tools such blogs, bulletin boards and e-mails provide	84 percent of bloggers maintain blogs that are	Likert, 5 scale

	a unique and needed outlet for self-expression	largely of the personal journal type that enables them to express deeply felt emotions and to articulate ideas through writing	
Information seeking	With what blogging software are you familiar?	The presence or absence in blogging software or blog services of specific features that encourage information seeking is determined in part by the blog software	Multiple choice
<b>Participatory Community-centered Development Variables</b>			
Designing Usability	Would you be willing to participate in usability testing for an ELDP online community website?	Designing usability and supporting sociability involves the user in the community design and policy and procedure processes to ensure that the community experience is user-centered	Yes / No
Supporting sociability	Would you like to help establish policies and procedures for an ELDP online community		Yes / No

### Reliability

The survey questions that investigate ELDP member's Internet usage patterns and habits, their behavior patterns in computer-mediated community, their motivations for computer-mediated community participation and their level of homophily are based on the literature review of previous studies and theory discussion herein, and the question set provides a reliable basis to evaluate the construct.

### Information Analysis

The research method to be used is quantitative data analysis. The survey will be deployed in the first week of February and responses will be collected for a period of three weeks. The raw data from the survey responses will be imported into statistical software spreadsheets. The variables will be evaluated for measures of central tendency and relationship to infer the behavior of the entire population of the ELDP from the number of received responses. The findings will inform the navigation and architecture of

the online community and provide a basis for future assessment of the online community. Additionally, a discussion of the analysis will be included in the final report.

### Conclusion

Successful computer-mediated communities have in common participants who invest the community with social capital, have a high number of weak or latent ties that can be made stronger through bridging ties and there is a social structure that exhibits a significant level of homophily. Under these circumstances, participants can build trust with others, accept advice and increase social capital.

Organizations that can draw existing social networks into them will build stronger community than those that do not. Populations within organizations can recruit new users who may then pull in their already existing social connections. The latent ties of the ELDP are the low-hanging fruit of the social networking tree that can feed the community needs of its members as well as the donor and membership retention concerns of NAMIC staff. With the analysis of the survey results, we will be able to assess the ELDP alumni's online community activity preferences, their online behaviors, and their motivations for online community participation. The evaluation of the survey responses against these variables will help us to assess the ELDP alumni's affinity to participate in a virtual community to strengthen social capital. In the building of the ELDP virtual community, this crucial next step of survey deployment will inform the direction and substance of the processes of design, programming and implementation that follow.

## WORKS CITED:

- Best, Samuel J. and Brian S. Krueger. "Online Interactions and Social Capital: Distinguishing Between New and Existing Ties." Social Science Computer Review. (24) 2006: 395-410.
- Coleman, James, S. "Social Capital in the Creation of Human Capital." The American Journal of Sociology. 94 (Supplement 1988): S95 – S120.
- Constant, David, Lee Sproull and Sara Keisler. "The Kindness of Strangers: The Usefulness of Electronic Weak Ties for Technical Advice." Organization Science. 7 (March-April 1996): 119-135.
- Della Rocca, Jason. "People Are the Platform." Associations Now. Aug. 2007: 11.
- Efimova, Lilia, Stephanie Hendrick and Anjo Anjewierden. "Finding 'the life between buildings': An approach for defining a weblog community." Annual Association of Internet Researchers. Internet Research 6.0: Internet Generations. Chicago, 2005.
- Garton, Laura, Caroline Haythornthwaite and Barry Wellman. "Studying Online Social Networks." Journal of Computer-Mediated Communication 3 (1), 0–0. <<http://www.blackwell-synergy.com/doi/full/10.1111/j.1083-6101.1997.tb00062.x#What%20is%20Social%20Network%20Analysis>> 16 Dec. 2007.
- Granovetter, Mark S. "The Strength of Weak Ties." American Journal of Sociology. 78 (May 1973): 1360-1380.
- Herring, Susan C., Scheidt, L. A., Bonus, S., and Wright, E. "Weblogs as a bridging genre." Information, Technology & People. 18(2005): 142-171
- Huang, Chun-Yao and Yong-Zheng Shen, Hong-Xiang Linshin-Shin Chang. "Bloggers Motivations and Behaviors: A Model." Journal of Advertising Research. 12(2007): 472-484.
- Mergel, Ines and Thomas Langenberg. "What makes online ties sustainable? A Research Design Proposal to Analyze Online Social Networks." Working paper, PNG Working paper No. PNG06-002. Program on Networked Governance. Cambridge: John F. Kennedy School of Government, Harvard University, 2006.
- Lampel, Joseph and Ajay Bhalla. "The Role of Status Seeking in Online Communities: Giving the Gift of Experience." Journal of Computer-Mediated Communication. 12 (2007): 434-455.
- Lin, Nan. Social Capital: A Theory of Social Structure and Action. Cambridge UP, 2001.

- Lin, Nan. "Social Networks and Status Attainment." Annual Review of Sociology. 25 (1999): 467-487.
- McPherson, Miller, Lynn Smith-Lovin and James M. Cook. "Birds of a Feather: Homophily in Social Networks." Annual Review of Sociology. (27) 2001: 415-444.
- Preece, Jenny and Diane Maloney-Krichmar. "Online Communities." In J. Jacko and A. Sears, A. Eds. Handbook of Human-Computer Interaction. Erlbaum, Mahwah: NJ, 2003
- Quan-Haase, Anabel and Barry Wellman. "How does the Internet Affect Social Capital." University of Toronto. Forthcoming in Marleen Huysman and Volker Wulf, (Eds.). IT and Social Capital Draft 4: Tuesday, November 12, 2002.
- Schmidt, Jan. "Blogging practices: An analytical framework." Journal of Computer-Mediated Communication. 12(4). 3 Jan 2008  
<<http://jcmc.indiana.edu/vol12/issue4/schmidt.html>>.
- Welser, Howard T., Eric Gleave, Danyel Fisher, and Marc Smith. "Visualizing the Signatures of Social Roles in Online Discussion Groups." Journal of Social Structure. 8 (2007). 20 Dec. 2007  
<<http://www.cmu.edu/joss/content/articles/volume8/Welser/>>.
- Wyman, Oliver. "NAMIC Program Impact Study: Methodology and Summary of Findings." Oliver Wyman Group. Sept. 2007.
- Zhao, Shanyang. "Do Internet Users Have More Social Ties? A Call for Differentiated Analyses of Internet Use." Journal of Computer-Mediated Communication. 11 (2006): 844-862.

## APPENDIX A

*Survey Questions*

Below is a questionnaire that is being sent to a select group of NAMIC members, the Executive Leadership Development Program alumni. We are continuously trying to improve the ELDP, and by completing this survey, you will help us to make the program better. The survey will take no more than a few minutes of your time to complete, and will go a long way towards enabling NAMIC to enhance the ELDP experience.

Please provide an answer for each question

**Section 1. Your online habits**

1. How much time do you spend online?

0 – 5 hours/week

6 – 10 hours/week

11 – 15 hours/week

16 – 20 hours/week

20+ hours/week

2. How much time do you spend online engaged in non-social activities?

0 – 5 hours/week

6 – 10 hours/week

11 – 15 hours/week

16 – 20 hours/week

20+ hours/week

3. How much time do you spend online engaged in social activities (e-mail, chat, discussion board, blog or social networking sites)

0 – 5 hours/week

6 – 10 hours/week

11 – 15 hours/week

16 – 20 hours/week

20+ hours/week

4. What types of community activities do you participate in online (check all that apply)

E-mail

Discussion board

Blog

Social networking

5. If you had more time to spend online, in what types of community activities would you participate (check all that apply)

E-mail

Discussion board

Blog

Social networking

6. How often do you read blogs?

Several times a day

Several times a week

Several times a month

Once in a while

I never read blogs

7. Do you currently author a blog or have you authored one in the past?

Yes

No

8. With what blogging software are you familiar?

Typepad

Blogger

MySpace

Blogspot

None

Other

If other, please specify \_\_\_\_\_

**Section 2. Your participation in online community**

1. In discussion or bulletin boards, I often provide answers to other's requests for information

Strongly Disagree

Disagree

Undecided

Agree

Strongly Agree

2. In discussion or bulletin boards I often post questions

Strongly Disagree

Disagree

Undecided

Agree

Strongly Agree

3. In discussion or bulletin boards, I often contribute to discussion threads

Strongly Disagree

Disagree

Undecided

Agree

Strongly Agree

4. It is important to me to help other NAMIC members resolve problems

Strongly Disagree

Disagree

Undecided

Agree

Strongly Agree

**Section 3: Online Community Design and Support**

1. Would you be willing to participate in usability testing for an ELDP online community website?

Yes: Please provide your e-mail address: \_\_\_\_\_

No

2. Would you like to help establish policies and procedures for an ELDP online community?

Yes: Please provide your e-mail address: \_\_\_\_\_

No