SENIORS' PERCEPTIONS OF THE WEB AND SOCIAL NETWORKING

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ABSTRACT

This is an examination of social networking and the elderly. Interviews were conducted with seniors and staff of senior care centers to identify current social network usage patterns by the elderly and to understand their perceptions and attitudes towards the Web and social networks. Results revealed that seniors were unfamiliar with social networking and in particular Facebook, but would be open to learning more about this application. Common themes and challenges elders face when using the web and online social networks were identified. The interviews also provided insight into developing a plan of action to help increase the use of online social networking communities by elders. .

Keywords: Social Networking, Internet, Seniors

INTRODUCTION

The Web and telecommunications have brought great changes to people's daily lives, learning and work, especially that of older adults. Information Technology (IT) targeted at the elderly is incorporated into assistive devices, home security, access to health care, banking, communication and many other areas. It has the potential to greatly enhance the lives of the elderly who are computer savvy.

More specifically, growth and enhancements to the Internet provides opportunities for banking, buying, learning, and communicating with family and friends, all of which can be a great convenience for older adults using computers [16]. Online social networking has the potential to enrich the lives of the elderly by providing them with an easy way to stay in touch with friends and family. However, as many older people have limited Web experience and find the Internet daunting, they do not stand to benefit fully from access to social networks.

There is a need to understand how the elderly perceive social networks, what benefits they could realize from the use of such networks and what might hinder their intention to use social networks to enrich their lives. This information may help seniors overcome obstacles and encourage them to use online social networks.

While there are several studies that investigate the impact of online social networking on the general populous user group, there is no research that discusses the influence or the potential benefits of online social networking on elders. Given that online social networking is still a growing phenomenon, academic research in this realm is still in its infancy. Given the state of the research and literature in this arena, this study was motivated by the need to investigate the use of social networking Web sites by elders and understand their attitudes towards social networking. In so doing, we expected to reveal findings that would be useful for seniors who plan to engage in online social networking. Senior centers and other elder care institutions have much to gain from encouraging elders to adopt social networking websites. The findings could assist elder care facilities to increase social interaction within their facilities. Finally, the research will also add to the existing literature on elders and IT that would help provide insights on how to reduce the digital divide problem that exists in the elderly population.

The remainder of this paper identifies how social networks are currently used by various demographics and groups and describes the current state computer literacy and social networking by seniors. It further discusses the usage and attitudes towards social networking as perceived by both senior citizens and elder care institutions. Finally it presents implications for future research and practice.

THE LATEST EVOLUTION OF THE WEB

At present, the Web is no longer seen as merely another display mode to publish information. The Web is in the forefront of a revolution of greater user collaboration and sharing online that enhances almost all aspects of life to every demographic in the population.

Web 2.0 has enhanced its functionality to present interactive features and applications to users [1]. Few concepts in information technology create more confusion than Web 2.0 as it is defined in different ways by different people. However, the very fact that Web 2.0 is described as being so many things underlines its importance. It has become a catch-all buzzword

that people use to describe a new generation of Internet that is emerging to form the "participatory Web." What seems clear is that Web 2.0 brings people together in a more dynamic way. Social networking is a key characteristic of the Web 2.0 world.

An online social network site is described as online space where an individual can create a profile to establish or maintain connections with others [5]. These Web sites are often seen as relationship facilitators. In the past five years, these sites have grown from catering to the activities of college students into a phenomenon that engages tens of millions of Internet users. While there are many social networking Web sites, the most common ones are facebook.com and myspace.com. Since February 2007, Facebook was the sixth most visited Web site in the United States as measured by average visits [3] with an active user count of over 140 million members that continues to grow at 250,000 users per day [17]. According to a study on Facebook users, the average user spends around 45 minutes on the site each day. These users often cite keeping in touch with real life friends and acquaintances and passing the time or avoiding boredom as the key reasons for their use [2]. Far fewer people reported using the site as a means for developing romantic relationships, finding companionship, relieving loneliness, or meeting more interesting people than they knew in real life. Recent research also indicates educational benefits as a reason for logging onto social networking sites.

A recent study asking what high school students learn from using social networking sites revealed that students listed technology skills as the top lesson, followed by creativity, being open to new or diverse views and communication skills [22]. According to the researchers, high school students are developing positive attitudes toward using technology systems, editing and customizing content, and thinking about online design and layout through social networking. This research suggests that social networking sites offer more than just social fulfillment or professional networking.

These online social networking sites are still especially popular among the 18 to 25 year old age group who are mostly college students. However, in 2008, a more mature audience was expected to embrace online communities, even though the young early adopters acted as the initial catalyst for social networks. Although growth in terms of quantity will still be largest among teens and 20-somethings, the highest percentage rise will come from parents of children who use social networks, professionals and senior citizens [10]. Studies cite that these new demograph-

ics will gain a wide range of benefits from social networking Web sites such as the ability to keep in touch with friends, to establish new relationships with others, and to feel a sense of community within the social network to which they belong.

While the most popular social networks cater to the general population, some cater to specific niche groups. As the current financial crisis deepens, members in the financial sector are turning to *Meethe-Boss*, a new social networking site for financial services executives to discuss the situation in the financial industry. Since its launch in the fall of 2008, *MeettheBoss*, a business-focused social network that helps financial professionals connect with their peers, has seen rapid growth in membership. *LinkedIn*, another social network that focuses on professional business connections, has experienced double the rate of membership growth since August 2008 and the company is now adding a new user every second - or more than two million a month. More specifically, the number of users working in the financial services industry has increased by 50 percent at *LinkedIn* in the past two months [24].

Organizations are also beginning to discover real value from social networking online. While the formal implementation of social networks and Web 2.0 tools within corporate intranets is still in the early adopter phase, new research shows that an increasing number of organizations are informally experimenting with and benefiting from the use of these tools for business purposes. A study on social networking trends in organizations revealed that more than half of the companies surveyed use communities of practice/groups and chat/instant messaging (IM), with other popular applications including corporate social networks (49%) and blogs and/or wikis (39%) [21]. Many major corporations are planning to use social networking tools to build better communication with employees and to replace outdated intranet systems. The increase in popularity of social networks and online communities in corporate environments will create a demand among businesses for customizable, scalable and feature-rich platforms. Market growth in this arena in 2007 was 191% showing that enterprises are indeed finding value in deploying social networking solutions to address a wide variety of business processes [11].

In addition to its use as a mechanism to enhancing internal productivity, companies are finding ways to increase revenue through these sites. According to a survey conducted last year, one out of every five of small business owners polled had actually obtained at least one new customer as a direct result of using

social networks [20]. Organizations are finding that it is significantly cheaper to employ online social networking strategies than to pay for advertising. Using social networks, organizations are able to prescreen potential customers and connect with prospects on a personal level that would build trust and credibility. Consequently, more than 55 percent of small business owners said they believed that online social networking has a place in the business world. Early data from the IT and Business Outlook Survey 2009 indicates two major areas of growth in the use of social networking by businesses. Customer relationship management and customer service are becoming deeply connected with online communities of users as many organizations to create meaningful customer interactions online. In 2009, organizations are expected to continue to look for ways to leverage the world's largest single marketplace in their businesses found in consumer social networks [19]. Organizations are beginning to see adopting social networking services as a way to increase differentiation and retain customers [11].

Online social networking is a fast growing IT phenomenon. It is connecting ordinary Internet users from various demographics, providing niche group interactions for employees and has revealed a new potential target market for businesses. One group that seems relatively less active thus far and less engaged in this revolution is the elderly. However, they are one of the groups that have much to gain from online social networks. Part of the problem lies in the limited computer literacy and Web use by the elderly. While elderly care institutions such as senior centers and adult care homes and health care institutions are encouraging seniors to garner the benefits of online information access, there is still low growth in Web use and computer literacy among seniors.

COMPUTER LITERACY AND SOCIAL NETWORKING BY SENIORS

While, the elderly are the fastest growing population in the world [14], they are considered to represent a section of society that has been bypassed by the IT revolution due to insufficient literacy or familiarity with IT [19]. As such, they do not gain the benefits from the prevalence of IT in today's society. Many expect the problem of the digital divide in the elderly population will continue to grow [18]. According to Hendrix [12], cognitive limitations related to memory use is one of the key barriers that may inhibit this population from learning how to use the computer and surf the Web. The health care literature is abundant with research that documents the challenges various health care bodies face in encouraging elders

to use the IT as a means of taking an active role in their health care (e.g., [27]). These institutions encourage elders to use Internet resources in order to stay up to date with the latest research in diseases and health care issues that affect them. There is an ongoing struggle to influence the elderly to use the Web as a convenient and efficient information source to enhance life.

The senior population has been slower than other age groups in embracing the Internet but according to a Pew report [7] this is changing. The report suggests that as many baby boomers approach retirement age, seniors' use of the Internet will increase dramatically.

> "While 56% of all Americans go online, only 15% of Americans over the age of 65 have access to the Internet. Wired seniors are more likely than their offline peers to be married, highly educated, and enjoying relatively high retirement incomes. More senior men than senior women use the Internet. Wired seniors are devoted Internet users – 69% of wired seniors go online on a typical day, compared to 56% of all Internet users. The top Internet interests among seniors who go online include email, hobby information, news, health information, browsing "just for fun," and weather updates." [12, p2]

According to Kiel [14] most elders are receptive to learning how to use computers and are looking for methods to stay connected and be informed. A pre/post survey of a computer training session to seniors conducted at a senior center to assess computer literacy and anxiety indicated a significant increase in computer literacy from the training. However, an expected decrease in anxiety did not occur. Still, the results indicate that older computer users have both a willingness to explore the functions of computers and an ability to use the computers to enhance daily functioning [25].

The receptiveness of elders to computers and the Internet is well demonstrated in the following research which compared computer literacy and perception of both young adults and older adults after a computer training session. Findings indicate that older adults were less computer anxious, had more positive attitudes toward computers, and had more liking for computers than younger adults. Additionally, for both younger and older adults, higher levels of computer experience were associated with lower levels of computer anxiety, and a more positive attitude toward computers [4].

Older adults comprise a growing but under-represented segment of Internet users. However, compared to many younger groups, members of this segment often possess more discretionary time and income to engage in online activities [26]. Past studies have indicated that Internet use seems to contribute to older adults' well-being and sense of empowerment by affecting their interpersonal interactions, promoting their cognitive functioning and contributing to their experience of control and independence [23]. A study that looked at the influence of computer literacy on life satisfaction indicated that use helped to increase self-efficacy and lower computer anxiety thereby increasing overall life satisfaction [13].

Elders have a lot to gain from computer and Internet literacy [9] and perhaps have the most to gain from online social networking when compared to the majority users who engage in social networking. The elderly is an age group most prone to losing social ties and to isolation because of physical disparities and retirement from active employment due to age [6]. They stand to gain a lot by acclimatizing themselves with social networking tools as a key means of communication.

Data and research on seniors' use of social networks is sparse. However, a recent report by the Canadian Internet Project indicates that while more than half of Net users under 30 have visited a community or social networking site, as many as one in five elderly Canadians have done the same [15]. According to the report, elders are using it as a means of incorporating their grandchildren into their purview and they are engaging in similar activities, learning it much more readily than they would any other technology or any other media.

Thus, online social networking applications will provide seniors with easy communication tools to increase their social interaction with their loved ones. These tools will help them meet new people as well as help them become more active participants in local elderly community programs. In addition to the elderly, elderly care facilities as well as senior care centers stand to gain from the introduction of online social networking to this aging population. They can use a Web site like Facebook to create an online community for their facility, to publicize events, to encourage participation and to enhance seniors' lives through increased mental stimulation and social interaction. Given the many benefits and potential life enrichment offered by online social networking, interviews were conducted with both elders and senior center personnel to identify the current use of social networks by elders and to understand their attitudes and perceptions towards social networking online.

METHODOLOGY

A senior center IT director, a senior center computer club organizing staff member and three seniors from the center were interviewed along with two sample seniors from a separate senior center. Semi-structured questions were used to conduct these qualitative interviews which lasted between 30 and 45 minutes. The semi-structured questions asked are included in the Appendix. A summary of the results of the interviews from the perspective of the seniors as well as the IT staff is presented in Tables One and Two.

Table 1: Seniors Perceptions on Computers and the Web

	Perceptions of Seniors	IT Staff Perceptions of seniors and the Web
Use	• Email & Shopping • Investment management • Online Health Searches • Games	• Internet use for email & (usage growth 15% to 50% in one year). Enjoy sharing photos online with family & friends. • Use internet for genealogy studies.
Benefits	• Time saver for shopping • Contact with family • Photos of grandchildren and friends • Environment – Eliminate Catalogs • Contact easier & less threatening than telephone	• Keeps seniors active & interested • Builds mental acuity. • Keeps seniors informed on health matters. • Keeps seniors informed on current events at the center but also the world.
Challenges	• Fear of the computer's complexity • Computer attacks and viruses • Sometimes confusing • Identity Theft	• Seniors anxious about using computers: too complex; influenced by media coverage of identity theft/viruses • Not informed computer buyers; don't trust sales staff. • Overwhelmed by language & complexity of computer ownership • Physical challenges (e.g., palsy, arthritis, & vision & hearing impairments)

Table 2: Seniors Perceptions on Online Social Networking

	Seniors	**IT Staff Perceptions of seniors and social networking**
Use	• Primarily photo sharing • Use of internet groups such as Yahoo Groups • Unclear what social networking is	• A few of the seniors use Google chat if they have Google mail. • Photo sharing
Benefits	• Could use for interest groups; links to other sites. • Center use for event posting/ announcements. • Photo sharing all in one place • Hospitality site for new members at the center. • Less threatening way of meeting.	• Help them reach out to former friends in a safe, non-threatening way • Keep in touch with the grandchildren • Overall, increase the quality of life by being involved with others.
Challenges	• Threaten people's privacy • Confusing to learn how to make use of it	• Computer Phobia • Many have never used a computer

Results of the Interviews

Perspectives of senior center staff. The director of the senior center initially indicated that a great majority of the senior residents have a general anxiety when it comes to using the computer. He found however over the past year that there had been a jump from 15% to 50% of the residents using email. The residents also do some shopping online and take advantage of the web-based genealogy sites. He indicated that the computer club on site plus the installation of Wi-Fi in the community helped this increase of internet usage. In regards to social networking and in particular, Facebook, he said that few if any knew about it and used it. He felt that if they knew about social networking that some of them would take advantage of it to stay in touch with their children and grandchildren. Since some of the members do photo sharing within email they would most likely appreciate a social networking site where they could post pictures and keep track of the family. The director further felt that this would keep them active and be an important part of life-long learning plus increase the quality of their lives. He indicated that since some are house-bound a social network site could help them feel connected and less lonely plus have the added benefit of maintaining mental acuity. Being able to reach out to long lost friends would be of interest to seniors and once they are free of the computer phobia and own a computer they would enjoy the social networking concept. If training on social networking was offered at the senior center he believed there would be a small group interested who then would start to interest others.

Perspective of Seniors Computer Club Organizing Staff Member – This senior member of the community started the computer club which has 60 members, 15% of the residential community. The club meets monthly on a different computer topic such as email, computer viruses, photo editing, Microsoft office and the like. The members have a variety of technical knowledge and support each other. They use computers to stay in touch with their families through email, and they also do web shopping and general searching for medical information and general topics. Many of the members still find the computer intimidating but want to use it to keep current. Such things as anxiety are not the only factors stopping them from using computers. They also suffer from arthritis and sight problems. The computer club chair felt that some of the members would be very interested in social networking. They don't know what it is right now but he sees ways to use it individually and for club purposes.

Club Member One The first club member interviewed was a former telecom manager and very comfortable with computers. He makes regular use of the internet and maintains a web page for a barbershop chorus of which he is a member. He uses the internet to shop, do health related searches, uses Yahoo groups, and recently joined Facebook at the invitation of his son and grandchildren. He sees the internet as a time saver, and an easy and less threatening way to communicate with others. He felt that other people his age still find the computer intimidating and hard to use. The publicity around identify theft scares them away from using the internet as does the fear that they will somehow break it.

Club Member Two The second club member was a former health care administrator who used computers for medical record handling. She had been doing

email with igloo.com for a number of years and uses the internet for shopping and for health related searches. To reduce the anxiety of credit card fraud she uses a separate credit card only for internet shopping. She likes the fact that the internet is a time saver, a form of entertainment for her, a way to save money on purchases, and a way to stay in touch with the family. She never heard of social networking or Facebook but would be interested in learning more about it and possibly setting up a site of her own. Her concern about social networking would be maintaining her privacy and her concern about using the computer in general is using the mouse with her palsy. This ailment could interfere with a regular use of the computer since the mouse is necessary.

Club Member Three The third club member sees his computer as his hobby. He uses it every day for about four hours and keeps tracks of his investments and to do health related searches on diabetes. He also teaches word processing to other members of the community. He did not know anything about social networking but felt that it would be a good way to stay in touch with others and new members of the senior center itself could get introduced to others in a virtual and less intimidating way.

Senior One – (non club member) This senior was a former manager in a printing company. He didn't make regular use of the computer, and maybe checks his email once a week. He felt the computer and the internet are a little confusing and he just keeps to email and viewing photos from the family via email. He thought a social networking site like Facebook would be interesting but he didn't think anyone he knew would have a page but he was willing to try it if someone showed him how to set it up.

Senior Two – (non club member) This senior was a stay-at-home mom for most of her life besides having part-time jobs in retail. She uses the computer everyday and checks email but uses the computer more for playing games. She took a class on word processing but found it confusing so just sticks to email and what AOL provides in the way of news. She thought the idea of social networking to be interesting and she said if it wasn't too confusing that she would like to join her grandchildren's Facebook sites to stay in touch and see photos.

CONCLUSION

Currently, the vast majority of seniors do not surf online. However, many predict that this trend is likely to change as the "silver tsunami" of internet-loving Baby Boomers become part of the off-line senior population in the coming years [8]. That demographic shift will likely influence the use of social networking websites by elders and in turn influence their quality of life as they use social networks as a means to interact with their community and loved ones.

As Baby Boomers become part of the senior demographic, they will keep their internet connections and bring their propensity for online communications with them. Senior centers and other elder care institutions, as well as any social network systems should be equipped to cater to the needs and the online networking preferences of this demographic. In addition, online entrepreneurs vying to grasp the attentions of social networking users to conduct e-commerce will have to become aware of the preferences and characteristics of seniors to effectively market to this demographic. For example, as social networking becomes ubiquitous through its proliferation in mobile devices, mobile social media developers will also have to pay special attention to the needs of elders if they are to capture the attention of this user base. Consequently, both academic researchers and practitioners will be well served by investigating the online social networking preferences of seniors.

Future areas for research might include:

1. Broader preference sampling of seniors with the development of a survey derived from the anecdotal comments and interview responses.
2. Determining the pervasiveness of social networking across a broad spectrum of institutions, including senior homes, senior centers, etc.
3. Identifying demographic characteristics that appear to be related to senior social networking usage (e.g., age, gender, location relative to family members, etc.)

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Appendix: Semi-structured interview protocol guidelines

Director(s) –
Introduce self and discuss study
How are seniors using Internet
Any anxiety about using the computer
How are seniors making use of social networks
How might you use Facebook with the members of the community
Would you be interested in a senior center community Facebook page?

Questions (Computer trainer/Club director)
What is your current perception of how members here make use of computers in general? Social networks?
Photo sharing? Web usage?
What are the benefits for using the web?
Do you perceive any benefits of using social networking sites like Facebook for the senior center? For the seniors?
What are the challenges of using computers at the senior center? To seniors?
Do you have computer training for members? What types? Reasons why these are offered?
How many might be interested in training?
Do you use the web to reach out to members and future members? Effectiveness? Does it have a richness?
How much would the average member use the web? Frequently to Not at All

Questions for users
What is your opinion of using computers?
Do you use a computer? If Yes, what do you use it for? How frequently do you use it?
Do you surf the Web? If Yes, what do you use it for? How frequently do you use it?
Do you use email? How often? What do you use?
Do you know about Social Networking using the web? If yes, what do you understand it to be? Are your families using it?
What are the challenges in using the computer for you?
What are the challenges in surfing the Web? In using a site like Facebook?
Optional: ask probing questions, eg. how confident are you? How familiar are you? Do you feel anxious? Any social or family pressure to use?
What are the benefits you gain from surfing the Web?
What are the benefits you gain or could potentially gain from a site like Facebook?