A

A Review of Internet Use Among Older Adults: Barriers or Benefits?
ประเด็นวิเคราะห์เรื่องอุปสรรคและประโยชน์ ของการใช้อินเทอร์เน็ตในกลุ่มผู้สูงอายุ

Nuchada Dumrongsiri, Ph.D.

Full-Time Lecturer at the Department of Public Relations

Faculty of Communication Arts, Assumption University

E-mail: nuchadadmr@au.edu

บทคัดย่อ

บทความนี้มีวัตถุประสงค์เพื่อนำเสนอประเด็นเกี่ยวกับการใช้อินเทอร์เน็ตในกลุ่มผู้สูงอายุว่าถูกจำกัด
จากภาวะทางร่างกายจากการสูงอายุ หรือจากทัศนคติเชิงลบต่อความสามารถทางการเรียนรู้
วิทยาการและเทคโนโลยีใหม่ๆ ในผู้สูงอายุ รายงานผลการวิจัยในอดีตชี้ว่าภาวะสูงอายุไม่เป็น
อุปสรรคต่อการเรียนรู้และการใช้อินเทอร์เน็ต อย่างไรก็ตาม อุปสรรคสำคัญซึ่งจำกัดการใช้
อินเทอร์เน็ตในวงกว้างของผู้สูงอายุเกิดจากทัศนคติเชิงลบต่อภาวะสูงอายุและการขาดโครงการ
อบรมที่มีประสิทธิภาพและเหมาะสมกับผู้สูงอายุ ผลรายงานวิจัยยังระบุว่าการใช้อินเทอร์เน็ตก่อให้
เกิดผลดีต่อสุขภาพทางใจของผู้สูงอายุ เนื่องจากอินเทอร์เน็ตได้เปิดช่องทางใหม่สำหรับการรับข้อมูล
ต่างๆ การสื่อสาร และการสร้างความสัมพันธ์อันดีกับผู้อื่น ถึงแม้ว่าผู้สูงอายุในประเทศไทยใช้
อินเทอร์เน็ตเป็นจำนวนน้อย การสนับสนุนจากภาครัฐและเอกชนในโครงการต่างๆ จะเป็นประโยชน์
ทั้งต่อตัวผู้สูงอายุเองและต่อสังคมในวงกว้าง

คำสำคัญ: อินเทอร์เน็ต การสื่อสารผ่านคอมพิวเตอร์ ผู้สูงอายุ ทัศนคติเชิงลบต่อภาวะสูงอายุ

Abstract

The purpose of this article was to address a question of whether aging or age bias is an obstacle to adoption of new communication technology among older adults. Based on previous studies, aging was not a major barrier to learning and using the Internet. Rather, two barriers to a widespread use of the Internet among older adults were age bias and a lack of training programs adapted to older adults' learning pace. Internet use yields positive effects on older adults' mental well-being. It provides an access to obtaining information, communicating with others, and maintaining healthy social relationships. Although, in Thailand, low numbers of older adults use the Internet, more support from government and private sectors would benefit older adults mentally and the society at large.

Keywords: Internet, Computer-Mediated Communication, Older Adults, Age Bias

Introduction

Computer-mediated communication (CMC), commonly known as the Internet, refers to "a wide range of technologies that facilitate both human communication and the interactive sharing of information through computer networks, including e-mail, discussion groups, newsgroups, chat, instant messages, and Web pages" (Barnes, 2003: 4). Researchers from various disciplines have investigated the effects of Internet use on individuals and society. However, a limited number of research has examined the effects of Internet use on members of minorities such as older adults (Cody, *et al.,* 1999: 269; Furlong, 1989: 147; Wright, 2000: 101). Although older adults aged 55 and over are a growing demographic group in the United States, which represent

approximately 21% of the population (United States, Census Bureau, 2000), they are left out of the information technology loop. They are information "have-nots" due to limited access to the Internet (Cody, *et al.,* 1999: 270; Furlong, 1989: 145).

Using the Internet could benefit older adults in many ways (Furlong, 1989: 145; Lawhon, Ennis, and Lawhon, 1996: 193; White, et al., 1999: 358). Participation in an on-line network can provide emotional support for older adults. It can reduce isolation and loneliness, minimize depression due to loss of spouses or friends, overcome physical limitations to social interactions, and enhance social contacts. Moreover, on-line networking can provide information access, health and safety monitoring, educational tools, and

entertainment. In fact, Internet use is a new opportunity to improve the quality of life and well-being of older adults.

Generally, older adults are not among the earliest adopters of new technologies (Adler, 1996). However, previous studies indicate that older adults pay more attention to new technology adoption. A national 1998 survey in the United States of America showed that 40% of older adults aged 50 and over owned a personal computer at home (Charles Schwab & Co., 1998). This percentage had increased from 29% in 1996 (Adler, 1996). The 1998 survey also found that Internet access among older adults with computers at home increased from 17 % in 1996 to 70% in 1998.

Additionally, older adults changed the way they used computers and the Internet. In 1996, a national survey indicated word processing as the most frequently used among older adults, whereas only 25% of them used computers for on-line communication (Adler, 1996). According to the survey in 1998, email was mentioned as the most frequent activity among older adults (70%). Also, 94% of senior users used the Internet to stay in touch with friends, family and relatives (Senior Net, 2002). Similarly, Srisab (1999: 92) found elderly people in Thailand used computers to access health information. This change implies that older adults perceive the roles of

computers and the Internet as more important, and they are more likely to adopt them. They consider a computer as a communication tool instead of simply office equipment – a word processor or typewriter.

In Thailand, a national survey by National Electronics and Computer Technology Center in 2005 showed Internet use consistent with past research. Most Internet users accessed the Internet at home (66.7%), while others used the Internet at their workplace (40.8%), and school (29.1%) (Thailand, National Electronics and Computer Technology Center, 2006: 64). Also, the survey indicated that email was the most frequent activity among Thais (24.2%), followed by information search (22.8%), and online games and chat (13.6%). However, Internet use in Thailand was dominated by youth and working people, with ages between 15-39, representing about 90% of the Internet users in Thailand. Less than 2% of the users were older adults aged 50 and above. The underrepresented number of older adults using the Internet in Thailand raises questions whether they are limited by age, bias, or opportunity from adopting new communication technologies.

Although Internet adoption among older adults has increased dramatically, a few studies have examined the impact of this new technology on older adults. This paper

will review selected studies to explore this area with an emphasis on barriers to older adults' adoption of Internet use and the effects of Internet use on their psychological well-being.

Barriers to Internet Use

Age Bias

One major barrier to a common use of new communication technologies – computers and the Internet – is an age bias against older adults (Lawhon, Ennis, and Lawhon, 1996: 193; Ryan, Szechtman, and Bodkin, 1992: 96). People view older adults as incapable of learning new technologies. Ryan, Szechtman, and Bodkin (1992: 96) examined attitudes toward younger and older adults' computer learning. They found that older adults were viewed as less likely to succeed in a computer course. Moreover, older adults enrolling in a computer course were perceived as less typical for their age. However, previous studies showed that age differences are not an obstacle to developing computer literacy among older adults. They are not only embracing new technologies, but they are also capable of learning them.

A pilot project, *SeniorNet,* was developed by the University of San Francisco in 1986 to study the impact of new communication technology on older adults who lacked access to this technology (Furlong, 1989: 146). *SeniorNet* is the Web site designed for older adults to learn how to use a computer and to browse the Internet. Network features include a member directory, email, forum, conference, bulletin board, and other services such as news, traveling, and book club. *SeniorNet* also launched a survey asking members about their reasons for joining the network and expectations of how computers will affect their lives. Although "information access" is mentioned as a major reason for older adults joining the network, "communication with others" is in fact the most popular network activity among members.

SeniorNet is extremely successful in developing electronic community among older adults and establishing both an information access and an emotional support system for them. It shows that older adults are interested in, and capable of, learning new technologies. Because of the success of *SeniorNet,* other countries such as Sweden also developed network services for older adults.

Similarly, in Thailand, the *Old People Playing Young Club* (OPPY Club) was established by a private organization in 2000 to provide training programs in using computers and the Internet for older adults aged 45 and above. The OPPY Club attempts to overcome age bias, commonly perceived

as a barrier to learning new communication technologies, by conducting various training programs adapted to older adults' learning styles and pace. Also, members of the OPPY club communicate with each other through a website named *"happyoppy."* The club's members indicated their major reasons for participating in the training programs were: (a) to learn basic computer and Internet functions (e.g., email, presentation, digital images); (b) to electronically communicate with young family members (e.g., daughter, grandchildren); and (c) to search for information (OPPY Club, 2008).

Another study investigated younger and older adults' performance on searching the Web to determine the extent to which age differences affected searching performance. In this study, Kubeck, Miller-Albrecht, and Murphy (1999: 167) assigned older ($M = 70.6$ years) and younger ($M = 21.8$ years) participants, who were Web novices, to select two of five questions and perform Web searches for answers. Participants completed pre- and post-Web search questionnaires to determine their attitudes regarding computer use and their experience. The results revealed somewhat of an age difference in Web searching performance. Although older adults took more steps than younger adults to find answers in the first search, the completeness

and accuracy of the answers were as efficient as the younger adults' answers. In the second search, older adults were as capable as younger group in terms of steps to solutions, but their answer quality (80%) was lower than younger adults' answers (100%). This study illustrates minimal age differences in computer performance. However, it implies that age differences are not an obstacle to new technology adoption. Older adults are not too old to learn this new technology.

Ineffective Training Programs

Besides age bias, a lack of effective training programs may be another barrier to widespread use of computers and the Internet among older adults. According to White, *et al.* (1999: 358), older adults reported a too fast-paced training as a problem to using computers. Slower processing speed and learning may delay older adults' adoption of new technologies. People learn at a different pace, especially older adults. Older adults may need more time and assistance in their computer learning (Kubeck, Miller-Albrecht, and Murphy, 1999: 180; White, *et al.,* 1999: 375). However, little attention is given to studying an effective training method for older adults learning to use computers and the Internet. Perhaps a good training program, which is designed to be compatible with older adults' learning rates, may help reduce the

knowledge gap in communication technology between older adults and others.

Cody, et al. (1999: 282) suggested that a "paced format" method of training would benefit older adults' learning. They launched a four-month training program for older adults to learn about computers and Internet search. In order to measure the effectiveness of the training program, they hypothesized that computer anxiety, computer efficacy, attitude toward aging, and social support were predictors of older adults' participation on the Internet as well as their on-line activities. Participants, with an average age of 80 years, completed pre- and post-questionnaires and recorded "adventure sheets," which were self-reports of sites visited and average weekly time spent on-line. Adventure sheets were collected weekly during ongoing training sessions.

After the training program, participants experienced a higher level of social support and connectivity, a lower level of computer anxiety, and more positive attitudes toward aging. Participants spent more time on-line when efficacy was high, attitudes toward aging were positive, and anxiety was low. The results showed that a higher level of perceived social support and connectivity helped maintain friendships and positive self-esteem as well as minimize age-related depression.

Additionally, they found that a training program would be more successful if it was not too simplistic or too challenging for older adults' skills. Thus they suggested a paced format training program that focused on reducing computer anxiety, building computer efficacy, and balancing older adults' skills. This study reveals that learning pace is an important issue for a better training program to encourage new technology adoption among older adults and to narrow a knowledge gap. The results also illustrate the impact of Internet use on older adults' psychological well-being. The Internet makes older adults feel more integrated in society and reduces the incidence of depression.

Effects of Internet Use on Well-being

Concerning the impact of the Internet, Internet use may help improve older adults' quality of life because it provides access to information and communication with others (White, *et al.,* 1999: 358; Wright, 2000: 101). A few studies have attempted to explore this area.

Wright (2000: 106) investigated older adults' satisfaction with social support received online and examined Internet participation in relation with life stress. This study used an on-line questionnaire posted on the *SeniorNet* Web site. The results

indicated that satisfaction with on-line social support was associated with the amount of time spent on Internet participation. Satisfaction was more likely to be higher for high Internet users and lower for low users. Moreover, low Internet users were more satisfied with non-Internet social support than high Internet users. This finding is consistent with previous studies showing that on-line relationship satisfaction is linked to frequency of Internet use (Walther and Burgoon, 1992: 77). The researcher also found that high Internet participation was related to lower life stress. This study provides evidence that Internet use does have psychological effects on older adults. Other studies also indicated that Internet use helped reduce loneliness (White, et al., 1999: 375) and develop positive attitudes toward aging, such as retirement (Bikson and Bikson, 2001: 127).

Bikson and Bikson (2001: 128) conducted a year long study to examine the impact of Internet use on older adults with an emphasis on the transition to retirement. Participants (*M* = 61 years) were retirees and employees who were eligible to retire. They divided participants into two task forces--an electronic work group and a standard work group. Both groups engaged in a similar task, but through different channels of interactions. One group interacted through computer networking,

whereas the other group interacted through conventional work technology (i.e. meeting rooms, telephones, paper mail, and blackboards). Regarding each group's task, they assigned retirees to provide information and employees to obtain information about the transition to retirement. All participants were interviewed at the beginning of the study and three times afterward in order to measure participants' perceptions and evaluations of group tasks and interactions.

The findings indicated that members of both groups evaluated their group effort quite similarly. They perceived that communication with retirees improved employees' attitudes toward retirement. Also, they found that members in an electronic work group tended to stay in touch with each other, whereas those in the other group were less likely to continue their contact. This study implies that on-line network is an effective way to develop and maintain social relationships as well as to communicate attitudes and values. It clearly shows that Internet use does affect and improve the psychological well-being of older adults within a context of the transition to retirement.

Conclusion

In conclusion, previous research has shown that age differences in cognitive ability

are not a hindrance to older adults adopting new communication technologies. In fact, social and contextual factors, age bias and a lack of effective training may be one of the barriers limiting early adoption and extensive use of new technologies among older adults.

Furthermore, the findings from prior studies indicate Internet use has a positive psychological impact on older adults' well-being, both in personal and professional life. As a contribution to the communication field, these findings highlight the Internet as a communication tool to improve older adults' quality of life, to enhance their connection with society, to reduce their reliance on caretakers, and to minimize costs of elderly social services. In other words, increased use of Internet among older adults yields benefits not only to elderly people by helping them retain an independent and healthy life style, but also to society in that it facilitates knowledge and experience to be shared and transferred from one generation to the next.

However, these benefits would be greater in association with an effective computer-training program adjusted to older adults' learning speed and with a reduced age bias. The Internet gap or digital divide could be narrowed if older adults are provided with more opportunity by both government and private sectors to learn new technologies.

Finally, future research should further investigate the negative impact of the Internet on older adults. Past research now verifies the positive effects of Internet use on older adults, but the negative side needs more exploration.

References

Adler, R. 1996. **Research About Older Adults and Computers: Report of a National Survey 1996** [On-line]. Available: http://www.seniornet.org/php

Barnes, S. B. 2003. **Computer-Mediated Communication: Human-to-Human Communication across the Internet.** Boston: Pearson Education.

Bikson, K. L., and Bikson, T. K. 2001. "The Impact of Internet Use Over Time on Older Adults: A Field Experiment." In N. Charness, D. C. Parks, and B. A. Sabel (eds.), **Communication Technology and Aging: Opportunities and Challenges for the Future,** pp. 127-149. New York: Springer.

Charles Schwab & Co. 1998. **Research on Senior's Computer and Internet Usage: Report of a National Survey 1998** [On-line]. Available: http://www.seniornet.org/php

Cody, M., *et al.* 1999. "Silver Surfers: Training and Evaluating Internet Usage among Older Adults Learners." **Communication Education** 48: 269-286.

Furlong, M. S. 1989. "An Electronic Community for Older Adults: The SeniorNet Network." **Journal of Communication** 39: 145-153.

Kubeck, J. E., Miller-Albrecht, S., A., and Murphy, M. D. 1999. "Finding Information on the World Wide Web: Exploring Older Adults Exploration." **Educational Gerontology** 25: 167-183.

Lawhon, T., Ennis, D., and Lawhon, D. 1996. "Senior Adults and Computers in the 1990s." **Educational Gerontology** 22: 193-201.

OPPY Club [On-line]. 2008, April 25. Available: http://www.happyoppy.com/index.php?lay=show&ac=article&Id=450433

Ryan, E. B., Szechtman, B., and Bodkin, J. 1992. "Attitudes toward Younger and Older Adults Learning to Use Computers." **Journal of Gerontology** 47: 96-101.

SeniorNet. 2002. **SeniorNet Survey on Internet Use, November 2002** [On-line]. Available: http://www.seniornet.org/php/default.php?PageID=6880

Srisab, P. 1999, September. "Internet and the Elderly People." **Computer Today:** 92-97.

Thailand. National Electronics and Computer Technology Center. 2006. **Internet User Profile of Thailand 2005.** Bangkok: National Electronics and Computer Technology Center.

United States. Census Bureau. 2000. **Statistical Abstract of the United States 2000** [On-line]. Available: http://www.census.gov/population/www/projections/natsum-T3.html

Walther, J. B., and Burgoon, J. K. 1992. "Relational Communication in Computer-Mediated Interaction." **Human Communication Research** 19: 50-88.

White, H., *et al.* 1999. "Surfing the Net in Later Life: A Review of the Literature and Pilot Study of Computer Use and Quality of Life." **Journal of Applied Gerontology** 18: 358-378.

Wright, K. 2000. "Computer-Mediated Social Support, Older Adults, and Coping." **Journal of Communication** 50: 100-118.

Dr. Nuchada Dumrongsiri received her Doctor of Philosophy in Communication Studies from Kent State University, Ohio, U.S.A. Her research interests include interpersonal communication, social support, comforting messages, persuasion, and organizational communication. Currently, she is a full-time instructor in the Department of Public Relations, the Faculty of Communication Arts, Assumption University, Thailand.