

Title: Social connections and Internet usage among the elderly: Focusing on the first ICT generation
Name: Yasuko Mori

Since the 1980s, the information environment has undergone a drastic change. Although new information terminals and applications have been developed and the information environment continues to change, the Internet usage rate among elderly people has remained lower than those in the other periods. People born before 1950, who are currently entering their elderly years, are the generation responsible for the progress of informatization since the 1980s; however, regarding the use of the Internet, one can observe differences not only between the use and non-use but also in usage content. In this paper, we focus on the birth cohort before 1950 that experienced the rapid progress of informatization since becoming adults. We aim to clarify the possible contributions of Information and Communication Technology (ICT) in the process until use, including the use of e-mail for communication and network maintenance, at an elderly age. From the viewpoint of personal living experience and network, we clarify how Internet usage that these now-elderly people encountered in their adulthood has influenced ICT, which has had a great influence on society and daily life. Furthermore, since changes in social relationships at an elderly age are considered to have an impact on life in local communities for elderly people, we demonstrate, by conducting a social experiment, the possibility of maintaining the personal network of elderly people in local communities by linking ICT and regional networks.

Specifically, we address the following research questions.

- (1) To clarify what are the factors influencing Internet usage of the birth cohort before 1950.
- (2) To study which network sectors are influential, assuming the adoption of new technology is due to a mixture of personal and environmental factors.
- (3) To investigate whether through using the Internet email use among the elderly affected communication and whether using email to communicate with people close to them increased satisfaction in their relationships.
- (4) To investigate, through a social experiment, what social conditions are necessary for the elderly to use ICT to maintain their network of friends and acquaintances and to create new networks from new communities.

The research method comprised semi-structured interviews with 18 men and women born before 1950, which were conducted in 2003 and 2009, and an online survey of 835 men and women of 65 years of age (born between 1918 to 1944), conducted in 2009. With regard to research question (4), we conducted a social experiment in a metropolitan area in 2010 about promoting communication of elderly people in the region by taking advantage of ICT, using an originally developed elderly communication support service.

The survey revealed the following findings for research questions (1), (2), and (3):

- (1) The results elucidated the impact of the following factors: the period effect on use/non-use of the Internet of the first ICT generation (born before the 1950s), the process leading to the use, usage content, etc. caused by the introduction of OA and IT; vocational career as a life event effect; and the effect of aging. Therefore, it is necessary to pay attention to the existence of job experience and whether the

timing of IT introduction in the workplace is before or after retirement. Moreover, gender differences seemed to be due to female life course and differences in job content between men and women.

- (2) In connection with Internet usage and networks, the results revealed that when many members communicate frequently via e-mail for establishing contacts with their affiliated organizations or distant friends, it can be considered the way of communication in that network sector; friendships are limited to relationships with people in the neighborhood, and if those people do not use email, then this does not lead to e-mail usage.
- (3) The factors that influenced sending e-mails to people other than family and relatives were different for men and women; for men, they included maintaining a network after retirement, and for women they were experience factors, such as the ability to use personal computers.

For elderly male Internet users, relationships that increased their satisfaction as a result of human interaction were friendships based on shared pleasures rather than formal acquaintances or relationships to offer and receive support. For elderly female Internet users, the form of these friendships did not have a significant influence on their level of satisfaction.

From the social experiment, the following findings were obtained for the research question (4):

- (4) ICT usage contributes to building and maintaining connections in the local community; this was achieved by connecting a network that included local resources on an ICT network and constructing a mechanism to ensure its functioning. The middle-aged and elderly people in the area, who were supporters, played an important role in the mechanism. The qualities of supporters were an important aspect in advancing the development of this operational model.

The academic suggestions of this study, which focused on the first ICT generation for elderly people, include the following four points: First, when viewing the spread of technology from an individual perspective, we highlighted the effectiveness of incorporating a lifelong developmental viewpoint into an interaction model between individual and environmental factors. Second, we clarified that among elderly people using the Internet, there is a difference between men and women regarding the factors influencing the sending of e-mails to close friends and people other than family and relatives. Third, we explained how the communication and social relationships of elderly people using the Internet was influenced by their Internet usage and their so-called elderly age. Fourth, we identified three processes in the construction of an ICT usage network of elderly people, namely simultaneous parallel type, ICT leading type, and network leading type. As practical suggestions, the following two points can be mentioned. First, the ICT leading type network of elderly people indicated that it will become a network that prevents isolation by maintaining the conventional network, and building a local network while adding new social resources. Second, in the operational model where supporters offer assistance, the qualities of supporters are critical.

The study has certain limitations: first, the participants surveyed in this study cannot be considered common, middle-aged and elderly people, as both qualitative and quantitative surveys were biased toward Internet users; and second, we cannot adequately mention the factors of non-use and the characteristics of non-users. Therefore, future researchers can examine topics such as the need for using an already available and accessible system as an ICT service, participation of many local residents, and the need for the developers of such systems to consider the lives and feelings of the users.