

J. ZHANG, H. UMEMURO. *When older adults start and stop to use technologies: Long term study on technology usage, computer attitudes and cognitive abilities of Japanese older adults.* *Gerontechnology* 2012;11(2):265; doi:10.4017/gt.2012.11.02.254.00 **Purpose** Technology usage by older adults has been studied statically, in rather short periods such as one specific point in time¹. In order to understand the nature, causes, and influencing factors of technology usage by older adults, long-term investigations are essential. The purpose of this study was to investigate the adoption and discontinuation of technological products and services by older adults, as well as to clarify relationships among older adults' computer attitudes, cognitive abilities, and usage changes. **Method** Older adult volunteers aged 60 and older, residing in a Tokyo metropolitan area and its suburb participated in this investigation. The total number of participants was 166. A questionnaire probing their technology usage and computer attitudes, which was originally developed by the Center for Research and Education on Aging and Technology Enhancement (CREATE)² and then modified by the investigators, was sent to the participants every year between 2003 and 2009. They were asked to complete the questionnaire at their own pace and send it back to the investigators by post. Adoption or discontinuation was identified by comparing the daily usage of technologies listed in the questionnaire for every two consecutive years. An attitudes-toward-computers questionnaire³ was employed as a part of the questionnaire to assess seven dimensions of participants' computer attitudes: comfort, self-efficacy, gender equality, control, dehumanization, interest, and utility. The participants were also invited to join into an investigation of cognitive abilities every year. Some of them agreed to participate in the on-site investigation sessions every year. Spatial abilities, associative memory, perceptual speed, and field independence were measured with the sections selected from the kit for factor-referenced cognitive ability tests⁴. **Results & Discussion** A series of t-tests and repeated-measures ANOVA were conducted to investigate whether there were significant changes of computer attitudes and cognitive abilities when the adoption or discontinuation of technology products occurred. Preliminary results showed two dimensions of computer attitudes—gender-equality and interest—increased when older adults started to use technology products or services. On the other hand, significant decreases in three areas related to computer attitudes, i.e. interest, utility, and control, were observed when older adults stopped to use technological products. For non-computerized products, no changes on computer attitudes were observed. With regard to cognitive abilities, no consistent patterns were observed. In this investigation on technology usage of older adults over several years, computer attitudes were found to be correlated with dynamic changes in technology usage, in addition to the usage status that has been reported in previous studies. On the other hand, cognitive abilities did not show a clear correlation with usage changes, although this relationship was reported in previous studies.

References

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Affiliation: Tokyo Institute of Technology, Tokyo, Japan; E: zhang.j.ae@m.titech.ac.jp

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