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Need for ICT Education Among Older Adults

ABSTRACT

Information technology evolves in order to meet the needs of ageing society. Despite the life-long learning perspective and availability of ICT courses, studies indicate that only a limited number of seniors take full advantage of possibilities given by mobile technology and the Internet. The question arises if the old are part of the Information Society or they are excluded from it. This article provides evidence that seniors underutilise the ICT devices and e-services and indicates the main lines of the recent debates on the current need for ICT education among older adults. The analysis of seniors' ICT competence is based on a literature survey.

Keywords:

lifelong learning, ageing, ICT competence, seniors

INTRODUCTION

Ever-increasing quantitative participation of the elderly in the political, social, economic and cultural life is evidenced in different areas and includes: (1) the increase of the number of the elderly in societies, (2) general increase in the proportion of the aged in particular populations as well as (3) the increase of the number of "old old" (Reichert & Phillips, 2008). As financial resources are too limited to provide all need-based services and products to all seniors, this raises justifiable doubts as to what extent traditional health care and social welfare sys-

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tems are able to cope with the ageing societies around the world (Stuart-Hamilton, 2000). Many experts believe that without the revolution addressing the old age and the innovation in managing it, the whole task may not succeed. Hence, promoting the empowerment of seniors in life-long learning, and positive ageing as well as looking for possible implementations of ICT in the everyday routines of the elderly are necessary.

There are various challenges arising from ageing societies. Man needs to adapt to senescence, including the necessity of coping with the decrease of personal independence and vitality, the increase of functional disability together with the number and the intensity of various ailments. The average health-life expectancy (HLE) and disability-free life expectancy (DFLE) as a rule are shorter than the period when an ageing person requires systematic health care and support in everyday life (Błachnio, 2012). Financial exclusion of seniors critically limits the number of resources dedicated to them.

This difficult situation aggravates singlehood and feminisation of ageing. Old females who outlive the males usually live their final years on their own on the verge of poverty (Ancyparowicz, 2012; Błędowski, 2012). This is because females typically earn less than males and thus their retirement income is meagre. Neither successful programs nor satisfactory policies are implemented to alleviate their risk of poverty, malnutrition or even elder abuse.

Another challenge concerns the continuous lack and/or uneven distribution of need-based environmental resources dedicated to seniors, and these which are available are constantly reduced. For example, Maria Kuchcińska argues that geriatric patients have very limited access to geriatrists and other specialists (the margin of attention), and health care benefits like private clinics and hospitals (the margin of accessibility). Furthermore, the elderly patients' rights are frequently not respected (the margin of importance: how many senior citizens have heard "You are too old for this treatment, and besides what's the point at your age?") (Kuchcińska, 2009). Many doctors are unable to treat geriatric patients properly because of their complex health problems (senescence, multiple pathologies and polypharmacy). Weak preparation combined with ignorance leads to frequent diagnostic errors. Malpractice also includes barriers in "the elderly patient–doctor" communication that prohibits a patient's accurate understanding of their health condition. These practices constitute a problem among General Practitioners (GPs), but also among nurses, physiotherapists, and social care givers (Cuddy, Norton, & Fiske, 2005).

Revolution of "greying society" happens in time of "decollectivisation of the life course" (Loos, 2012). It means that an average man experiences all transitions in his life (including ageing and old age) on his own without any cultural or social

support. The only available substitute of "another person's presence" can be found in digital environment ("network individualism", Loos, 2012). So, if seniors do not possess ICT competencies they are deprived of an important tool to rebuild their social networks; they have no chance to belong to the e-community (Malanowski, Özcivelek, & Cabrera, 2008) and to optimise their quality of life (Amichai-Hamburger, 2008).

Although senior citizens constitute generations that are better-educated and more self-conscious than they used to be, the observations and studies reveal the constant need to actively contribute to ICT re-education of the elderly in order to successfully empower them (Buliński & Błachnio, 2017; Śmiatacz & Błachnio, 2016). ICT technology, the implementation of which does not require a significant revolution in the economic and social resources of the senior citizens (Butler & Volkov, 2010), can help them to preserve health and fitness for longer into old age (Kim, 2008).

LIFELONG LEARNING, U3A AND ICT COURSES

Lifelong learning fosters intellectual development, strengthens individual adaptability to global market trends and maintains personal growth (Manheimer, 2008). Expanding skills, attitudes, knowledge, values and competences improve quality of life. People nowadays are more likely to take advantage of all kinds of learning opportunities and experiences without time and space limits (Şenyuva & Kaya, 2014).

Although seniors often suffer from sensory limitations and cognitive impairments, their willingness to learn equals that of the youth. They are eager learners and take real pleasure in lifelong-learning activities. Growth of older learners' interest and involvement in education leads to the rise of University of the Third Age (U3A). In a number of countries worldwide this tendency for increasing popularity of U3A strengthens (Błachnio, 2012; Lu, Lai, & Lin, 2014). To take a local example: in 2007 in Poland the estimated number of U3A was 90–110 (depending on available source), but in the next 3 years it has increased to 200 (Błachnio, 2012). Numerous U3A have sprung up in villages and small towns. They gather local communities of seniors, meetings are held at little rooms in local libraries, and the Town Halls. Undoubtedly this change has proved to be both a success and a progression of U3A movement that used to be developed in big academic cities in Poland. This localisation shift has increased access of older people whose mobility is often a handicap to accessing educational services.

U3A are autonomous and offer diverse educational programmes for adult learners. Their general goal is to encourage seniors to maintain their sense of purpose, to preserve their functional independence through teaching them about disease prevention and good self-care practices, to acquire new knowledge and skills to keep pace with and adapt to socio-cultural and technological changes (Manheimer, 2008; Błachnio, 2012). Education enhances seniors' personal growth and improves their ability to keep pace with rapidly-changing technology. Thus, lifelong learning and U3A maintain a high quality of life of the old persons in a technologically-focused environment.

U3A participants often choose ICT courses. The Internet is an interesting educational module which focuses attention but does not introduce any deep changes in senior learners' approach to informative technology and presumably does not build sufficient ICT competencies among seniors (Kaleta, 2014). The knowledge is not necessarily transferred into the context of everyday life. The seniors become fully aware of the Internet's advantages: that it supports and facilitates free access to information and exchange of information; that it gives the individual the opportunity to contribute to the society via e-volunteerism; that it provides better access to a wide range of e-services (e-health, e-bank, e-shopping, etc.); that it enriches leisure activities especially for those seniors whose mobility is rather limited. In general, the Internet is a cheap and effective tool of social inclusion (Ryser & Halseth, 2011). Nevertheless the observations prove that the exposure and usage of Internet by seniors are still rather limited. Although they have the mobile phones and personal computer at home, they make use of very few mobile applications if any at all. They lack either courage to integrate information technology into their everyday life or lack access to training in the use of ICT.

OPPORTUNITIES AND OBSTACLES IN SENIORS' ICT EDUCATION

The latest research has proved that the "technophobia" or computer anxiety of old people should rather be recognised as an overestimated myth. Although the use of new digital media is limited among senior citizens, in each age there are people who are less likely to follow the latest technological achievement and take advantage of it because they claim that change is too complicated and troublesome. Thus it is not completely correct to refer to the "age digital-divide". It is better to implement a category of "digital spectrum" in order to underline the fact that the individual differences grow with age, and older people, with a lot or a little effort, can learn to use digital media up to a certain point (Loos, 2012).

The process of seniors' integration to the Information Society has led to the development of new concepts and methodology. Birgit Jaeger describes "domestication" – the term developed by Silverstone and Hirsch. It emphasises that person adapts to new technology through appropriation, objectification, incorporation, and conversation. The technological innovations become part of daily routine through concrete actions, such as buying and installing the new equipment at home, symbolic actions like developing new self as a user of the Facebook, and cognitive development like learning the "know-how" of the device (Jaeger, 2004).

"Domestication" of digital technology can be facilitated if the teaching-learning environment is adjusted to senior learners. They become very involved in ICT learning process and the efficiency of their acquisition of ICT competencies increases if some requirements are met. Senior learners prefer to join courses addressed to persons of roughly the same age as themselves rather than significantly younger learners (Jaeger, 2004). A small group setting is better than a large one. A teacher should be well-trained to provide assistance to senior learners. He should divide the training materials into small units to avoid information overload for seniors. He should avoid technical jargon, provide detailed and frequently-repeated instructions and hands-on practice. The teaching/learning process would be easier if the complexity of application is lowered. He should build a supportive environment and encourage seniors to ask questions and express doubts. He should also programme senior learners' experience in a way which guarantees success at the initial stages of the learning process. Regular, continued training early morning is more beneficial to older learners' needs (Xie & Bugg, 2009).

The use of technology is a benefit for senior citizens, however they need to be convinced about its usefulness and appropriateness to their personal interests and needs. If they are therefore to be well-motivated to develop their computer competencies, the adequate knowledge of ICT and its advantages needs to be provided to them.

The Internet as a source of information can enrich the knowledge of older people, however, the elderly audience has specific needs to be met. Being more self-focused they have a mature outlook towards changing times and very limited interest in news stories which are content specific – focused on crime, sexuality, and money. This is because modern consumerism often offends their traditional sensibilities (Wilson III, 1998). Besides, the telecommunication and information processing favour younger generations who already possess high-tech skills and have a higher standard of academic achievement. The young generation, unlike the old one, is more likely to access global news in English. For seniors, foreign language is another obstacle. They usually do not speak English at all or speak at

a basic level, so they cannot use the majority of English written e-resources. They do, however, have access to local websites which offer broad knowledge and useful resources for seniors in their mother tongues, which makes them more skilful at both asking questions and expressing themselves. Still, searching for information on the Internet can be impeded by age-specific losses in motor skills, sensory perception, memory- and attention-deficits.

ICT has been implemented in the health domain. New senior-optimized smartphones have been developed recently. They are equipped with a rich offer of mobile applications for monitoring health condition and communicating the obtained results to the online receivers: doctors, nurses, social care givers, family members and online support groups (Sandhu, 2011).

The Internet is also a social network. Although seniors are more likely to communicate with family members via e-mail, they still have little or no experience with a telecommunications application software such as Skype. They need to incorporate more technology into their daily routines and learn how to fulfil other more technologically advanced objectives such as using the ICT to create and develop seniors-dedicated socio-technical networks; to use technology for online debate. Simultaneously, the information technology industry should further adjust the digital services addressed to seniors like for example readjusting interfaces.

Gaining facility with computer software applications is extrinsic, in-order-to-achieve, and an instrumental motive as well as intrinsic, learning-for-its-own-sake action (Manheimer, 2008). The readiness to acquire and practice new skills is time-limited. The practice proves that senile old people with wide neurodegenerative processes fail in developing ICT competencies (Jaeger, 2004). Decline in cognitive abilities such as for example short-term memory loss and attention deficits impede the retention of new skills. The learning process often becomes physically frustrating because of reduced dexterity and sensor ability. The ageing body with weakening motor skills and possibly arthritis makes seniors experience increasing difficulties even with simple tasks like using a mouse and scrolling. On the other hand, the use of technology can be an easy solution to overcome physical obstacles, for example, old people whose hands shake encountering difficulties with handwriting can prevail over their body weakness and continue to write using their personal computer. Thus, becoming more integrated with information and communication technology allows seniors to retain their self-reliance and independence for longer in their daily activities.

To summarise, the technological gap between seniors and the youth cannot be overcome. This is because they belong to different "technology generations" – separate communities of different age groups that live their lives with their own

specific pattern of available media, media competency and media preferences (Loos, 2012). Despite these many obstacles, senior citizens should learn how to use new media because they can improve their ICT competences and in this way improve their quality of life and self-perception.

CONCLUSIONS

The observed e-disparities between seniors and the rest of the population have many causes. The Internet, computers, smartphones and rapidly-developing remote applications create an environment dedicated to the needs of the young, whereas the elderly still feel alienated among these technologies. Despite its broadness and diversity, senior citizens treat technological progress and advanced digitisation of everyday life not as a necessity but as an extravagance or luxury. The use of electronic technology is limited by ageing-related changes. The elderly suffer from visual impairment, hearing loss, decline in intellectual skills and performance, decreased automation of learning. In order to cope well with technological advances, older people need to mobilise their individual and environmental resources. Finally, the e-access is limited by economy, that is, the funds available for and from the older learners.

In Poland, some seniors still cannot afford to pay for smart devices and telecommunication services. Even local operators label the elderly as low-income and offer them cheap mobile phones with limited functionality unsuited to their complex medical and social needs. Consequently, Polish seniors have no chance to take advantage of the most recent applications, such as mHealth. Seniors who live in rural areas are even more disadvantaged due to the lack of telecentres there. Thus the need to develop new digital services targeted at Polish seniors – also senior-friendly applications and websites – is apparent and urgent.

Professional e-education and training, particularly within the realm of IT competencies, become necessary (Lu, Lai, & Lin, 2014). The popularization of knowledge about ICT together with the modification of the attitudes and the system of values among the older generations are also indispensable. Over time, they can successfully contribute to the fulfilment of lifetime aspirations and the satisfaction of life of the elderly. Encouragement from family and friends, help from the younger generations and patience can prove invaluable help in seniors' mastering ICT. Schools, by educating young generations, can further facilitate the change of the local context and support the elderly in their attempt to be more „wired," e-educated and IT-literate.

References:

Amichai-Hamburger, Y. (2008). Potential and Promise of Online Volunteering, *Computers in Human Behavior*, 24(2), pp. 544–562.

Ancyparowicz, G. (2012). Kapitałowe emerytury i renty a ryzyko ubóstwa w Polsce. In: J. Hrynkiewicz (Ed.), *O sytuacji ludzi starszych* (pp. 83–97). Warszawa: Rządowa Rada Ludnościowa.

Błachnio, A. (2012). *Starość non profit. Wolontariat na Uniwersytetach Trzeciego Wieku w Polsce i na świecie*. Bydgoszcz: Wydawnictwo UKW.

Błędowski, P. (2012). Starzenie się jako problem społeczny. Perspektywy demograficznego starzenia się ludności Polski do roku 2035. In: M. Mossakowska, A. Więcek, & P. Błędowski (Eds.), *PolSenior. Aspekty medyczne, psychologiczne, socjologiczne i ekonomiczne starzenia się ludzi w Polsce* (pp. 11–26). Poznań: Termedia.

Buliński, L., & Błachnio, A. (2017). Health in Old Age, and Patients' Approaches to Telemedicine in Poland, *Annals of Agricultural and Environmental Medicine*, 24(2), pp. 322–328.

Butler, R.N., & Volkov, O. (2010). The Elderly in Society: An International Perspective. In: H.M. Fillit, K. Rockwood, & K. Woodhouse (Eds.), *Brocklehurst's Textbook of Geriatric Medicine and Gerontology* (pp. 988–996). Philadelphia, PA: Elsevier.

Cuddy, A.J.C., Norton, M.I., & Fiske, S.T. (2005). This Old Stereotype: The Pervasiveness and Persistence of the Elderly Stereotype, *Journal of Social Issues*, 61(2), pp. 267–285.

Jaeger, B. (2004). Trapped in the Digital Divide? Old People in the Information Society, *Science Studies*, 17(2), pp. 5–22.

Kaleta, A. (2014). E-learning jako dyfuzja innowacji na obszarach wiejskich Unii Europejskiej, *Kultura i Edukacja*, 2, pp. 134–145.

Kim, S.H. (2008). Older People's Expectations Regarding Ageing, Health-Promoting Behaviour and Health Status, *Journal of Advanced Nursing*, 65(1), pp. 84–91.

Kuchcińska, M. (2009). Edukacja przeciw marginalizacji seniorów, *Chowanna*, 52(2), pp. 173–186.

Loos, E. (2012). Senior Citizens: Digital Immigrants in Their Own Country?, *Observatorio Journal*, 6(1), pp. 1–23.

Lu, B-Y., Lai, J-S., & Lin, M-Ch. (2014). An Experience of the Evergreen Elder University in Taiwan: Perspectives on the Mobile Users, *The New Educational Review*, 37(3), pp. 161–176.

Malanowski, N., Özcivelek, R., & Cabrera, M. (2008). *Active Ageing and Independent Living Services: The Role of Information and Communication Technology*. Luxembourg: Office for Official Publications of the European Communities. Retrieved from: http://www.umic.pt/images/stories/publicacoes2/JRC41496.pdf

Manheimer, R.J. (2008). Lifelong Learning in Aging Societies, *Annual Review of Gerontology & Geriatrics*, 28, pp. 111–127.

Reichert, M., & Phillips, J. (2008). The Changing Generational Contract Within and Outside the Family: Britain and Germany Compared. In: A. Walker, & G. Naegele (Eds.), *Social Policy in Ageing Societies* (pp. 142–164). Basingstoke: Palgrave Macmillan.

Ryser, L.M., & Halseth, G.R. (2011). Communication Mechanisms for Delivering Information to Seniors in a Changing Small Town Context, *Journal of Rural and Community Development*, 6(1), pp. 49–69.

Sandhu, J.S. (2011). Opportunities in Mobile Health, *Stanford Social Innovation Review*, 14–17. Retrieved from: http://www.ssireview.org/images/articles/Fall_2011_HCSupplement_Opportunities.pdf

Şenyuva, E., & Kaya, H. (2014). Nurses' Lifelong Learning Tendencies and Their Attitudes Toward Distance Education: A Sample of Turkey, *The New Educational Review*, 36(2), pp. 17–29.

Stuart-Hamilton, I. (2000). *The Psychology of Ageing*. London & Philadelphia: Jessica Kingsley Publishers.

Śmiatacz, K., & Błachnio, A. (2016). *Poor Results of SMS Survey of 60+ Patients of Oncology Centre in Bydgoszcz and the Need for Revision of Seniors' Technology Education, INTED2016 Proceedings*, pp. 7997–8004.

Xie, B., & Bugg, J.M. (2009). Public Library Computer Training for Older Adults to Access High-quality Internet Health Information, *Library & Information Science Research*, 31(3), p. 155–162. doi:10.1016/j.lisr.2009.03.004

Wilson III, E.J. (1998). *Globalization, Information Technology, and Conflict in the Second and Third Worlds*. New York: Rockefeller Brothers Fund.