LIFE’LONGER’ LEARNING FOR ELDERLY PEOPLE: THE CONTRIBUTION OF ICT

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ABSTRACT

Currently, developing countries face two realities simultaneously: an aging population and the frequent and common use of ICT in all areas of society. Another situation that can be observed with regard to the fact that many of the elderly who are retired do not have a digital literacy and, as such, makes these fall within the group called digital divide: «info-excluded». In this sense, becomes an urgent priority to develop initiatives that promote the training and formation as a lifelong learning strategy for older people so that they can create conditions suitable for their active aging (e.g. «Conceptual Framework for the Preparation and Observance of the International Year of Older Persons in 1999 – UN»; «Madrid International Plan of Action on Ageing»). ICT can provide opportunities for older people feel integrated in their society through ICT and can continue to be socially useful in a digital environment where there is also the possibility of promoting intergenerational relations.

Field of Research: Lifelong learning; elderly people; ICT.

1. Introduction: Developed Countries – Ageing & ICT

It is common referring the ageing of the population as a problem for the develop countries regarding the budget related to their pensions. On the contrary, the major challenge those developed countries face is to transform the aging of their population into a force for progress at both societal and individual levels. This situation occurred mainly in the more developed countries of the world during the last century. As argued by Sidorenko (2007) that period represented an unprecedented advancement of science, technology, and quality of life, including the increase of longevity in two parallel processes that must be ensured that they are compatible and synergistic: societal development and population ageing. Therefore policies must be taken by including programs to address the need of the elderly to ensure their independence, participation, healthcare, their self-fulfillment and their dignity. Sidorenko (2007) also emphasised the need of the empowerment of the elderly by including legislative measures to guarantee their basic human rights and prevent abuse and violence against them by establishing and sustaining positive images of elderly people in a society. In the opinion of Kinsella and Phillips (2005) aging must be seen as a challenge and an opportunity
about new thinking and emerging new policy responses to individual and population aging in the 21st century.

In 1999 the United Nations presented the Report «Conceptual Framework for the Preparation and Observance of the International Year of Older Persons» referring the need of a society for all ages by enabling the generations to invest in one another and share the fruits of that investment, guides by the principles of equity and reciprocity (United Nations, 1999). The Report included four levels of intervention regarding the development of a strategy for a society for all ages under the decisions assumed at the «Madrid International Plan of Action on Aging» (United Nations, 2011):

1. Action on aging with policies designed to enhance the lives of the elderly as individuals supporting their independence, participation and dignity;
2. Policies that must shape people at different ages and situations providing and enabling a supportive environment fostering lifelong learning and education, skills upgrading and healthy lifestyles;
3. Multigenerational relationships and the implications of aging for family (care giving and the provision of social services and income security);
4. Development and aging of populations focused on harmonization of population aging with continuing socioeconomic development by ensuring that elderly have opportunities to participate and contribute within the society.

In 2001 the «Madrid International Plan of Action on Aging» the major outcomes gathered from all the United Nations Member states was the commitment to eliminate all forms of discrimination, including age discrimination in order to incorporate effectively aging within social and economic strategies, policies and action to provide elderly with universal and equal access (United Nations, 2001). Three main priorities were approved:

1. The integration of aging within the larger context of development making possible the full participation in the development process and also its beneficiaries;
2. The importance of health as a vital point for the development and that for the individual (importance to reach old age in good health with the combination of efforts from the government, civil society, and the individual);
3. Ensure and enabling supportive environments to promote positive perceptions of aging and realistic images of older citizens to influence social, cultural, and economic exchange between generations. In conclusion, the Madrid Report encouraged the development of policies approaches that keep aging from becoming an additional burden for developed countries and to transform into an opportunity for more development (United Nations, 2001).

During the last decades that the fertility rates in the European countries are very low. The last projections of the aging in Europe for the period 2004-2050 shows that the population aged 65+ will increase by 58 million (it will represent 77% of the total) and at the same time the so called working age population will drop by 48 million (it will represent 16% of the total). According to this projection it is clear that European governments, civil society and the industry need to work cooperatively to adapt and
supplement some of the existing policies and practices to adjust to this new context. In consequence the European Union launched in 2005 the «i2010 – A European Information Society for Grow and Employment» initiative. This initiative aimed to ensured that the benefits of the information society must include all the citizens mainly whom are disadvantaged due to their limited resources, education, age, gender (i.e. e-inclusion), citizens with disabilities and also those citizens who live in less favored areas (e.g. rural and remote areas). As stated by EICTA (2007) some barriers must be removed and opportunities for the ageing society on ICT opportunities must also be created: affordability (industry must approach its research and development by including the elderly not only about its accessibility but also to create products and services that will come at lower price); availability (the introduction of broadband into remote and rural areas for the total digital inclusion); relevance and impact (the ICT courses and trainings must be targeted for the elderly needs with relevance for their everyday tasks and needs); accessibility (despite the recent efforts to train the elderly with digital skills to use ICT it must be assumed that they often cannot use the majority of existing mainstream products); intergenerational solidarity; usability and innovation; ICT and Healthy aging (the possibility and ability to use ICT to connect the elderly with their families by bridging distances and sharing information and receiving assistance from healthcare and social providers on a sustained and proactive way may be a crucial component to increase the elderly quality of life).

2. The Importance of Digital Literacy for the Elderly People

The increase of aging has a direct consequence on services and the traditional systems, e.g. social and health care among the European countries therefore one of the main targets is the quality of life and the active inclusion of the aging citizens in social and economic life. According to Malanowski, Özcivelek and Cabrera (2008), in this reality ICT and all those digital devices may have an important role because the digital applications can provide new ways of helping elderly to live with more independence. However the great majority of elderly do not enjoy and profit from the benefits of the present digital age, such as low cost communications and online services that could support some of their main needs. In a context of financial and economic crisis, improving digital inclusion can act as an enabler for citizens to actively participate in the economy and society of tomorrow. Greater e-Inclusion also generates systemic innovation, new business models, and new modalities for service delivery. By linking technology and service innovation to local entrepreneurship, e-Inclusion can become an engine for social enhancement and economic growth.

Digital inclusion therefore can be considered a ‘structural investment’ for innovation and economic growth. Elderly people can benefit enormously from digital inclusion because they can overcome isolation and improve their health and economic prospects through ICT.

In the opinion of Blit-Cohen and Litwin (2005) the phenomenon of ICT involvement among elderly has been variously addressed in the literature and the results of the reports are mixed. For example a survey carried on in Australia found that elderly used ICT and also expressed interest and confidence in learning to use digital devices however only few of them owned or used a computer!... It is true that elderly are not seen as ‘early adopters’ of ICT and they are not seen to be early adopters, so marketing
and design of new products and services are often aimed at younger people. People who might not have used a computer at home may be required to use one at work and trained to do so. But if a person is no longer in the work force this on-going introduction to new digital/technological devices needs to be sustained in some other way (Harrington and Harrington, 2000). Consequently elderly do not adopt ICT quickly, despite the benefits often applying to them. In order to avoid the present situation there is a need that development on ambient intelligence robotics and the pervasive computing e.g. integration of mainstream low-cost assistive technologies, intelligent systems and devices for care and support at home and on the move, accommodation of elderly in the workplace, multi-channel accessibility of content, user-friendly interfaces, and automatic translations and interfaces for services.

Table 1 show and highlight how, across the EU 27, the internet usage falls with age. The usage average among the EU 27 in what concerns the 55-74 group that is the lowest is in all the countries considered.

Table 1: Individuals who used the Internet at least once a week (by age and gender), EU 27 (%). Source: Eurostat Statistics.
Table 1 shows the evidence that ICT use declines with age but the figures also made clear that besides the elderly people there are other groups that may be considered info-excluded: citizens with lower level of education, the unemployed and, the retired and inactive. Some reasons can be assigned e.g. the fear of viruses, spam or intrusion can act as a barrier to learn. On the other hand the language used by providers of computers and other information technology suppliers can often be full of jargon and difficult for any lay person to understand mainly for those who may never worked with or used ICT before the problems will be bigger. Another reason may be due for the rapid pace of information technology can also cause problems and what one learns today maybe outdated tomorrow.

Figure 2: Individuals’ level of basic computer skills (2005), EU 25 (as percentage of the total numbers of individuals aged 16 to 74) Source: Eurostat Statistics.

As stated by Malanowski, Özcivelek and Cabrera (2008) it is not expected that elderly people will be able to take advantage of ICT since their experiences with future technology, their educational backgrounds and their incomes may vary significantly. However of the life-course perspective is that more active people are, the more lifestyle practice will become mobile and the more their expectations and specific needs for technologies (ICT) that support mobility, independence, participation and safety will increase. In resume, central to independent living is the recognition that each individual has a right to the independence that comes from exercising control over his/her life, based on an ability and opportunity to make choices and decisions in everyday activities. As argued by Malanowski, Özcivelek and Cabrera (2008) these activities include their participation in community, fulfilling social roles, employment and citizenship, sustaining their self-determination and at the same time developing strategies to minimize physical and/or psychological dependence on others.
3. Conclusions, Reflections & Proposals for the Future

There is a non-correct but consensual opinion that elderly people are not open to use ICT. However, several studies showed the contrary i.e. elderly use ICT (e.g., Czaja and Sharit, 1998; Rogers, Cabrera, Walker, Gilber and Fisk, 1996) although some fear because they lack some digital skills and also missing basic and background knowledge, and some inaccessibility of several digital devices keep many elderly from learning and using them (e.g. Rogers, Meyer, Walker and Fisk, 1998).

As a consequence of aging cognitive, physical and mental capabilities present a serious decline by affecting their abilities, priorities and preferences the elderly start to spend their energy in a select way aiming an optimal result (Craik and Salthouse, 2000). Because even the elderly are relatively healthy they realize their place in the life cycle, and experience their lifetime as limited they are reluctant to spend their last times in an unpleasant way. This means that the elderly choices are based on a cost-benefits analysis. According to the opinion of Melenhorst, Rogers and Caylor (2001) besides the feasibility of using ICT their perception about the potential benefits will affect their decisions. So, the knowledge of ICT will be determinant for their future use. Provided the benefits of the use of ICT are valued sufficiently high, the elderly may overcome the inhibitory effects of low usability and interface complexity. In order to enhance the use of ICT by the elderly training skill is still important however it must be taken in account that elderly are only motivate to make that effort when they see and understood the benefits. Therefore such benefits of ICT must not be considered in isolation and only focused on the device but must explicitly include the possibilities they offered for communicating with one’s own social network, in diverse daily life contexts (Melenhorst, Rogers and Caylor, 2001).

According to Hedge, Borman and Lammlein (2006) as population continues to age, society will still face the issues of equal access, healthcare needs, disability, engagement, and technological literacy of elderly all the organizations and institutions will be pressed to determine ways to manage retiree’s knowledge and with ways to accommodate older workers who choose to work beyond the age of retirement. But additionally society becomes more technologically centered, and it will be important to explore ways in which we can improve and maintain the technological literacy and access of elderly adults so that they may remain active in our political and social systems. Borges (2006) also stated that all citizens living in the European Union should be in a position to benefit from ICT regardless of their age by the development of new systems and new services for elderly is to ensure that ICT is cohesive and not divisive. ICT can aid elderly people’s daily lives such as preventing of or compensating for age related mobility functions, creating of new social networks, developing educational and artistic activities and giving practical or technical support to caregivers.

For EICTA (2007) it is important to stress and underline the three spheres of impact for ICT according to EU (2007):

a) Aging at work (allowing the integration of elderly into the labour market staying active and productive for longer with better quality of work and work-life balance with the help of easy-to-access ICT; it is recognized that ICT is a necessary skill in today's working environment, so it is need to work towards changing the mentality of employers and ensuring that the workplace is adapted to the needs of the elderly population);
b) Aging in the community (through ICT solutions for social networking it is desired that elderly people will be stay active and creative, as well as access to public and commercial services by improving their quality of life and also reducing social isolation because without ensuring all segments of the population are comfortable using ICT it will risk an alienation a large proportion of the population, and the elderly in particular; the isolation must prevent the rural and remote areas and as well as the urban populated areas with limited family support for the elderly people);

c) Aging at home (the main aim is to enjoy a healthier and higher quality of daily life for longer, assisted by ICT, while maintaining a high degree of independence, autonomy and dignity; ICT can serve as an equalizer for people of all ages, removing workplace barriers and increasing employment opportunities while reducing social isolation at the same time).

In the opinion of Borges (2006) elderly people need the encouragement and time to be accustomed to the ever-changing world of technology, a so-called: ‘social functionality’. Therefore awareness campaigns and training are needed to motivate, empower and enable elderly people to increase their sociability and also their levels of digital literacy that will enable them to continue to play an active role in society. To achieve these aims technology applications as well as technological services must be designed to take into account the needs of the elderly people and not on an assumption of the need. In the opinion of Malanowski, Özcivelek and Cabrera (2008) now a more active approach is starting to develop, in which elderly people are encouraged to articulate their own specific technology-related needs in a different fashion and they could even assume a role as feedback providers in the technology design process. However it is also important to recognise that the development of technology to help people remain independent does not need to be complex but can and must be «user-friendly». However if elderly people are to take advantage of information society them ICT products and services must not only be available and accessible they must also be affordable.

According to Melenhorst, Rogers and Caylor (2001) beside the feasibility of using ICT, the perception of the ‘benefits’ also affects its adoption, and may determine elderly adults’ choices even more than the ‘costs’. Increasing the perceived benefits of new communication methods may encourage their use by the elderly people but these benefits imply that we need to make them visible and tangible for them. Cutler (2006) argued that the gerontological research had not kept pace with technological change and gerontological research on technology had itself been reset by lags. Another main reason is outlined by Oestlund (2005) related to the fact that present understanding is still limited by stereotypes which fail to understand how different groups of elderly people use or do not use ICT and how they articulate their specific technology-related needs. However it is necessary not forget that aging is a complex process presenting big variations between groups and individuals and it is also important to remember that the ‘elderly people’ are a very heterogeneous group and for this reason a better differentiation is necessary when it comes to their specific technology-related needs.

In order to match the heterogeneity of the elderly people a new concept was introduced to meet the specific technology-related needs of this group as far as possible: ‘Design for All – DfA’. The concept of ‘Design for All’ consists in three main strategies (EU, 2011):
1. Products, services, and applications should be usable by as many people as possible without any kind of modifications (regardless of age, ability or situation);

2. All the products should be easily adaptable to different users and contexts;

3. Products should also have standardized interfaces capable of being accessed by specialized users. This remains to a concept of 'barrier-free' or 'assistive technology' or 'accessible design' by providing a level of accessibility for people with disabilities (e.g. elderly people).

Complementing the 'Design for All' another concept must be referred: 'Ambient Assisted Living – AAL'. This initiative was launched by the EU and is based on the article 169 of the European Union Treaty (EU, 2010) and aims to prolong the time elderly people can live with dignity and decently in their own homes by increasing their autonomy and self-confidence and to relieve elderly people of monotonous everyday activities, to care for elderly or ill people in order to enhance personal safety and also to save resources (human and economic). The 'Ambient Assisted Living' develop its strategy in three domains:

1. Ubiquitous computing: consists of integrating microcomputers, sensors and actuators into everyday objects;

2. Ubiquitous communications: enabling objects to communicate with one another (e.g. ad hoc networking, self-organization, personalization, and context awareness will play an important role);

3. Human-computer co-operation: when an interaction with devices happens in a 'human way' (technologies are interactive and in some cases multimodal and are based on speech, gesture, emotions, and artificial skins).

The concepts referred above (DfA and AAL) may constitute the possibility for independent living that can broken aspects related to the control of one’s life and empowerment, integration and full participation in society, independence, autonomy, self-determination, self-respect, and self-reliance.

Finally, it must not be forgotten as argued by Blit-Cohen and Litwin (2005) that elderly people who want to remain connected to society and who are capable of being a part of the 'technology-era' may also feel that being elderly does not limit them from being 'computer-users'. As also argued by Furlong (1989) computer utilization allows elderly people to hold a positive approach towards life and benefit from the excitement that can result from participation in the realm of ICT. Both society as a whole and elderly people themselves have to get used to the realities of lifelong learning. As stated by Harrington and Harrington (2000), lifelong learning does not stop at 27 or 45, but indeed lasts a lifetime and the result is an improved quality of life for elderly people and support for independent living.
References


