

The Role of ICT in the Lives of Senior Citizens

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Abstract: The entry deals with the issues of old age, accentuating the indicators that characterize and simultaneously modify the quality of life of senior citizens, focusing on the possibilities and place of ICT in the life of senior citizens. Human ageing is a highly individual process, a very individually-running complex process when social relations diminish and even family slowly recedes. Senior citizens have plenty of time available, looking for a meaning to life. One of the many opportunities is education. The practical section analyzes selected indicators of the lives of senior citizens in the area of education and ICT utilization. The paper provides a number of stimulative findings that reject persistent ideas about dissatisfaction increasing with the quality of life associated with the growing age of senior citizens. The objective of this paper is to contribute to further understanding of senior citizens' needs, since the level of this knowledge represents a limiting factor towards improving the quality of their life.

Key words: Quality of life, education, senior citizen, old age, leisure time, universities of the third age, computers, internet.

1 Introduction

Senior citizens form a specific group of our society that will increase, considering the ageing of the population. The demographic curves of recent years show that the population is ageing. According to the current projections of inhabitants, significant growth of the senior citizen group in our population is anticipated. In 2030 senior citizens might form about 25% of the total population of the Czech Republic [6]. As people age, their sensation, memory and fluid intelligence deteriorate. Creativity decreases, affectionate experiences gain a different quality in old age, those people are less interested in their neighbourhoods, they focus more on themselves and their problems, sometimes they may seem hypersensitive. Social relationships slacken and even family slowly recedes. Suddenly they discover that they have plenty of free time, but do not know what to do with it.

One of many options for helping this situation are computers and the internet, which offer a wide spectrum of opportunities for filling free time and, in addition, improve a number of skills and functions of the body. Surveys conducted by the company Gfk [2] point at the growing trend and readiness of senior citizens to use the internet and learn how to work with it. However, educational courses are often conducted by lecturers – experts in computers - who realize only rarely that senior citizens are a very specific group.

In all developed countries, education is one of the conditions of an active and fruitful life. The

chance of lifetime education is a prerequisite for maintaining the knowledge and skills of ageing people. Education supports the mental well-being of an individual and strengthens his/her independence. Society should thus develop a system of life-time education that provides education throughout a person's life in accordance with his/her needs and interests. The programme of the Government of the Czech Republic proposes the following measures to be taken in the educational sphere:

- Support educational programmes of the universities of the third age in order to enhance the life activities of senior citizens.
- Participate in the involvement of the Czech Republic in European and world cultures dealing with the education of senior citizens.
- Enhance the awareness of senior citizens of the possibilities and forms of education, and create a uniform system of generally available information concerning the offer of these opportunities.
- Support the activity of non-governmental subjects in the area of senior education.

In the Czech Republic there is already National Programme of Preparation for Population Ageing in place as a social programme that includes many of the active ageing policy principles, the fulfilment of which is required by the European Union. [5] The programme states, among other things, that the existing stereotypes of and views into ageing and old age need to be overcome and changed. The

objective is to enable lifetime education, create programmes and an environment that will help senior citizens to become oriented in the world of information technologies, and organize lectures on preparation for ageing and how to deal with the old age.

2 Problem definition

According to his activities, a Czech senior citizen appears to be an individualist who, to a great extent, prefers individual activities. He meets his loved ones gladly and often, however he tries to be independent of the family and community as much as he can. [3] The effort for activation of elderly people must fully respect the individual capacities and wishes of every human being. It is important to help them find motivation to create short-term and future goals, help them experience adventures and success, and strengthen their self-respect.

The analysis of older people's activities, conducted by Kuchařová [3], confirmed that old age is continuation of the previous life that reflects life spent in one's younger days. The different lifestyles of middle-aged people are largely transferred to the senior citizen's life. This dependence can be basically changed just by an unexpected change of physical conditions or a "fated" life situation. Most of all, people watch television and read newspapers and magazines. These activities are followed by meeting their relatives and friends and working at home or at a cottage, etc. (gardening, breeding domestic animals or pets). Various hobbies and interests, as well as book reading, are quite frequent. Popular activities include walks and sports. Other investigated activities exist rarely, also because these depend on the specific interests and attitudes of the individuals. This group contains visits to the theatre, exhibitions, etc., voluntary work in the neighbourhood, participating in activities of interest associations and organizations, and the last place is occupied by study (reading technical literature and visits to lectures).

The low interest in education is not characteristic just for pensioners, but is a manifestation of the non-established need for lifelong education of the entire Czech population. People with a higher education live more actively during retirement. The extent of activity of these people remains high for a long time, and decreases rapidly only in the last stage of life; education thus contributes to a satisfactory life in old age.

The importance of senior education is clear. It brings a feeling of dignity and helps appeasement and satisfaction with oneself. It helps to involve senior citizens in the community and preserves

physical and spiritual health. It improves orientation in new life situations, as well as the ability to make independent decisions. Furthermore, education in old age has a certain function. The preventive function is completed with the anticipation function that prepares a senior citizen for changes that might occur, for instance during retirement. The rehabilitative function then helps the person to recover and maintain spiritual and physical power, as well as to prepare for future being. This last is a strengthening function that develops interests, needs and skills and develops activity. It cultivates interests and needs and – last but not least – is significant in terms of stimulation and cultivation.

There are three senior education models in the Czech Republic. These are Clubs of Active Ageing where relationships are mostly informal, and which focus on different areas. These clubs are followed by the Third Age Academies that are being set up in those districts where a university is missing. Mostly they form a part of an organization, and have lectures in different spheres, among which can be e.g. edification in a healthy lifestyle. The Third Age Universities are affiliated with a college. This is an official form of education. Study at a Third Age University can be supported by computer and internet skills.

To senior citizens, the internet potentially offers a broad spectrum of utilization. However, the lower computer literacy of the existing senior generation, together with rather limited access to the internet, restrict its utilization to a considerable extent. Senior citizens these days represent a group that is mostly jeopardized by so-called function illiteracy, i.e. the reduced ability to function in a rapidly transforming information society. With the accession of the "younger" senior generation we can, however, expect that in the future the internet will play a more important role in senior citizens' lives. The question is, how is affected the personality of a senior citizens who learns, who works on PC or with the internet.

3 Investigation

The main objective of our research was to find out whether, and potentially how, the personality of a senior citizen who educates himself/herself and works on computer or with the internet, is affected. [4] Partial goals then included pointing out the importance of education for the senior citizen himself/herself - how computers and the internet can help senior citizens spend their leisure time in a more active manner, how they can develop the intellectual and emotional spheres of their personalities and, last but not least, how they can deepen their manual skills, obtain new information

from all corners of the world and various spheres, as well as having easier contact with family and friends.

Considering the intention to penetrate the situation concerning senior citizens and their relations to ICT, we selected qualitative research supported with a public opinion poll among the attendees of the University of the Third Age in Hradec Králové and random informants – senior citizens.

3.1 The technique of data collection and analysis

As the primary data source, we utilized a semi-standardized interview during which the intention and objective of the interview were defined, leaving a certain freedom in the tactics of conducting it. It was unnecessary to maintain the formulation and sequence of the questions, but all predefined areas had to be mentioned. The method of an interview was selected because it is an investigation method that allows not only capturing the facts but even deeper penetration into the motives and attitudes of the people interviewed.

The "tree-and-branch" model was used as the questioning strategy. This model has a shape of a tree. The core of the topic is like a stem and the main queries are like branches. The questions were formulated so that the individual branches of the topic were investigated in approximately the same depth. The "river-and-channel" model was applied only on finding information about the lives of the informants. This model tracks a certain stream of thoughts that caught our attention, and that's why we left other streams behind without further consideration. [7]

The interviews were always preceded by a personal request for an interview that would concern the interviewees' relations to computers. Then the subjects replied successively to the main questions related to their leisure time and how it is spent, the place of their education in their current lives, familiarization with PC, the time spent on a PC, the activities on a PC and the potential influence on their personalities or lives by the computer or the internet. Finally, they were asked why they thought a senior citizen should use a computer. These primary questions were supplemented with other questions to form a complete picture of the situation.

The interviews took place at senior citizens' homes to make them feel as relaxed as possible, to prevent their fear of opening up and expressing themselves. Each interview took 20 to 45 minutes. All data were recorded on a dictaphone. They were then rewritten in an unshortened version, and subjected to open encoding and analysis.

The said interviews were completed with a public inquiry among the attendees of the Third Age University. The public inquiry consisted of 7 items, four of which focused on leisure time, the room that education has in leisure time, the preferences in the area of their further education and the role of computers and the internet in their lives. The remaining three were of a demographic nature.

3.2 Investigative sample

In limiting the age of a senior citizen, we currently work conventionally with the age border of 60 or 65; however, without the existence of clear, objective rationales. [10] This statement is opposed by studies conducted by Vidovičová and Rabušic [9], which state that people generally do not consider age the sole and decisive factor for labelling a person as old. This proves that in the Czech Republic, "old" means a person who looks old and who is not in a good physical shape. It is interesting that the definition of the state claiming that a senior citizen is a person who starts receiving the old-age pension is put by people down to the sixth place. For instance, from the point of view of internet schools for senior citizens, a senior citizen on the internet is one who became familiar with the internet at the time of his/her productive or retirement age. For the purpose of this investigation a senior citizen is understood as a person of 60+ years of age who receives an old-age pension and gets familiarized with the computer in the productive or post-productive age.

The investigative sample was carefully chosen in advance to provide information from those people who were experienced in working with a PC and the internet, and who became familiar with a computer at a different time. Structured interviews were conducted with 47 interviewees, and the public inquiry involved 736 interviewees. The total average age was 75. The youngest informant was 63 years old and the oldest was 88 years old. The distribution was balanced in terms of sex, education and domicile of the informants. More than 90% of them had children and grandchildren.

3.3 Results and Findings

As the interviews showed, the senior citizens who participated in the study became familiar with computers at different times. Over 80% of the informants became familiar with them while they were still working. When they retired, the personal computer as we know it now was only at the beginning of its development, and the internet was a convenience. More than 87% of these started working with a PC as senior citizens within courses

organized mostly by a university or by municipalities.

As concerns the *relationship and attitude of senior citizens towards computers and the internet*, the results show admiration, anxiety and lust for work on a computer. However, all is done with a certain respect and less fear of operations they are not quite sure of. The craving of some individuals (about 8%) to surf on the internet borders on a dependency.

As concerns the *user work on PCs*, senior citizens are most interested in the internet with which they are often fascinated. They utilize searching for information on the internet to supplement their hobbies or for other activities that are helpful for their lives. Most often, the relevant investigative sample contains watching current news over the internet, searching for laws, foreign words, timetables, information on remarkable places, cultural events and technical servers. Also, recipes are frequently searched. As concerns other activities, they prefer email, which constitutes the biggest motivation for senior citizens to become familiar with work on a PC. More than 24% of the informants – senior citizens – have also discovered Skype or ICQ for communicating with family and friends. These PC "contact activities" take up about 45% of the time spent on a PC. Less interest is shown in playing games when these are mostly games of a simpler nature, logical and those known by senior citizens in the table version. They are also interested in assembling puzzles.

The *time that senior citizens spend on a PC* varies. It ranges from couple of hours once a week to everyday activity on a PC. There is a difference based on whether they own their own PC or whether they are residents of a facility for senior citizens and have the opportunity to visit the local internet cafe or go to another place. A statistical dependence between the closeness of the computer's location and the amount of time spent on it was verified, regardless of sex or age.

Senior citizens agree that at their age one needs to have a hobby, something to fill up the amount of free time they have. One of the possibilities is user work on a PC. For every senior citizen in the research group a computer has personal importance; the reason *why they decided to start working with a computer*. The main motives include a "need" for it. This involves realization of the fact that the internet has spread to all spheres. Senior citizens do not want to be a burden on anybody, and therefore they want to learn how to work with internet so that they are not left behind and to be able to communicate by means of electronic mail or electronic forms. Additional reasons include a necessity that can be understood as memory training and brain activation. They do

not want to become lazy, and want to learn further. For some, the internet itself and its options and offers were the reason for learning how to work on a PC.

For the members of the research group, electronic mail has great importance, whilst for others it represents all that interesting for them on the internet. It is one of the meanings of their lives. On top of that, they appreciate the financial aspect, since, in particular, calls outside Brno or outside the Republic are quite expensive. Another positive factor is the topicality and unseriousness of the information they may include in their letters. Also, the fact that, due to decreased ability to move and increasing difficulty in memorization, they have the chance to reconsider everything or rewrite it and then write it all in a readable manner, plays an indispensable role, which is stimulating for the psychic.

In the research model, senior citizens expressed their opinions on *potential positive or negative changes* that could turn up in their personalities during their work on computer. The study pointed at changes in multiple spheres. *Increase of brain activity* and memory support is revealed as one of them. Senior citizens hold the view that work on a computer and with the internet has a positive effect on the brain's activity and keeps it going, which prevents becoming lazy – and this is important at this age. They agree that work on a PC is more interactive than watching TV, which appears to be the most universally spread leisure-time activity among senior citizens.[8] At the same time, it is the revival and pleasure that have to be stressed out, which are caused by the feeling of satisfaction based on activity or e.g. on memorizing an email address. *Even as concerns movement functions*, senior citizens think that a change has happened, or that it might affect their movement abilities. In their opinion, the mouse is what affects the said change most - controlling the mouse causes minor issues for them, especially at the beginning. Then they mention the keyboard in relation to writing letters. *Improvement of the psychic* occurred mainly in the effect that work on a PC has on their thoughts. Thanks to computers, senior citizens are free from everyday and uncommon worries and they think of something else. This then also affects the everyday stereotype that is crushed by work on a PC. They get the feeling that ageing is slowing down and that they no longer have as many problems.

We even noted the opinion that the internet, especially electronic mail, *supports relationships*, especially within a family. It appears that email has the ability to connect generations; the existing young generation hardly ever sits at a writing desk every day to write a postcard or a letter to their grandmother. Whilst at the computer, they spend a

relatively longer time, so it is not much of an issue to reply to their grandmother's electronic letter.

Work on a PC affects the quality of life, as well. Senior citizens claimed that when they work on PC, they do not get bored. On the contrary, they perceive work on a PC as a kind of enrichment or diversification of their lives, by which they are offered a variety of options. On top of that, they have the feeling of being more active and that they are doing something positive for themselves, which is better than just sitting and watching TV. Some of them think that this might affect a positive attitude towards life and the activities offered to them.

4 Discussion, conclusions and problem solution

We can say, based on the aforementioned results, that senior citizens become familiar with computers mostly at work, and that they return to it after being inspired by spreading of the internet in broad use. They learn the basics of computer work in courses, which they see as beneficial because even though they do not utilize all they learn, it is important for them in terms of understanding the logical sequence and computer function and as a place for creating new social contacts.

As an older generation that is still far from being able to function naturally in the society of information technologies, they have to write everything down, they need to see clearly, learn theory and have multiple methods of memorizing the given procedure or information. The monitored group of informants likes to work on a PC and it can be said that they become dependent on it or, at least, they are eager to sit at the computer and start working on it. On the other hand, there is an apparent fear or respect they feel towards computers. This shows itself mainly in situations when they are not quite sure about a procedure or command they are not fully familiar with. It is, however, interesting to see the willingness with which they tear into learning. They have more problems with finding sufficient time in which they want to try and repeat every day what they have learned.

On a computer, they search for information from the spheres and events they are interested in, then daily news service and information on travelling or timetables. Contrary of the population of the Czech Republic, sending electronic mail is not the most frequently utilized internet service, though we cannot claim that it is not used or even preferred by some senior citizens.

This research group plays PC games less often, however it must be pointed out that they successively discover games, even though this was

not the main reason why they started using the internet. The time the research group of senior citizens spend on a PC ranges within a quite large time span and depends on many factors, such as ownership of a computer or availability, the courage to work on it on their own, or impatience in waiting, for instance, for an email.

Senior citizens agree that they need to have a hobby in old age that makes spending their free time more pleasant. One of the options is work on a PC. This is important for senior citizens not only as a hobby and a way of spending their free time, but they see it also as brain activation and memory training. They also realize that they live in a society of information and modern technologies in which they need to learn these, if they do not want to be left behind or be a burden on somebody.

Electronic mail is also of great importance for the research group members. It can be said that electronic mail rather simulates certain relationships with family and friends, which gives them a feeling of satisfaction. What is priceless for them is the financial factor which is good, i.e. zero, unlike using a telephone. Another positive factor is the topicality and unseriousness of information they can include in their letter. Also, the fact that, due to decreased ability to move and increasing difficulty in memorization, they have the chance to reconsider everything or rewrite it and then write it all in a readable manner, plays an indispensable role, which is stimulating for the psychic.

The research discovered that work with computers and the internet can affect changes in the personality and life of a senior citizen. This involves specifically an increase of brain activity and support of memory that help the brain not to become lazy in old age. There is no doubt about work on a PC being more active than, for instance, watching TV, which is very common among senior citizens. Controlling the mouse can then affect the fine movement abilities, just as writing on the keyboard. Improvement of the psychic showed mainly in the effect of work on a PC on their thoughts. Thanks to computers, senior citizens are free of everyday and even uncommon worries, and they think of something else. This, then, also affects the everyday stereotype that is broken by work on a PC. They get the feeling that ageing is slowing down and that they no longer have as many problems.

Although they say that mobile telephones and the internet reduce eye-to-eye communication, which prevents relationships from becoming deeper, and communication is limited to various abbreviations, it seems that, on the contrary, electronic mail improves the social relationships of senior citizens. This applies especially to the

interconnection of generations, which could hardly be as frequent under different circumstances.

All these factors and many others affect satisfaction and appetite for life, which is caused by the feeling that they can do something, they are learning something, they have the opportunity to see their families more often. In fact, they work and yet it is fun, which is an ideal combination. It can, therefore, be said that the research showed that the work on a computer and with the internet not only may have, but in the specific research group it actually did affect the personality of a senior citizen. Those changes proved to be positive in many spheres, causing improvement in the psychic, memory, motor functions, social relationships, appetite for life and in the total activity of the personality of the senior citizen.

Specialized, yet broadly perceived, education thus becomes a symbol of a new, attractive, purposeful and informed attitude of senior citizens toward their lives; an attitude in which education becomes one of the options to create new areas of interest, activities, contacts, development or at least maintaining the quality of a senior citizen's life. [1]

5 Conclusion

Old age is a period of involutionary changes, when the human body weakens; changes are noted both in the physical and the psychological part of the human personality. Czech society is ageing, just as everywhere else. We are facing a period of huge changes. Society has to adapt to the situation that has occurred and react to it. Passive spending of leisure time and insufficient motivation to do something about it seems to be a big issue. In connection with this, it is important to realize that education is the primary tool for affecting this situation. Not only is there a need to adopt lifelong education as a matter of course, but even to stimulate one's appetite for further learning. This should be accompanied by a feeling that being in retirement age does not mean automatic give-up on the education and the life itself.

All this should lead to a senior citizen having the chance to feel that he/she is a full-value citizen of our society for as long as possible, which is enabled if he/she is able to react fast to this rapidly changing information society and work with information technologies.

Many people and institutions already realize this; therefore, for instance the European Union is investing from the PHARE fund in a number of courses of user PC work for senior citizens. In addition to this, senior citizens are clearly interested in the internet since they represent the most rapidly growing group connected to the internet. As resulted from the study, computer

technologies and the internet are not significant for senior citizens in terms of autarchy within modern society only, but they even embrace all the benefits of senior education in general. Learning to work on a computer has preventive, anticipating, rehabilitative and strengthening functions.

The problem is that there is a lack of qualified lecturers to teach senior citizens specifically how to work on a computer. The skill of learning has to be developed; education must become fun. It must be demonstrated that education is not only for the young but is also useful for senior citizens. Then there is room for a social pedagogue who, thanks to his professional preparation and requirements on personality, represents a suitable alternative for this kind of work.

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