

Self-development in Old Age versus the Challenges of the Information Society: The Polish-Bulgarian-Portuguese Perspective

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Abstract

The paper presents the result of a study to diagnose the level of interest of elderly people in the study of digital skills, and attempts to answer the two questions of whether older people feel the need for self-development in this area and how they find themselves in the information society. The comparative study was carried out as part of the international project Erasmus+ Adult Education, titled Silver Civic Education (2017-1-PL01-KA204-038695) implemented in the years 2017-2019. It involved seniors from three partner countries of the project: Poland, Portugal and Bulgaria, which made it possible both to determine general educational expectations of elderly people and to identify specific issues for each country. Elderly people are a very heterogeneous group, they require educational support in many areas, and especially in the area of new technologies. This can influence maintaining or stimulating their curiosity and self-development, and therefore contribute to raising their quality of life and enabling them to use life to the full.

Keywords: seniors, education, self-development, information society, internet.

Саморазвитие в пожилом возрасте и вызовы информационного общества: перспектива Польши, Болгарии, Португалии

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Аннотация

Данная статья приводит результаты исследования по диагностированию уровня интереса пожилых людей в освоении цифровых навыков, а также представляет попытки установить, есть ли у них желание развиваться в этом направлении, как они определяют себя в информационном обществе. Сравнительное исследование было проведено в 2017-2019 годах как часть международного проекта Erasmus+ Adult Education "Silver Civic Education" (2017-1-PL01-KA204-038695). Были вовлечены пожилые люди из трех стран-партнеров: Польша, Португалия, Болгария. В результате, были исследованы как общие ожидания пожилых людей, так и специфические сложности в каждой стране. Пожилые люди – это достаточно неоднородная группа. Им нужно дополнительное обучение, особенно в сфере новых технологий. Такая под-

держка может помочь развить их любознательность, стремление к самосовершенствованию, и как результат, улучшить качество их жизни.

Ключевые слова: пенсионеры, образование, саморазвитие, информационное общество, интернет.

Introduction

The period of old age is usually associated with various deficits. Intensifying health problems affect the senior's quality of life and their activities. "With the age from the middle adulthood, the speed of acquiring and collecting new information, especially not very useful in everyday or even professional activity, is being reduced. These processes are the result of changes in functioning of the nervous system, especially the deterioration of specific brain areas" (Gurba et al., 2018, p.4856). Despite that, many people aged 60+ are still active. In many countries, including Bulgaria, Poland and Portugal, seniors participate in social initiatives, courses and workshops prepared for them, i.e., adult education aimed at their self-improvement and self-development. The current holistic perspective of the role and importance of the person's lifelong self-improvement shows that seniors have huge potential that can be used in their development. New challenges of the contemporary world actually make it necessary to stimulate self-creation or self-development capabilities of elderly people (Tomczyk, 2014). Increasingly seniors are aware that self-development and education in old age is largely practical and ensures them greater comfort of life. Such comfort is the result of, among other characteristics, efficient functioning in the world of the production, gathering and circulation of information, what is commonly called the information society.

We define the "Information society ... as a civilization where processing information using information and communication technologies is a significant economic, social and cultural value" (Koćwin, 2018, p.86). In such a society, information is treated as a product or good for sale, being the driving force of the contemporary civilization, in which computers, the Internet and all digital techniques are among the most important aspects of the life and work of information society members, because they allow quick access to information (Golka, 2005, p.254). The Report on Europe and the Global Information Society (European Union, 1994) declares that: "The widespread availability of new information tools and services will present fresh opportunities to build a more equal and balanced society and to foster individual accomplishment. The information society has the potential to improve the quality of life of Europe's citizens, the efficiency of our social and economic organization and to reinforce cohesion" (p.6). However, the term "information society", refers to all the people affected by the new media, although the intensity and the level of their engagement may differ. The development of the information society offers new opportunities for social functioning and access to various kinds of information, but it can also be a source of frustration. Therefore, terms such as digital natives and digital immigrants have grown to symbolize different generations (Prensky, 2001). Members of the former group (the younger ones) do not know a world without computers, the Internet or cell phones (as a source of entertainment). They use Google or other search engines and communicate via social media. Digital immigrants (the older ones) know analogue technology and use cell phones only to talk or send messages. The recent technological innovations offer new ways of communication: no longer face to face, but face to computer. They also require the ability to use, not only a computer mouse, but also touch screens, or even voice control, which may be frustrating and confusing for many older people.

The recent statistical data regularly collected by the portal We are Social (2019) shows that in 2019, the number of Internet users was almost 4,388 billion – nearly 60% of the global population. The number of Internet users in Poland is 30,07 million, in Portugal, 8,02 million, and in Bulgaria, 7,01 million, that is, 70%, 78% and 67% of the total

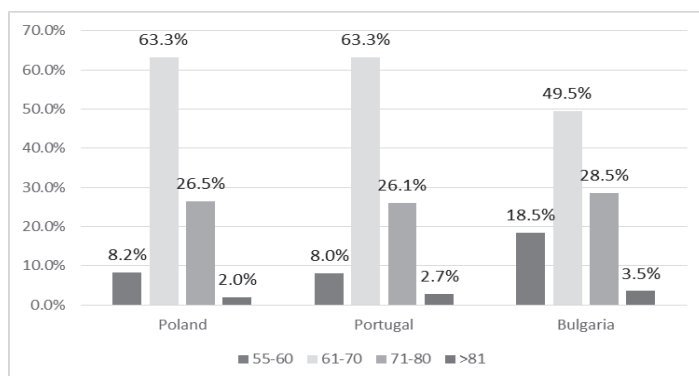
populations of those countries, respectively. In 2014, one-fourth of the people all over the world had active accounts on social networking sites such as Facebook or Twitter. By 2019, this proportion had grown to 45% of the global population. Statistical data shows also that people aged 65+ account for 9.2% of the total Internet user population, but in the 80+ age group, this proportion is only 1.9%. Seniors are also users of Facebook, but they only comprise 3% of all the group (We are social, 2019). The question arises whether the low level of participation of elderly people in social networking sites or their less frequent use of the Internet resources (as compared to the younger generations) is the expression of seniors' reluctance to engage in these activities or whether it results from the lack of skills necessary to function freely in the virtual world? Are seniors learning or are they interested in learning digital skills? Do they feel the need for self-development in this regard? How well do they function in the information society? These issues were one of the areas investigated in the presented international comparative study involving seniors.

Methodological background

The study presented in the paper was carried out as part of an international project Erasmus+ Edukacja Dorosłych – Silver Civic Education (2017-1-PL01-KA204-038695). It is a two-year (2017-2019) project coordinated by the Polish association 'Searching for Poland' located in Białystok. The partner countries of the project are Bulgaria (New Bulgarian University in Sofia) and Portugal (The Union of Parishes Council of Gondomar– S. Cosme, Valbom and Jovim). The project is addressed at seniors, and one of its aims is to explore the educational needs of elderly people. This was achieved through a diagnostic survey carried out between February and May 2018. The study was based on the survey technique with identical questionnaires for all three countries. A total of 622 responses were obtained: 200 in Bulgaria, 196 in Poland and 226 in Portugal. The questionnaires were properly encoded and subject to comparative statistical analysis. Statistical calculations were performed using the SPSS Statistics 22 software.

Study sample characteristics

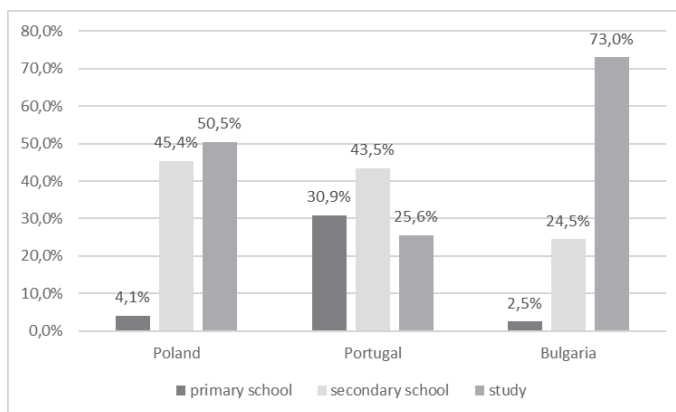
More than half (55.1%) of all the respondents were women, whose proportion was the highest in the Portuguese group (65.9%). 44.9% of all the respondents were men, with the highest proportion in Poland (60.2%). The most numerous were people aged 61-70: Bulgaria (49.5%); Poland (63.3%); Portugal (63.3%) (See figure 1). Almost one third of all respondents (27.0%) were in the 71-80 age group and 11.4% were people aged 55-60, with the highest proportion among respondents from Bulgaria (18.5%). The oldest, aged 81+, represented 2.7% of the respondents.



Source: own study.

Figure 1. The respondents' age

Nearly half the respondents (48.6%) had higher education, 37.8% had secondary or vocational education, and the remainder, elementary education (Figure 2). In each of the partner countries, higher education was most common in Bulgaria (73.0%), and more than half of respondents from Poland (50.5%). In Portugal, 43.5% of the participants had secondary, and almost a third had only elementary education level. The Portuguese group was definitely most differentiated in terms of education level.



Source: own study.

Figure 2. The respondents' level of education

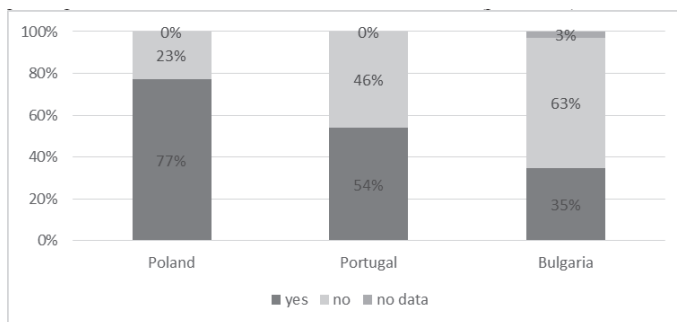
Work purpose

The previous order is redefined by ubiquitous media, in many cases contributing to the sense of maladjustment, marginalization or deepening of generational differences. The question arises whether this is experienced by present seniors, who have lived the last decades of their lives in the digital age. Does this digital environment contribute to their self-development or to their exclusion? How do elderly people function in the information society? In this article, we will look for the answers to these questions. Based on international research, we discuss the issue of seniors' interest in new technologies and learning how to use them.

Results

Seniors' interest in basic and extended skills concerning new technologies

“Participation in adult learning (in general) stimulates the economic wellbeing of a country, as countries with higher levels of skills and competences are more likely to be more competitive” (European Commission, 2018, p.19). It seems that contemporary societies, aware of the relationships identified in the report, offer seniors various educational activities as part of adult learning. Do seniors use them? At the beginning of diagnosing the educational needs of elderly people, we recognised seniors' participation in activities designed for them. The study showed that more than half (55.1%) of the respondents had either participated in such activities in the past, or were attending them at the moment (Figure 3). The highest level of seniors' engagement in educational activities was observed in Poland, where 77.0% of the respondents declared they had participated or were participating in such educational activities, while the lowest engagement level was found in Bulgaria (35.0%). In Portugal, the distribution of seniors' engagement in educational activities is similar: 54% of them participate in educational activities, and 46% do not ($p < 0.001$).



Source: own study.

Figure 3. Taking part in educational activities for seniors

We tried to determine seniors' level of interest in learning how to use devices that make it possible to use Internet resources and other forms of activity that ensure access to digital media. Boz and Karatas found that: "given the increasing share of ICTs in everyday life, understanding and examining the role of the Internet for the life quality of the older population is essential in aging societies. Much of the existing research has focused on younger age groups who are perceived as the more active Internet users. Although in recent years there has been a gradual increase in studies about older Internet users" (Boz and Karatas, 2015, p. 183). Our study is an example of that. Data concerning seniors' interest in learning how to use new technologies is presented in Figure 4.



Source: own study.

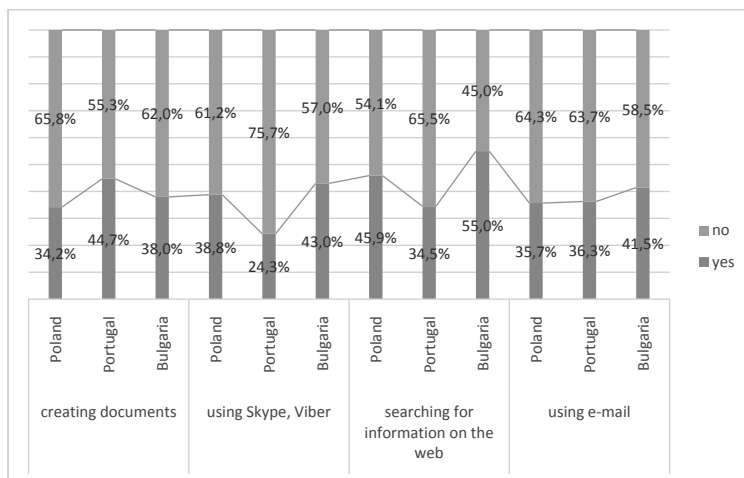
Figure 4. Seniors' interest in new technologies

The participating seniors are definitely interested in educational activities aimed at deepening knowledge and skills connected with using modern technologies. The indices for Poland and Bulgaria are similar: 90% respondents there indicated the need to engage in activities oriented at modern technologies. In Portugal, this proportion is 85.4%. Only one in ten people did not display such interest. These were mostly participants aged 71-80 and people with secondary or elementary education.

The analysis of Figures 5 and 6 shows which issues related to new technologies are specific interest for the respondents. They were divided into two groups: basic skills related to using the tools that facilitate work and allow to maintain contact with other people, and extended skills that improve the quality of life and allow the facilitation of daily life.

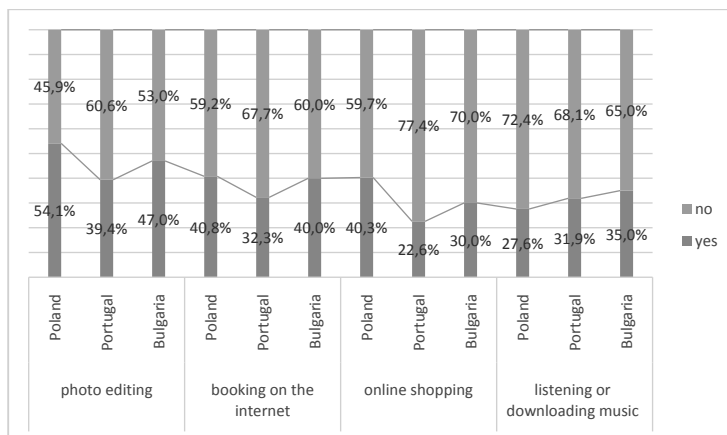
The respondents expressed similar opinions on various basic skills connected with the global network. On average, 40% of elderly people consider skills such as creating digital documents, using instant messaging applications (Skype, Viber) or store and forward communication systems (e.g., e-mail) to be valuable. The highest number of all respondents (45.0%) find searching for information on the web to be especially interesting when it comes to using new technologies. The analysis of data included in figure 5 shows

the lack of significant relationships between the respondents' country of origin and their intention to obtain basic skills in using new technologies. Differences only occur in the case of respondents from Bulgaria (55.0%), who declare they are particularly interested in searching for digital resources on the Internet and seniors from Portugal (24.3%), minority of whom are interested in learning to use instant messaging apps (Skype, Viber).



Source: own study.

Figure 5. Basic fields of seniors' interest in new technologies



Source: own study.

Figure 6. Extended fields of seniors' interest in new technologies

Seniors' interest in extended skills, those which can improve the quality of life and facilitate daily functioning, is somewhat different (Figure 6). The respondents would most like to improve their skills related to digital photo editing: 54.1% from Poland, 47.0% from Bulgaria and 39.4% from Portugal. In the age of common access to digital cameras, which are present on most smartphones also used by the older generation, this is understandable. The participants also expressed interest in classes that would teach them how to make online reservations. This is especially important for senior Polish (40.8%)

and Bulgarian (40.0%) respondents, and slightly less, for Portugal (32.3%). Only a small group of seniors (31.0% of all the respondents) are interested in learning the skills that would enable them to listen to or download music via the Internet and to shop online (31.5%). In Poland alone, a larger group (40.3%) perceive the value of shopping online.

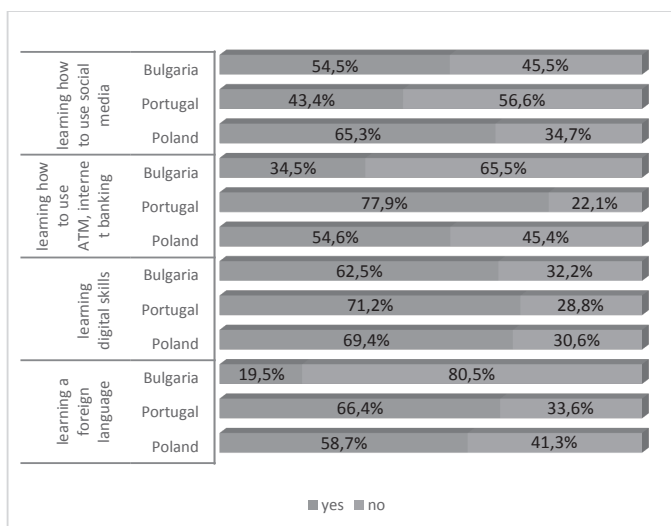
In order to gain deeper insight on seniors' interest in learning basic and extended skills connected with new technologies, and to look for clearer differences (or similarities) between the three countries, we performed a cluster analysis. We used the procedure of two-stage cluster sampling as an exploratory tool to reveal the existence of natural groups (clusters) in the data set, which are not otherwise visible. The categorical variables were: country, sex, age, and education level. The evaluation variables were: the seniors' interest in basic skills related to new technologies and interest in extended skills. The model based on a two-stage algorithm and including 4 input variables proved to be well fitting. The Silhouette measurement of cohesion and separation was almost 0.6, which shows the good quality of the groups obtained. We generated 3 clusters with similar sizes and the proposal of the biggest group with the 1.13 ratio to the smallest.

Space here makes it impossible to describe the results in detail, but several conclusions are interesting. The use of cluster analysis led to generating 3 clusters, in which the key variable decisive for their shape was the respondents' country of origin. However, their sex, age and education level also played a part. Cluster 1 was made up in 65.0% by Poles. What is important is that 87.4% of seniors in this cluster were men, who are generally more technically-oriented than women. Hence, the fact mentioned above, of higher interest of Poles than other nationalities in learning digital photo editing or online shopping seems understandable. The responses that make cluster 2 have completely different characteristics: they are dominated by the Portuguese (73.4%), and all the women (100%) taking part in the study were in this cluster. Perhaps the gender of respondents from Portugal may explain their lower interest in the development of their competence in basic (e.g., using Skype, Viber; searching for information on the web) or extended skills connected with new technologies (on-line shopping, booking on the internet, photo editing). The responses of Bulgarian seniors, included in cluster 3, can be explained the same way. People with higher education made up 74.1% of this cluster. We think the respondents from Bulgaria expressed less interest in e.g., learning how to create documents or do online shopping, because they may already have those skills and are less interested in extending them.

Taking all that into consideration, it is worth exploring what classes seniors would most like to attend as part of adult education. Which fields of new technologies do they consider most interesting in cognitive and practical terms, if not those mentioned above? The respondents proposed subjects of classes which in our opinion clearly reflect the needs resulting from the advancing digitization of the environment (figure 7).

In each group (71.2% from Portugal, 69.4% from Poland and 62.5% from Bulgaria), the majority respondents mentioned the acquisition of digital skills, i.e., the use of modern digital media – the computer, the tablet or the cell phone. Learning how to use social media and blogs (Facebook, Twitter) was also mentioned by many people, but there are differences between the countries in this respect. The desire to learn or improve skills in using social media was most often declared by seniors from Poland (65.3%) and Bulgaria (54.5%), and slightly less often by those from Portugal (43.4%). The situation is the opposite in the case of learning how to use online banking which was expressed by 77.9% seniors from Portugal, 54.6% from Poland and 34.5% from Bulgaria. We can suppose that differences in educational needs, reflected in the declarations of respondents from different countries, result from the level of development and the availability of different modern solutions in each country. For example, in Portugal, more and more offices only

work online, so it seems that seniors are aware of the need for self-improvement or self-development in this regard (e.g., learning online banking). What is more, nearly a third of respondents from Portugal only have elementary education, and this may also explain their interest in self-development and acquiring practical skills. We think that greater digitization of daily functioning (forced by the country's advancement level) results in greater need to improve skills in this regard.



Source: own study.

Figure 7. Interest in topic that could be implemented during seniors' education

Compared to other answers, learning foreign languages is mentioned less often as being of interest for the participants. This need is very important for respondents from Portugal (66.4%), slightly less for respondents from Poland (58.7%), and the least often mentioned for Bulgaria: nearly 20% of respondents. If we remember that almost $\frac{3}{4}$ respondents from Bulgaria reported having higher education, the distribution of responses regarding this subject is less surprising. Bulgarian seniors may already know English at a level that is satisfactory for them.

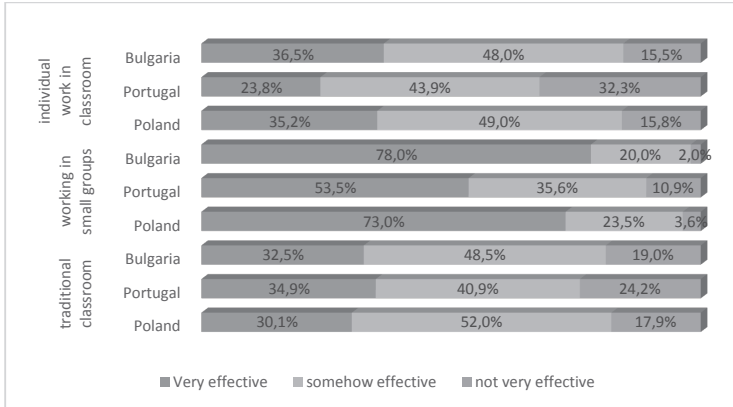
Methods of teaching seniors and their effectiveness

We already know the areas that seniors would like to develop as part of adult education. Equally important is information concerning the teaching methods. We asked the participants which methods are the most effective for them (Figure 8).

The respondents reported that working in small groups would be the most effective. This method is most often appreciated by Bulgarians (78.0%), slightly less often by Poles (73.0%) and by more than half of the Portuguese (53.5%). The effectiveness of other teaching methods, i.e., individual works and working in traditional classes, are evaluated by seniors on a similar, much lower level. They also rate the effectiveness of teaching methods using new technologies, as shown on Figure 9.

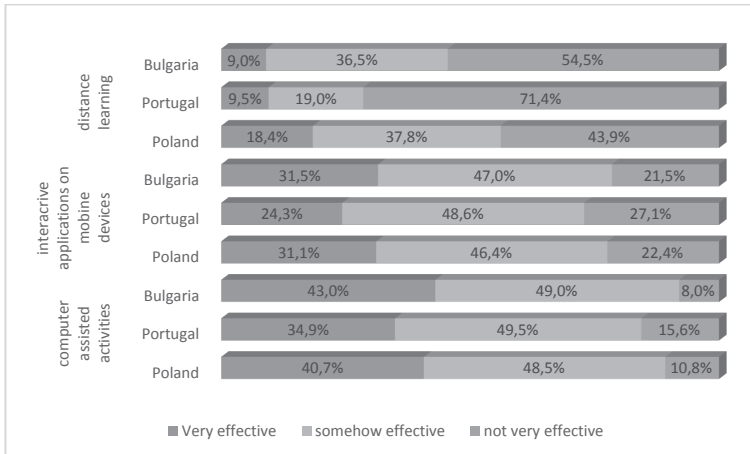
The seniors rated computer assisted activities as the most important. Comparative analysis shows that such activities are most often regarded as effective by the respondents from Bulgaria (43.0%), Poland (40.7%) and Portugal (34.9%). The use of interactive applications on mobile devices (e.g., the cell phone, the tablet) is less popular as an effective way of learning. Nearly $\frac{1}{3}$ of seniors from Bulgaria and Poland and $\frac{1}{4}$ from

Portugal find such learning methods effective, but the vast majority of the respondents perceive them as not very effective or ineffective. The thesis about the need of individual working directly with computer is confirmed by responses concerning distance learning. People from Portugal (71.4%), Bulgaria (54.5%) and Poland (43.9%) regard it as the least effective method.



Source: own study.

Figure 8. The effectiveness of traditional training methods



Source: own study

Figure 9. The effectiveness of training methods using new technologies

Conclusion

Taking into consideration the present social context of information society, we can identify at least two groups of seniors that should be supported in the dynamically changing reality. The first group consists of people experiencing difficulties in performing everyday activities whose character has changed as a result of transformation of civilization creating information societies. It may include activities such as buying travel tickets online (e.g., railway), making monthly payments when there are fewer post offices, booking visits to the doctors, using ATMs instead of bank cash points etc. As a result

of digital advancement, these people already experience exclusion in many spheres of life due to the lack of Internet access or the lack of competence to use it, or they exclude themselves because they do not feel the need to use the Internet. The other group is the seniors who have the access to the Internet and know how to use it, but due to limitations resulting from old age (e.g., health problems) or the impossibility to improve those skills (e.g., the lack of relevant educational opportunities), they do not develop them.

Based on the results of this study, we can say that seniors from the latter group prevail in the sample. They have taken or are taking part in educational activities developed for them and are interested in self-development, whose direction depends on the character of information society. After careful analysis of the collected material, we learnt that almost 90% respondents from all three countries – Bulgaria, Poland and Portugal – are interested in activities oriented towards modern technologies. Learning digital skills, i.e., the use of modern digital media such as the computer, e-mail, cell phone, was of interest for seniors from all three countries. More than half of Polish and Bulgarian seniors mentioned the desire to learn or improve their skills in social media, while Portuguese seniors regarded learning to use online banking as more important. On average, 40% respondents consider such activities as creating digital documents, using instant messaging applications (e.g., Skype, Viber) or store and forward communication systems (e-mail) to be valuable. The seniors much less often expressed their interest in gaining skills necessary to download music from the Internet or shop online. Thus, the elderly people's responses are an excellent starting point for all those who deal with adult education. Through the diagnosis of seniors' needs concerning new technologies, planning such practical activities may be easier. We should remember about seniors' liking for learning in small groups as the most effective teaching method.

It seems that the study participants – Polish, Bulgarian and Portuguese seniors – cope quite well in the current information society and meet its challenges. Carrying out representative research would show whether the attitude of the participating seniors reflects the general tendencies or whether it is still typical only of those who are active. We need to be aware that elderly people are a very heterogeneous group, including both active and passive seniors. They require educational support in many areas, and especially in the area of new technologies. Therefore, a social and educational challenge is to prevent elderly people's exclusion by counteracting barriers that make it difficult for them to function in the changing world. But only activating and educating them in a wise way, with consideration of their needs and preferences, as well as effectively maintaining or stimulating their curiosity and self-development may contribute to raising their quality of life and enable them to live life to the full.

Conflict of interest

The authors declare that there is no conflict of interest in this research.

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