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Senior's competencies against global digital transformation

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Abstract

The modern digital environment is increasingly integrating with the everyday life of modern people, regardless of the place of residence, education or age. Today, cyberspace is a parallel space of social activity to the living environment known to man for centuries. Information and media competence are becoming effective help and support for seniors' media activity.

Introduction

The information has always been an integral aspect of every human activity; it would be hard to define any human action without mentioning information per se or information exchanged in the communication process. Technological information and communication revolution which took place at the turn of the centuries has revolutionized the processes of communication as well as acquiring, processing and publishing information, and human habitat gained its parallel – virtual version. The consequences of the rapid and continuous development of information and telecommunication technologies cause regular changes in the functioning of humans who get access to more and more advanced digital environment to perform their professional, social and educational activities. The dynamic, ongoing development of artificial intelligence and robotics steers towards more and more sophisticated systems that interact with people and thus, will be seen more as partners rather than tools.

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The dynamics of the technological progress of the last decades justifies seeing the transformations as the fourth industrial revolution which affects all aspects of social activity. Virtual reality with its social networks, intelligent information and communication media or ever more advanced robots created a new quality of life, of how we experience emotions, self-awareness, and our environment.

Conditions of global digital transformation

The digital transformation involves social, economic, cultural and demographic changes affecting both individuals and the global community. Increasingly stronger integration of the well-known physical reality and digital space generates new challenges and new values while the new, revolutionary forms of communication and sharing information modify social relations and actions. The influence of the digital transformation on the functioning of the societies cannot be overemphasized, especially in the context of the challenges posed by the dynamic development of artificial intelligence, growing capabilities of cloud computing or increasing accuracy of data stored in the cyberspace (Big Data). It is worth remembering that changes evoked by the digital revolution affect all areas of social activity both, globally and individually – not only businesses, government agencies, and organizations or big research institutes but every family and every individual. Modern digital technologies are integrated with the latest scientific achievements and strategies developed by agencies and governments to solve the problems emerging in the 21st-century society; problems like environmental pollution, natural disasters, social exclusion, waste management or aging of the societies observed in Europe and outside of it. Implementation of modern technological solutions facilitates the planning and implementation of strategies to reduce inequalities and reorganize and modify the systems designed to meet the emerging needs.

The pace of the digital development is measured by the high dynamics of growth and importance of the cyberspace for human social activity: professional, social or personal, and the pace of popularization of new ICT tools (the most typical example are mobile phones in all their variations like Smartphone, Smartwatch, Watch active, etc.). Modern digital environment integrates more and more with the everyday life of modern men, regardless of their place of residence, education or age. And while changes in the social activity, happening unnoticed and continuously due to new generations of media tools, are seen by the digital natives² as a natural element of progress, for the

2 *"Digital natives"* is a term used by the researchers to identify persons born in the digital era, for whom digital reality is the natural living environment. (M. Prensky, *Digital Natives, Digital Immigrants*, „From On the Horizon”, 2001, Vol. 9 No. 5.)

digital immigrants, seniors in particular³, they may create a barrier that is sometimes impossible to overcome.

Seniors and the rapid development of digital technologies

In the context of our daily digital environment, seniors are undoubtedly in the most difficult situation, as they were born before the invention of computers, Internet, and cyberspace, the latter constituting the environment parallel to the real one we have known for the centuries. This means that active aging generates – stronger than ever – the need for lifelong learning which enables seniors to keep up with social changes caused by the new technologies, especially if these changes mean rapid, continuous development of ICTs and revolutionary, new ways of communicating and obtaining, processing and sharing information. As shown in the gerontological studies (Szmi-gielska, 2014), the effectiveness of embracing the completely new scope of issues and the ability to operate new devices depends on many contexts and means using the available resources to the maximum. Commission of the European Communities decided in June 2007 to set up a plan to increase the number of the retired users of the new media, and the *Strategy for the Development of the Information Society in Poland until 2013* intended, among others, reduction of the digital gap among the elderly citizens. However, reality shows that the effectiveness of activities in this area is not satisfactory. Seniors themselves are the crucial determinant here. The studies into the preparation of seniors to be active in the digital environment clearly show the strong influence of more and more rapid technological changes taking place in modern society (Skibińska, 2012). The vast majority of these changes involve the necessity to engage in new activities, in the new environment which is often completely unknown and constantly evolving⁴. The response to these conditions is the concept of active aging developed by professor R. D Hill⁵, which addresses the necessity of constant learning – even in late adulthood – the new things which engage reasoning and facilitate effective engagement in new activities. It is worth to point out that Hill's concept

3 For the sake of clarity, I assume that “senior” means a person who has ceased their professional activity; in Poland, according to the Act of 1 October 2017, the retirement age is 60 years for women and 65 for men;

4 The studies conducted in Poland (i.e. D. Batorski (2011), B. Kędzierska (2007, 2017, 2018), A. Fabiś (2005)) indicate that the greatest barrier to effective and responsible use of modern media is insufficient level of digital literacy, especially in the growing population of seniors;

5 Professor Robert D. Hill is the professor of psychology at the University of Utah and a therapist

is consistent with the assumptions of positive psychology⁶ which emphasizes, among others, the value of interpersonal openness, optimism, and engagement in the performed activities. The ability and fluency in adapting to new conditions is a surely invaluable support for the seniors who try to navigate through the virtual space. However, it cannot replace the information competencies which ensure responsible, secure and effective activity in cyberspace which is the most available of all the modern ICT tools. The omnipresent media allow for different forms of communication and provide access to the unlimited, yet uncensored, source of information. These conditions not only make information and media competencies, like knowledge and online information-related skills and attitudes, crucial but they are the basic and vital elements of education and preparation of seniors to independent, secure and effective functioning in the digital environment.

Information competencies as a key form of supporting seniors in the digital environment

Based on the analysis of the research and didactic experiences⁷, we can say that the basic education of seniors in the area of information competencies should cover the following key issues⁸:

In terms of knowledge, a competent senior should:

- (be aware of) know that information is the basis of every activity, both direct and related to media;
- know and understand the conditions and attributes of reliable and secure information;
- know and understand the need to resort to reliable and diverse sources of information (virtual, printed and human);
- know and understand the principles of copyright and intellectual property law;
- know the opportunities and conditions of responsible use of digital technologies while communicating and building relationships with newly met people;
- know the reliable sources of information, not only traditional ones but also media and digital resources which support their daily activity and provide opportunities for personal growth;
- know the reliable and strategic source of support in emergencies;

6 Positive psychology was inspired by the works of the University of Pennsylvania professor, Martin Seligman (former president of the American Psychological Association).

7 The original research into the level of digital literacy among students and adults (teachers) were conducted in 2018, in cooperation with the research institute by the Ministry of Digital Affairs (Research and Academic Computer Network) – the report is in print;

8 Didactic activities addressing, for example, the scope and role of digital literacy, led by the author among the students and adult learners confirm that the scope of issues in the area of key information competencies is and should be the same for all social groups in every

- know and understand the threats related to the perception of the reality created by various media messages;
- be aware of the conditions (types, advantages, disadvantages, conditions related to safety) of interpersonal communication through media;
- be aware of the principles related to sharing information (as texts, photographs, videos, etc.) about themselves and their loved ones in the cyberspace;
- know the principles of staying safe while online;
- know the scope of potential e-threats;
- have knowledge regarding safe activity in cyberspace.

In terms of skills, a competent senior should be able to:

- properly identify their information gap and correctly choose the sources of information needed to perform certain tasks;
- responsibly verify and effectively process information;
- identify safe, legal and ethical information on the Internet, paying attention to the issues of copyright, intellectual property law and proper identification of references;
- successfully use modern ICT tools to communicate with family, friends and other people in their lives as well as public institutions;
- use dedicated, thematic knowledge databases developed by professionals;
- intentionally and responsibly use digital devices and resources to facilitate the execution of tasks, develop their interests and improve the quality of their daily life;
- recognize/identify manipulations and threats in media messages and virtual environment;
- verify their actions in the virtual reality and media in regards to the provisions of intellectual property law, the Civil and Penal Code, and provisions of the GDPR;
- consider the basics of ergonomics and safety of working the ICT when using certain media and while online;
- identify biased and unreliable messages in the media, especially all signs of “hate speech”.

In terms of attitudes, a competent senior should:

- responsibly and securely obtain, analyze, verify, process and publish information, using properly selected carriers;
- use safe, legal and ethical information on the Internet, paying attention to the issues of copyright, intellectual property law and proper identification of references;
- accept, recognize and use the opportunity to communicate using the modern media;
- accept and use the contemporary, Internet-based, scientific and social forms of media messaging;
- be aware of the opportunities and the potential of the modern multimedia tools for self-development and social collaboration;

age. It is because today the key information competencies determine all social, private and professional activities.

- respond immediately when noticing the cases of violation of ethics, aggression, and violence;
- take actions in the virtual reality and use multimedia devices, respecting: the intellectual property law, the Civil and Penal Code and the provisions of the GDPR;
- follow the principles of health and safety while working with information technologies and the basic rules work ergonomics;
- respond effectively to identified danger;
- transparently and optimally use chosen media resources to support the completion of tasks;
- show the attitude of tolerance and readiness to communicate on an equal basis in the media.

Summary

In the times of the rapid development of ICTs, change is the only constant of the fluent postmodernity. As a society, we should be ready to face these changes as best as possible. Of all the social groups, digital natives are the ones who adapt best to the digital environment. We can say that they naturally and intuitively integrate the newest multimedia tools into their daily educational, professional and social activities. If deprived of the possibility of functioning in the digital environment, this generation would be much more helpless and lost than seniors who take their first, often timid steps in the world of technologically advanced multimedia tools.

And even though the number of seniors who responsibly and with confidence navigate the digital environment (in regards to their needs) is regularly growing, this social group is still the least active in media. Of course, the goal is not that all the seniors are active social media users, regular online buyers or that they interact with all their friends via online communication tools. However, it is important that they feel and be an integral part of contemporary society – the information society which functions in two spaces at the same time: physical and virtual. For it to be possible, for the seniors to understand the nature and conditions of the process of obtaining, processing and sharing information in the digital space and to be able to engage in different activities in the virtual world in an independent, successful, secure and responsible manner, some intense actions are necessary. These actions involve lifelong informal education which would allow all digital immigrants in their late adulthood, who struggle with the advanced ICTs, to acquire information competencies. Proper knowledge, skills, and attitudes are the most effective protection against the potential threats and equally effective stimulator of activity in the virtual space.

References:

- Batorski, D. (2011). Korzystanie z technologii informacyjno-komunikacyjnych. In J. Czapiński & T. Panek (Eds.). *Diagnoza społeczna 2011 – Warunki i jakość życia Polaków. Raport*, 5, 299–327. Warszawa: Rada Monitoringu Społecznego.

- Fabiś, A. (2005). Edukacja seniorów – odpowiedź na wymagania współczesności. In A. Fabiś (Ed.), *Unowocześnianie procesu kształcenia dorosłych. Wyzwania Współczesnej Edukacji Dorosłych* (tom 2). Mysłowice–Zakopane: Wydawnictwo Górnośląskiej Wyższej Szkoły Pedagogicznej im. Kardynała A. Hłonda.
- Hill, R. (2009). *Pozytywne starzenie się. Młodzi duchem w jesieni życia*. Warszawa: Wydawnictwo Laurum.
- Kędzierska, B. (2007). *Kompetencje informacyjne w kształceniu ustawicznym*. Warszawa: IBE.
- Kędzierska, B. (2018). Edukacja całościowa w kształtowaniu kompetencji kluczowych dla zrównoważonego społeczeństwa. In J. Madalińska-Michalak & N. Pikuła (Eds.), *Edukacyjne konteksty współczesności z myślą o przyszłości*. Kraków: Oficyna Wydawnicza „Impuls”.
- Kędzierska, B. & Mróz, A. (2017). Information competencies as a key factor of teacher education: the Polish context. In A. Mesquita & P. Peres (Eds.), *Proceedings of the 16th European Conference on e-Learning*; ISCAP, Porto, Portugal, 26–27 October 2017/. Wielka Brytania: Academic Conferences and Publishing International Limited.
- Prensky, M. (2001). Digital Natives, Digital Immigrants. *From On the Horizon*. 2001, Vol. 9 No. 5.
- Skibińska, E. (2008). Proces kształcenia seniorów. In A. Fabiś (Ed.), *Aktywność społeczna, kulturalna i oświatowa seniorów*. Bielsko-Biała: Wydawnictwo Wyższej Szkoły Administracji w Bielsku-Białej 2008
- Szmigielska, B. (2014). *Senior zalogowany*. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.