Digital Literacy of Seniors in the Context of Third Age Universities

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Abstract

The research project focuses on the issue of education of seniors as an important part of lifelong learning. The paper presents the results of an empirical investigation, the main objective of which was to identify and analyze selected aspects of digital literacy of third age university students and interpret them in the context of the possible use of digital technologies in the institutional education of seniors. In accordance with the specific objectives and characteristics of the research investigation, a mixed research design was chosen. This approach allowed for a combination of qualitative and quantitative methodological strategies, resulting in effective data integration and interpretation. In the pilot phase of the research, a focus group method of data collection was chosen, followed by a questionnaire survey in an effort to contribute to the validity of the research instrument. The results of the investigation yielded concrete recommendations and the identification of strategies for adult education organizers.

Keywords: digital literacy, university of the third age, senior, adult education.

Digitální gramotnost seniorů v kontextu univerzit třetího věku

Abstrakt

Výzkumný projekt je zacílen na problematiku vzdělávání seniorů, jako významné součásti celoživotního vzdělávání (učení). Příspěvek prezentuje výsledky empirického šetření, jehož hlavním cílem bylo zjistit a analyzovat vybrané aspekty digitální gramotnosti posluchačů univerzit třetího věku a interpretovat je v souvislosti s možným využitím digitálních technologií v rámci institucionální edukace seniorů. V souladu se specifickými cíli a charakteristikami daného výzkumného šetření byl vybrán smíšený výzkumný design. Tento přístup umožnil kombinaci kvalitativních a kvantitativních metodologických strategií, což vedlo k efektivní integraci a interpretaci dat. V pilotní fázi výzkumu byla zvolena metoda sběru dat prostřednictvím ohniskové skupiny (focus group), na kterou navazuje dotazníkové šetření ve snaze přispět k validitě výzkumného nástroje. Výsledky šetření přinesly konkrétní doporučení a stanovení strategií pro organizátory vzdělávání dospělých.

Klíčová slova: digitální gramotnost, univerzita třetího věku, senior, vzdělávání dospělých.

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Introduction

Population ageing is one of the "megatrends" of the 21st century. It is characterised by changes in the age structure of the population, with the share of older age groups growing faster than the rest of the population, resulting in a growing share of the post-replacement component (65+ years) in the total population. This process is occurring most rapidly in Europe and is not avoiding countries such as the Czech Republic (United Nations, 2022). The question is what impact this population development will have, what role is and will be assigned to the elderly in society. It is clear from the above that seniors will be an unmissable group of clients, patients, customers or participants in various forms of education. The importance of institutional education for seniors against the backdrop of demographic ageing will undoubtedly grow. The range of educational opportunities specifically for seniors is very broad, both in terms of content and organisation.

Among the basic institutions dedicated to the education of seniors are universities of the third age (including virtual ones), academies of the third age, universities of leisure time, clubs for seniors, while the most demanding opportunity for education of seniors at the university level is offered by universities of the third age (Špaténková & Smékalová, 2015). Third Age Universities organised by universities in the Czech Republic are part of the so-called lifelong learning programmes and are implemented according to § 60 of Act No. 111/1998 Coll. on Higher Education, as amended (Zákon o vysokých školách).

Current technological progress affects the content of senior education. In order to be able to continue their activities, to participate in cultural and social events, it is necessary to know how to use modern information and communication technologies. The topic of desirable skills for the 21st century is often associated with the issue of the so-called "new literacies". Basic skills such as reading, writing and arithmetic are no longer sufficient today. Thus, digitally literate people should be capable of any activities with digital technologies that they have to deal with in various life situations, whether we mean work, learning, leisure or other aspects of everyday life (Zounek et al., 2021). Rightly, one of the current topics addressed in academic discourse is the education of seniors and its support, as well as the development of life competences of this age group. The intention of this research investigation is to find out how this second "megatrend" of the digital transformation of 21st century society affects the development of seniors' competences and how this can be responded to.

Older people, as an increasingly important heterogeneous population group with different needs, have the right to acquire the necessary knowledge, skills and attitudes to enable them to acquire the necessary competences according to their own abilities, thus avoiding the painful reality of ageism, which emphasises the cult of youth and dishonest for old age.

1 Theoretical background

Despite efforts to establish a concise definition, the concept of digital literacy (skills, competences) is constantly confronted with the speed of technological development and there is still no consensus in the literature. The different methods used to classify digital literacy overlap or are not exhaustive, confirming the conceptual ambiguity mentioned by van Laar et al. (2015).

There are many definitions of digital literacy in the literature, but much of it goes back to the original definition proposed by Gilster (1997), who defines digital literacy as "the ability to understand and use information in a variety of formats from a wide range of sources when presented through computers" (Gilster, 1997, p. 1). That definition

emphasises that digital literacy is not only about technical skills but also includes a cognitive dimension.

This fact is also taken into account by the international project OECD Future of Education and Skills 2030 (2030), which includes among the particularly important cognitive foundations that constitute basic literacy, on which digital literacy and information literacy can be built.

It is clear that the term digital literacy appears to be a multifaceted term, which some authors argue includes the concept of digital competence. Picatoste (2018) broadly defines it as "a set of different skills to perform well in a digital society" (Picatoste et al., 2018, p. 1033).

Digital literacy is understood in the report of the Digital Literacy Strategy of the Czech Republic for the period 2015 to 2020 as "a set of competences necessary to identify, understand, interpret, create, communicate and use digital technologies (their technical features and content) in a purposeful and safe way in order to maintain or improve the quality of life of their surroundings, i.e. for the purpose of professional and personal self-fulfilment, development of their potentials and maintaining or increasing their participation in society" (MPSV, 2015, p. 7). In this definition, digital literacy is a highly complex set of skills.

For the purpose of the research, we did not focus on the specific level of skills, but rather on the commonness of the use of digital technologies in the everyday life of seniors. We looked at the frequency component, which reflects the frequency of use of digital technologies, and the content component, which reflects the variability of the technologies used.

2 Empirical survey

The main objective of the research project was to identify and analyse selected aspects of digital literacy of seniors and interpret them in the context of the possible use of digital technologies in the institutional education of seniors at universities of the third age. The motivation for the choice of the topic is the topicality of the issue of education of seniors against the background of demographic ageing with an emphasis on the changing requirements of today. This allows for the development and implementation of targeted educational programmes and strategies that reflect the specific needs and challenges associated with strengthening digital competences in this demographic group.

Given the complex and multifaceted topic, increased emphasis was placed on conducting preliminary research. This step was necessary to ensure an adequate theoretical and methodological basis for the main phase of the research. For the data collection in the pilot phase of the research, a focus group method was chosen, followed by a

questionnaire survey in an attempt to contribute to the validity of the research instrument. Using the information or reflecting on the conducted focus group interview increases the likelihood of designing more appropriate questions in the questionnaire (Hendl & Reml 2017). The intention was to exploit the potential of a mixed research design, which means to link and integrate the findings of both research phases. Members of the focus groups were selected according to predefined criteria. In this particular case, there were two groups of students of the University of the Third Age in Hradec Králové in the academic year 2023/2024 who agreed to a group interview. The main topic was digital literacy of seniors, or the use of digital technologies. The projective method of story-telling cards was used to stimulate the respondents' interest and break down barriers. Focus groups have been confirmed to be effective in exploring topics where group phenomenon is essential (Patton, 2002). The topic of seniors' digital literacy was related to the research problem, however, the presented focus group method in the pilot phase of the research had the ambition to capture the meanings named by the group, or to make visible the perceived meanings resulting from belonging to a certain social group. The data corpus was coded in the professional software MAXQDA and subsequently key categories were selected in an attempt to link the findings to the qualitative questionnaire method. The Word Cloud tool was used to process the data in the software to gain insight into significant trends (Figure 1).

Figure 1
Selective visualization of frequent concepts

Figure 1 illustrates the sample visualization at a word repetition frequency of at least seven times. A total of 31 words were involved, and the analysis showed that the most frequently mentioned words were: help, digi-literacy, internet, family, no. The content analysis generated the following main themes and categories: working with digital devices (computer, laptop, smartphone, tablet, smart home appliances); how and how often the selected digital devices are used; barriers and help in working with the selected digital devices.

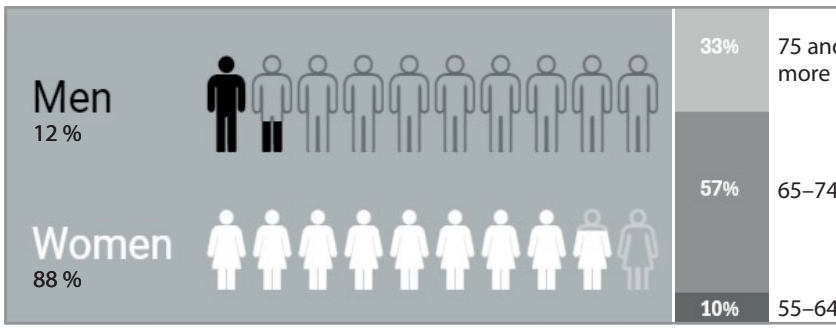
The results of the pilot phase showed that the issue under investigation can be seen in at least two ways: as demands on the digital competences of seniors in the context of the current times, but it is also necessary to take into account what they themselves consider important in deepening their skills and what problems they have. An emerging theme was identified in the area of possible barriers and assistance in working with digital devices.

The sample of the survey presented below consisted of the students of the University of the Third Age of the University of Hradec Králové (hereinafter referred to as U3V UHK) in the period 2023–2024. In this academic year, a total of 665 participants were registered for studies, of which 88 % were women and 12 % were men. The most represented age groups were in the 65 to 74 age group (57 %) and the 75 and over age group (33 %), see Chart 1. A total of 294 seniors participated in the survey, of whom 94 % were women and only 6 % were men. The questionnaire included 14 closed and 2 open questions.

The obtained data were subjected to descriptive statistical analysis, some parts of which are presented in the following section. The main output is the analysis of the variable mapping the digital literacy of seniors in the context of third age universities.

Chart 1

U3V UHK students in 2023/2024 in terms of male/female representation and age categories

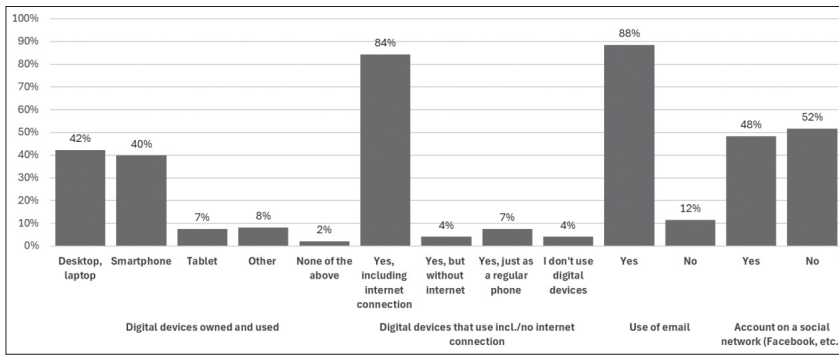


3 Results

3.1 Content and frequency components of digital literacy

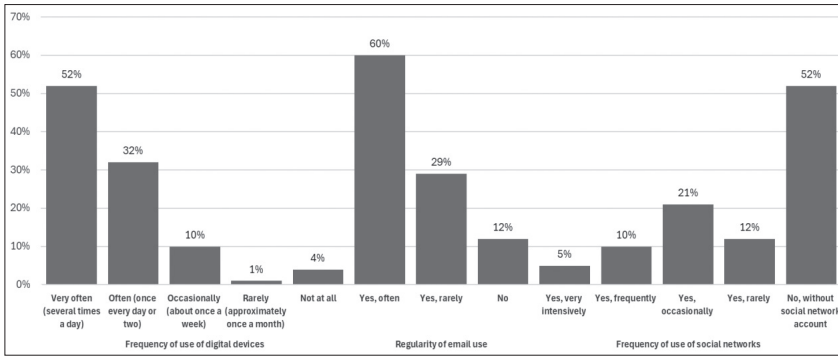
In order to determine the **content component** of digital literacy of U3V UHK students, categories were surveyed to identify specific digital devices they own and work with. Furthermore, whether they use these devices, including applications requiring an internet connection. The content components also included data on the use of email and social media accounts (Facebook, Instagram, Classmates, etc.). From the results presented (Table 1), it is clear that seniors mainly own and use a desktop computer, laptop (42 %) and smartphone (40 %), which they use including applications that require an internet connection at a dominant 84 %. A significantly large group of respondents (88 %) use email. In the item of having an active social media account, the negative response (52 %) slightly outweighs the positive (48 %).

Table 1
Content component of digital literacy of U3V UHK students



The following **frequency component** of digital literacy reflects the frequency of use of digital technologies and in a way builds on or extends the previous categories of content items. More than half of the respondents said they use digital technologies very often (several times a day) at 52 % and often (once every day or two) at 32 %. Very frequent use of email was declared by respondents at 60 %. The intensity of social media activity clearly mirrors the previous findings on active social media accounts, with the overwhelming positive response being at the level of occasional use. However, we must not overlook the fact that 52 % of respondents do not have a social networking account.

Table 2
Frequency component of digital literacy of U3V UHK students



3.2 Areas of potential obstacles and assistance when working with digital devices

Based on the analysis of the data from the pre-research phase of the empirical investigation, an item was implemented in the questionnaires that identifies the problems associated with the use of digital technologies and the need for assistance with their use. Although 63 % of respondents did not express any problems, 18 % declared fear of the unknown, such as the issue of safety in the online environment. The most common forms of assistance in this area were learning from a family member at 57 % and self-study at 27 %.

Conclusion

Research work on digital literacy is essential in the context of accelerated digitisation, fuelled by the consequences of the COVID-19 pandemic, and in response to the challenges of demographic change. Children today are brought up in a society where technology is deeply integrated into everyday life, unlike older people. Digital literacy has the potential to support active ageing and independent living for older people who are part of the digital age. Thus, changing the paradigm of the "elderly at risk". Promoting lifelong learning should contribute to the sustainability of digital literacy and increase the benefits of adopting digital technologies in the lives of individuals (MPSV, 2015).

Older people are a heterogeneous group with different specific needs and educational experiences, which is reflected in the research study presented here. Let us recall that the advent of digital technologies has caught different generations and population years at different life stages in relation to their educational or work activities. The results of the empirical investigation show that U3V UHK students are characterized by a high level of digital literacy. The presented findings are also supported by the results of the Czech Statistical Office (2023) survey, which recorded a dynamic shift in the last five years from button mobile phones to smartphones in the 65-74 age group from 21 % to 56%, and also the share of internet users in the Czech Republic increased from 13% in 2010 to 52% in 2023 for people over 65 years of age. However, we must not leave out the smaller group that does not work with digital technologies, does not have an internet connection or does not use email to communicate. All of this poses a major challenge for organisers of education for the elderly.

Based on the results of the empirical investigation, we can identify several **current trends in the field of education in the context of universities of the third age**. In terms of course structure, it is essential to include **digital literacy courses** in the educational offer, covering both basic and advanced levels. The inclusion of the topic of safety in the online environment appears to be important.

In order to exploit the potential of digital technologies, it seems organizationally advantageous to include the possibility of **online registration** for individual courses or the provision of electronic study support.

It is desirable to promote **intergenerational learning projects** that are designed to bring together different generations and provide a space for the exchange of knowledge and skills. Digital technologies have become an important communication tool in terms of **public relations and advertising**. Information about the education programme is available on university websites and should strategically target the social networking area.

The presented research points to the self-confidence of U3V UHK students in the field of digital literacy, which refutes the prejudices of ageism. Although the results refer to the audience of one third age university, they can serve for further elaboration in terms of adult educators and in terms of further research on the digital literacy of this target group.

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