

# **Bridging marginalization: the political imperative of inclusive digital futures in elderly empowerment**

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## **Abstract**

In an era of fast technological breakthroughs, the integration of information technology into educational frameworks has become critical. This research uses a political perspective to examine the critical role of technology information and communication in improving educational possibilities for the elderly. This paper seeks to understand the consequences of ITC activities on policymaking, social inclusion, and community empowerment by examining the convergence of technology and elder education within the larger sociopolitical context. The COVID-19 pandemic is a harsh reminder of the value of technology in everyday life, particularly in overcoming isolation and sustaining social relationships. As technology advances, it becomes increasingly important for the elderly to have access to digital education in order to stay connected to modern culture and successfully traverse the digital terrain. This article is based on a review of secondary literature, which confirms the primary research hypothesis that digital education for older people is critical for improving their lives and lowering levels of social exclusion, discrimination, and low-quality everyday services. This article examines case studies and policy frameworks to illustrate ITC's revolutionary potential in supporting lifelong learning and active citizenship among the elderly, contributing to the development of a more inclusive and equitable society.

**Key words:** social isolation, lifelong learning, policies, ICT.

## **Introduction**

The enormous growth of information technology (IT) has transformed many aspects of human life, including education. While the benefits of IT integration in educational settings are generally recognized, its potential to meet the special needs and issues of the elderly remains unexplored, particularly from a political aspect. This research attempts to close this gap by investigating the role of information technology and communication (ITC) in supporting educational possibilities for the elderly within the larger framework of political discourse and policymaking.

Many people have been excluded from reaping the benefits of digital technology, as digital dividends coincide with digital divides, with more than half of the global population either lacking affordable internet access or utilizing only a fraction of its potential despite being connected, disproportionately impacting marginalized groups such as women, elderly people, those with disabilities, indigenous communities, and residents of poor, remote, or rural areas<sup>1</sup> (UN Secretary-General, 2020). Under a political context, in recent years, governments and stakeholders have increasingly recognized the necessity of meeting the educational requirements of the aging population. The aging demographic, together with technological improvements, has highlighted the importance of implementing creative methods to elder education. From a political standpoint, investing in ITC aspects for the elderly has important consequences for social welfare, healthcare, and economic growth. Policymakers might encourage active aging and reduce the societal and

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<sup>1</sup> UN Secretary-General, *The age of digital interdependence*, 2020, p. 6 (accessed on 15.04.2024)

economic costs associated with population aging by encouraging older persons to obtain digital literacy and skills. The political implications are felt that the policies which support the integration of ITC in elder education must be developed and implemented for technology-driven learning initiatives to reach their full potential. Policymakers have an important role in building an environment that promotes digital inclusion and equal access to educational resources for the elderly, particularly those from underserved regions. Furthermore, by engaging older people's views and opinions into the policymaking process, economic and political actors may guarantee that ITC efforts are suited to the aged population's unique needs and preferences. While the potential benefits of incorporating ITC into elder education are significant, numerous hurdles must be overcome to provide fair access and meaningful engagement among older persons. The digital gap, technology literacy, and socioeconomic inequities all represent substantial challenges to the adoption of ITC among the elderly, particularly in low-income and rural areas. On the other hand, simply having access to technology does not guarantee effective usage, as individuals may lack skills or face obstacles in efficiently accessing digital content, emphasizing the importance of developing adaptive literacy skills for proficient navigation of new technologies, particularly for disadvantaged and marginalized users who face additional barriers when interacting with the internet<sup>2</sup> (Charleston, 2012). More than that, concerns about data privacy, cybersecurity, and digital exclusion highlight the need for robust regulatory frameworks to safeguard the rights and interests of the elderly in the midst of the digital revolution; however, despite these challenges, there exists significant potential for widespread innovation and cooperation within the sector, allowing policymakers to develop tailored solutions that cater to the diverse learning needs and preferences of older people.

The paper's hypothesis is that using a political perspective to emphasize inclusive digital futures for senior empowerment through targeted policy interventions and efforts could help to bridge marginalization, promote social inclusion, and improve older persons' quality of life. The research questions are going to explore what structural elements contribute to the marginalization of elderly people in the digital age? By investigating these aspects, the paper aims to identify the systemic hurdles and inequities that impede older individuals' access to and use of digital technology, compounding social exclusion and restricting prospects for economic, social, and political engagement. How can policymakers use targeted policy measures to alleviate structural imbalances and promote inclusive digital futures for older adults? This topic emphasizes the necessity of proactive legislation in removing obstacles and building enabling settings that enable older persons' digital inclusion and empowerment, therefore improving their quality of life and of course their well-being. What role does digital education play in enabling elderly people to successfully traverse the digital realm and encourage social inclusion? Here, the article aims to explore the transformational potential of digital skills training in increasing older individuals' confidence, autonomy, and connectedness in the digital age by investigating the relevance of digital literacy and education programs. How can policymakers use a political perspective to prioritize the creation and execution of policy routes that promote senior empowerment through digital education? Taking a political approach allows policymakers to more effectively advocate for and prioritize policies and initiatives that bridge the digital divide and promote age-friendly engagement, continuous education, and social inclusion among older adults, fostering a more equitable and inclusive society for all generations. The objectives are to critically analyze the

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<sup>2</sup> Charleston, Diane, *Bridging the Digital Divide: Enhancing Empowerment and Social Capital*, Journal of Social Inclusion, 2012 (accessed on 20.04.2024)

structural elements that contribute to the marginalization of aged people in the digital era, providing light on the intricate interplay of societal, economic, and technological variables that define older individuals' digital experiences and possibilities, hence to examine policymakers' roles in resolving structural disparities and building inclusive digital futures for older persons, including identifying viable policy initiatives and interventions that can enhance digital inclusion and empowerment among older populations. More than that, another scope is to investigate the importance of digital education in enabling senior people to efficiently traverse the digital world and promote social inclusion, highlighting best practices and solutions for improving digital literacy and skill development among older persons. Additionally, the last objective is to propose actionable policy pathways and recommendations for policymakers to prioritize inclusive digital futures for elderly empowerment through digital education, we will use research findings and stakeholder engagement to inform evidence-based policy development and implementation efforts.

Lastly, the paper is divided into three sections: introduction, main body, and conclusion. The first part introduces the reader to essential concepts and words, noteworthy data, and a summary of the topic being studied. This part also discusses the critical role of digital education in improving the quality of life for the elderly, fostering social inclusion, and eliminating prejudice against this vulnerable and disadvantaged community. The study concludes by emphasizing the need of comprehending the demographic aging issue in combination with technology improvements. It highlights education's critical function as a link between these two phenomena, promoting societal cohesiveness, lifelong learning, intergenerational and intragenerational connectedness, and sustainability.

### **Status**

In today's world, technological development and population aging are two of the most pressing issues affecting humanity. The significance of technical advancement stems from its central position as the foundation of contemporary civilization. Indeed, the current period is marked by an exceptional rate of technological advancement, with what was formerly deemed outlandish or just hypothetical just two decades ago now constituting the concrete fabric of our daily existence. Currently, population aging offers a tremendous challenge to nations globally, prompting the urgent investigation and implementation of feasible solutions. People all throughout the globe are living longer lives. In 2020, 727 million people were 65 or older, and the number of people 65 and over is expected to double to nearly 1.5 billion by 2050, representing a 16.3% rise (Akinola, 2021). According to the latest WHO research, all nations have significant hurdles ensuring that their health and social systems are prepared to capitalize on the demographic transformation, because by 2050, 80% of the elderly will live in low and middle income nation, in 2020 the number of persons aged 60 and more will outweigh youngsters under the age of five, and between 2015 and 2050, the fraction of the global population over the age of 60 will nearly double, from 12% to 22%<sup>3</sup> (World Health Organization, 2022). Moreover, basic ICT education is one of the most important elements for a good quality of life for everybody. Education is a significant predictor of active aging, and the recent studies aims the life quality of life is directly influenced by the level of education of the individuals. Given the increasing digitalization of mankind and the increasing number of tech-savvy (and those with some ICT abilities) nearing old age, older people are expected to utilize ICTs much more in the future and it is understandable that the internet clearly has the potential to be immensely useful to the elderly (Eurostat, 2019):

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<sup>3</sup> World Health Organization report, *Ageing and Health*, 2022, p. 24.

Table 1:

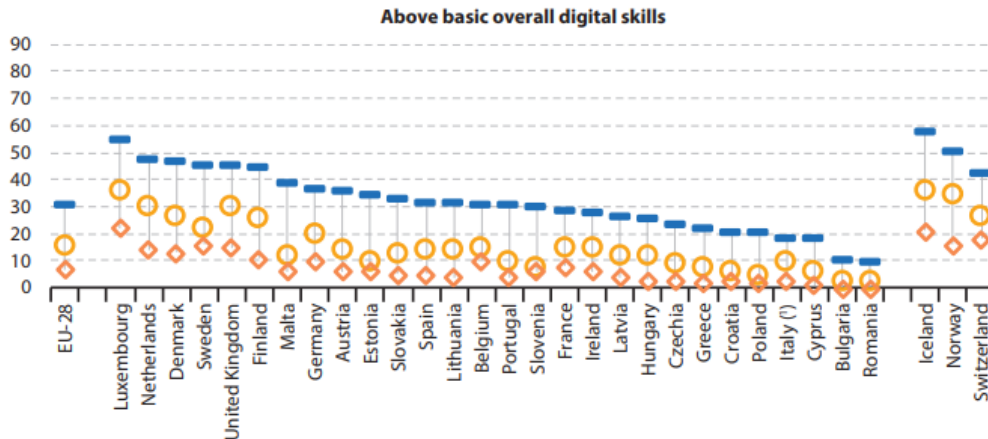


Chart source: Eurostat, 2019

Before getting farther into the debate, it is critical to have a solid awareness of the language associated with elderly people. The concept of "old", "senior", or "elderly" varies greatly from nation to country and is influenced by cultural, social, and institutional norms. While some jurisdictions may include people of working age as part of the older population, others may make distinctions based on retirement status. The World Health Organization defines the elderly as people aged 60 and up. Similarly, in Romania, where retirement usually occurs between the ages of 60 and 65, people in this age range are frequently referred to as seniors. This shift is a watershed event in their life, indicating their departure from the working and entry into retirement. The main ideas which derives from here is that it is critical to recognize these differences in defining older age because they have substantial consequences for policy formulation, resource allocation, and social programs targeted at meeting the needs and well-being of older people in various circumstances. Furthermore, "education is often seen as an important tool to increase the participation and quality of life of older people"<sup>4</sup>, meaning that low levels of education and illiteracy, even digital literacy is linked to an increased risk of disability and mortality in older people as well as greater rates of unemployment, social exclusion, marginalization and physical disorders like depression and Alzheimer's. Older people are sometimes believed to be fragile or reliant, as well as a drain on society. Even senior people themselves frequently believe that the current and modern technology and the digital tools are difficult to operate, that they are lack self-confidence, and of course they are unable to learn anything new at their silver age. Hence, as a result, senior citizens are vulnerable to social exclusion, because they are aging naturally, and it can be difficult for them to reconcile with the current era, being concerned about failing behind, which may result in further societal disadvantages<sup>5</sup>. Due to knowledge and practice gaps, disparities in technology uptake, complicated product designs, and other obstacles such as a lack of motivation and intergenerational communication, the elderly are one of the most socioeconomically disadvantaged groups in this regard. But "seniors hey are eager learners and take real pleasure in lifelong-learning activities"<sup>6</sup>. Questions such as which are the limits of elderly in learning technology, which is the interest of civil society to engage them with it and which is

<sup>4</sup> Kirsti Ala-Mutka; Malanowski, Norbert; Punie, Yves; Cabrera, Marcelino, *Active Ageing and the Potential of ICT for Learning*, 2008.

<sup>5</sup> Vacek, Pavel; Rybenska, Klara *Research of interest in ICT education among seniors*, *Elesvier Journal*, 2015, p. 1044.

<sup>6</sup> Błachnio, Aleksandra ; Maliszewski, Wojciech, *Need for ICT Education Among Older Adults*, 2017, p. 170.

the level of relevance of technology to seniors are only a few questions that may be addressed further. The essential question still arises: why is it this gap between younger and older generations? Heaggans aims that it appears that seniors are trained to be afraid of what they do not know; that is, technology, and that this lack of understanding is affecting seniors socially, physically, and cognitively<sup>7</sup>. So, for a homogeneous society, good quality of marginalized people and the respect of human right and connection to the modern society, the most crucial issue is raising and enhancing the level of competency across all educational and training levels, as well as across all demographic groups.

### **Global crisis**

The COVID-19 epidemic has revealed huge obstacles and serious concerns that have been simmering for decades. Two important innovations have emerged throughout the epidemic period. To begin, as the world's population ages, there has been a significant increase in social isolation among the elderly, which has serious consequences for their well-being and quality of life. Second, older persons have had less access to modern technology, notably the internet, than the general population. The epidemic has increased existing vulnerabilities in older persons, amplifying the negative impacts of social isolation on their mental, emotional, and physical health. With constraints on social gatherings and movement, many elderly people have been increasingly isolated from their social support networks, aggravating feelings of loneliness and reducing their sense of belonging to the larger society. Furthermore, the pandemic has exacerbated the digital divide, as dependence on digital tools for communication, access to services, and information distribution has increased. Older persons, who may already face challenges such as low digital literacy or access to technology, have been further alienated by their inability to successfully utilize online platforms. These developments highlight the critical need for extensive and targeted interventions to address the interconnected issues of social isolation and digital exclusion among older people. Based on that, as society deals with the pandemic's long-term consequences, it is critical to prioritize strategies that promote social connectivity, digital literacy, and equitable access to technology for older adults, ensuring that they can stay connected, engaged, and empowered in an increasingly digital world.

### **Structural inequities**

Economic inequities exacerbate uneven access to digital technology and educational resources among the elderly. Low-income older people are less likely to be able to afford internet access, digital gadgets, and formal digital education programs, aggravating social exclusion and digital disparities. Policymakers must address poverty gaps through targeted financial assistance programs, broadband access subsidies, and low-cost technology efforts to guarantee that all older individuals have equal access to digital learning and empowerment. Educational achievement has a substantial impact on digital literacy and skill acquisition among the elderly. Those with lesser levels of education are less likely to have the skills and confidence needed to successfully traverse the digital world. Policymakers could encourage educational initiatives that respond to varied learning needs and preferences, such as adult education. By addressing educational gaps, authorities may help older persons achieve crucial digital abilities and participate more fully in the digital economy, knowing the fact that digital infrastructure disparities, especially in rural and disadvantaged regions, deepen older marginalization. Limited access to high-speed internet, insufficient technological infrastructure, and geographic remoteness are all significant

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<sup>7</sup> Heaggans, Raphael, *The 60's are the new 20's: Teaching older adults technology*, SRATE Journal, 2012.

impediments to digital inclusion and empowerment, hence policymakers must invest in increasing broadband infrastructure, boosting digital access in rural locations, and strengthening digital literacy training programs in marginalized groups. Nevertheless, policymakers can bridge the digital gap and boost senior citizens' engagement in the digital economy and society by emphasizing infrastructure development and fair access to digital resources.

### **Policy Solutions**

Policymakers should create comprehensive digital inclusion policies that target senior empowerment while addressing structural impediments to digital access and engagement. These policies should include activities like digital literacy training, inexpensive internet access programs, community-based learning, and targeted outreach to underprivileged people. By taking a multifaceted approach to digital inclusion, authorities may encourage social cohesion and solidarity across generations while also empowering the elderly. Technology developers and manufacturers should use age-friendly design principles when creating digital products and services, because this involves creating user interfaces that are straightforward, accessible, and adaptive to the various requirements and preferences of older persons. Policymakers may encourage age-friendly technology design through legislative frameworks, industry standards, and financing incentives for enterprises that emphasize accessibility; they could improve the digital experience for older persons and help them integrate into digital society by advocating age-friendly technology design. Advocates prioritize three core aspects, namely universality, affordability, and reliability, in efforts to enhance internet connectivity, emphasizing the need for all residents, irrespective of their neighborhood, economic status, legal standing, or racial/ethnic background, to have access, affordable pricing options including discounts and free accounts for low-income individuals, and consistent, high-speed Internet, which should constitute central objectives for any digital inclusion advocacy initiative<sup>8</sup>. Vacek & Rybenska stated that understanding ICT may also make it easier for people to participate in modern society, because it suddenly makes it feasible for elderly people who may not otherwise could visit in person with distant relatives to communicate. One method to raise the standard of living for seniors is to improve their ICT abilities because an active lifestyle improves the quality of life for elderly persons; family relationships, avoidance of mental skill degeneration, the ability to cope with adverse conditions, and not giving up on life<sup>9</sup>. A research study made in Germany, Austria and Finland aims that the most important senior`s reasons for using the technology are achieving independence, staying physically and mentally fit, as a hobby and maintain social relationships<sup>10</sup>. The pandemic has also highlighted seniors' social and physical vulnerability, as stated in the precedent subchapter, and more seniors used ICT, learned, or improved their ICT skills, those will become increasingly important in ensuring healthy aging<sup>11</sup> (ICT for Seniors' Social Inclusion, 2018). The health of older persons was influenced by their age and the sorts of internet services they used, so it is critical to aggressively encourage older individuals to use the internet<sup>12</sup>.

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<sup>8</sup> Sanders K. Cynthia & Scanlon Edward, *The Digital Divide Is a Human Rights Issue: Advancing Social Inclusion Through Social Work Advocacy*, PubMed Central Journal, 2021.

<sup>9</sup> Vacek, Pavel ; Rybenska, Klara, Research of interest in ICT education among seniors, 2015, p. 1039.

<sup>10</sup> Pihlainen, Kaisa; Ehlers, Anja; Rohner, Rebekka; Cerna, Katerina; Karna, Eija; Hess, Moritz; Hengl, Lisa; Aavikko, Lotta; Frewer-Graumann, Susanne; Gallistl, Vera; Muller, Claudia, *Older adults' reasons to participate in digital skills learning: An interdisciplinary, multiple case study from Austria, Finland, and Germany*, 2022.

<sup>11</sup> ICT for Seniors' Social Inclusion, Report on Positive Impact of ICT on Seniors' Social, 2018, p. 2.

<sup>12</sup> Lee, Jakyung; Jang, Soong-nang, *Have changes in Internet use during the COVID-19 pandemic affected older adults' self-rated health? A cross-sectional study of young-old and old-old populations in Korea*, 2022, p. 141-145.

Although Romania performs well in terms of internet speed and connections, the fundamental issue is that it performs poorly in terms of connectivity and internet access for a large part of its inhabitants. Firstly, the access to the internet and to the digital tools is a main issue for Romanian citizens. According to one of the most important studies, the Digital Economy and Social Index data, Romania ranks often on the last places in the charts. DESI is the digital progress of the European Countries, from a human capital, connectivity, integration of digital technology and digital public services point of view. Romania ranks last among EU Member States in the 2022 Digital Economy and Society Index (DESI), with the country also ranking last in the human capital component, indicating a significant deficit in fundamental digital capabilities compared to the EU average, particularly in basic and above-basic digital skills, as well as digital content creation abilities, emphasizing the need for improvement in digital literacy and competencies within the country<sup>13</sup>. Secondly, sometimes, it could be wrong understood that senior's interest for technology is not as develop as people may expect. This aspect could appear maybe because their earlier experiences may not entail a willingness for them to learn new technologies and perhaps their experiences of life have not required to know how to use technology. Many older people have never used a computer but have heard about the internet and its potential use. Many of them would like to learn more about digital technology, but may believe that is too difficult or too late for them to learn. In fact, today's older individuals are more open to new technologies and eager to learn new skills, such as through participation inside of an online learning community<sup>14</sup>. In the technological sector, the elderly frequently have lower qualifications. As a result, they are unable to compete in the labor market; they are also unable to fully utilize public services and telecommunication technologies. As an outcome, their standard of living suffers<sup>15</sup> (Lapiniene, 2021). The Covid-19 epidemic, as well as the ensuing social distance restrictions and travel limitations, have drastically transformed the environment, emphasizing the risk of digital, and hence social, marginalization of older people<sup>16</sup>. According to Eurostat data 2021, in Romania, the Sud-Vest Oltenia region had the lowest proportion of persons aged 16-74 years using the internet daily in 2021. It is also well-known that active aging entails growing older in good health, playing an active role in society, and finding career fulfillment, but also having autonomy in everyday life and participating in civic activities. In seniors' efforts to employ new technologies, people frequently encounter several challenges stemming from demographic variables such as poverty, education, geographical location, potential impairments, lack of incentives, economic barriers, digital skills, and improper training<sup>17</sup>. Furthermore, aging is typically associated with a decrease in activity or the onset of inactivity, a high reliance on health and social services and in some cases dementia, all of these being connected with how society is organized and operated<sup>18</sup>. Of course, we must address the following question: what would be beneficial for old people to use a computer? We first must mention all the changes that occur as a person age. Changes such as sensory and motor changes (vision, hearing, motor abilities), cognitive, social, and economic changes, all those transform seniors' life<sup>19</sup>. The beneficial impact of adult learning given the

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<sup>13</sup> European Commission, *Digital Economy and Society Index (DESI)*, 2022.

<sup>14</sup>Fong, Ben Y. F.; Yee, Hilary H. L.; NG, Tommy K. C.; Law, Vincet T. S., *The use of technology for online learning among older adults in Hong Kong*, 2022, p. 389-407.

<sup>15</sup> Lapiniene, Laima, *Development of Elderly's Digital Skills Through Family Learning*, 2021.

<sup>16</sup> ICT4Elders, *Promoting ICT knowledge for the elderly people*, 2021.

<sup>17</sup> Roupa Zoe; Nikas Marios; Gerasimou Elena; Zafeiri Vasiliki; Giasyrani Lamprini; Kazitori Eunomia; Sotiropoulou, Pinelop, *The use of technology by the elderly*, Health Science Journal, 2010.

<sup>18</sup> Stoiciu Victoria, *Social inclusion and on the labor market*, 2015.

<sup>19</sup> Van de Watering, Marek, *The Impact of Computer Technology on the Elderly*, Semantic Scholar, 2005.

literature's evidence on the importance of adult learning as a realistic strategy to retain mental and social independence in old age<sup>20</sup>. Well-being, both cognitive and physical, social contact and emotional well-being are the most important effects of technology in elderly's life<sup>21</sup>.

In terms of internet usage patterns, younger age groups prioritize privacy protection, whereas older age groups face technical difficulties and feel unsafe online, with gender differences indicating that men are more likely to avoid certain apps and social media for privacy reasons, and targeted ads raise concerns among internet users of all ages about the potential sale of personal data to commercial and political organizations<sup>22</sup>. According to the research literature, seniors are interested in learning about tools and way to keep in touch with family and friends, in artificial intelligence such as virtual reality and of course phishing method and how to stay safe online. Fostering digital skills is essential for encouraging active aging as it expands learning opportunities for older individuals in formal and informal contexts, while also serving to bridge the generational gap by facilitating intergenerational learning and bridging the digital divide<sup>23</sup>. Digital obstacles can become a source of marginalization for the elderly, limiting their ability to engage in the present<sup>24</sup>. By creating more adaptable learning environments tailored to the demands of a more mobile culture, digital technologies get an effect on education, training, and learning<sup>25</sup>. In some countries, for example, Germany, the education offer for adults of all types is primarily provided by private providers, whereas in others (for instance, Denmark, Finland, and Sweden), public authorities are significant investors in adult education, particularly for disadvantaged groups of the population. In Norway, both the public and private sectors invest in non-professional adult education, or by pasting something here and then pressing the button<sup>26</sup>. Being digitally and technology literate is essential for participation in modern society, but not every person has the requisite tools and resources to develop these abilities, knowing the idea that the relationship between inclusion, digital technology, and education is deep and transversal<sup>27</sup>. Digital abilities are becoming increasingly important for executing instrumental activities such as looking for connections, seeking medical assistance, paying bills, and participating in democratic processes, of course to guarantee that no one falls behind in today's fast-changing world, it is vital for global citizens of all ages to have a collection of digital skills to live, learn, and engage in contemporary society<sup>28</sup>. The amount of formal education of subjects has a substantial link with receptivity to the use of digital technologies in old age, although it should be highlighted that a more modest beginning education is not a true barrier to training or use of digital technologies<sup>29</sup>. The advantages of the digital literacy for seniors' investment are the involvement in the internet society, increasing self-confidence and self-esteem, more effective and pleasant life, and work<sup>30</sup>.

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<sup>20</sup> Brenna Elenka; Gitto Lara, *Adult education, the use of information and communication technologies and the impact on quality of life: A case study*, Department of Economics and Finance Journal, 2018, p. 19.

<sup>21</sup> Grossia Giuliano; Lanzarottia Raffaella; Napoletano Paolo; Noceti Nicoletta; Odone Francesca, *Positive technology for elderly well-being: A review*, Elsevier Journal, 2020, p. 61-70.

<sup>22</sup> Gültekin Nur, *Bridging the Digital Disparities in Sweden*, 2023, p. 82 (accessed on 16.04.2024).

<sup>23</sup> European Commission, *ICT For Seniors and Intergenerational Learning*, 2012.

<sup>24</sup> Ordonez Tiago Nascimento; Sanches-Yassuda Mônica ; Cachioni Meire, Elsevier Journal, *Elderly online: Effects of a digital inclusion program in cognitive performance*, 2011, p. 216-219.

<sup>25</sup> Official Journal of the European Union, *European Council Recommendations*, 2018.

<sup>26</sup> Eurydice, *Adult education, except vocational training in Europe*, 2007, p. 32 (accessed on 15.11.2022).

<sup>27</sup> International Training Center, *Digital Inclusion In Adult Learning*, 2021.

<sup>28</sup> DSM, *ICT 4 the Elderly, Digital Skills Map*, 2022 (accessed on 23.11.2022).

<sup>29</sup> Popescu, Dorin; Pitic, Diana; Dragomir, Diana, *Elderly training for using digital technologies: a literature review and an empirical research in north western Romania*, 2022 (accessed on 23.11.2022).

<sup>30</sup> ECDL Romania, *Digital Literacy for Seniors*, 2013 (accessed on 23.11.2022).



A major impediment to new digital adoption and utilization is a lack of digital skills. The first most important program in Romania for this direction was the *Digital Citizen Program*, with an appropriate curriculum for seniors to begin to utilize technology correctly and actively, allowing them to integrate into the digital world<sup>31</sup>. Smart shopping online, transferring money, video calling, email essentials, using devices, online banking are just a few of the most important and useful tools which seniors could learn to use. In a digitally changed Europe, the European Commission's European Pillar of Social Rights Action Plan, published in March 2021, considers basic and advanced digital skills to be a prerequisite for inclusion and engagement in the labor market and society<sup>32</sup>. As part of the *Bibliothèque Program 2009-2014*, public libraries in Romania began offering free E-Skills training to older people and other "hard-to-reach" citizens<sup>33</sup>. To achieve equitable access to digital technology and capitalize on its potential for promoting active and healthy aging, senior well-being, and empowerment, policymakers must prioritize actions such as leveraging digital communications to reduce social isolation and loneliness, as well as establishing ethical, legal, and technological standards to protect older people's human rights in the digital age<sup>34</sup>.

### Conclusions

Finally, the function of information technology and communication in senior education extends beyond mere technological integration; it is fundamentally political. Recognizing the political implications of ITC projects for the elderly allows policymakers to use technology's transformational capacity to promote social justice, democratic engagement, and human rights for older people. Moving forward, concerted efforts are required to integrate elder education into political agendas and prioritize investments in ITC infrastructure, capacity training, and legislative reforms that enable the elderly to survive in an increasingly digital society. All of us could create a more inclusive and equitable society by collaborating with governments, civic society, academia, and the corporate sector to empower older individuals to live satisfying and meaningful lives in the digital era. According to the *ICT for Elderly Report* some policymakers in the fields of adult literacy could increasing financial and institutional support for active aging and digital inclusion policies and activities across society improve adult learning policies, a broad and holistic approach to adult learning and education-anyone, regardless of age or experience, can learn, raise awareness about the advantages of increasing digital skills among older persons, assist educators engaged in digital education programs for older persons with pedagogical and digital upskilling, good practices in care home digitalization that go beyond digitalization of healthcare services and help older people to stay in contact and active should be scaled up<sup>35</sup>. The educational framework for senior digital literacy should prioritize providing valuable ICT information that meets the elderly's personal and social needs, emphasizing collaborative and interactive teaching methods to foster proactive learning, and aiming to improve social inclusion by allowing older people to expand their communication networks with family and friends via the internet, fostering greater independence<sup>36</sup>. The findings of this paper emphasize the significance of providing a high-quality

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<sup>31</sup> ECDL Romania, *The first Digital Citizen program for digital education of the elderly. Digitalization must leave no one behind!*, 2021 (accessed on 04.11.2022).

<sup>32</sup> UNECE, *Policy brief-Ageing in the Digital Era*, 2021 (accessed on 18.11.2022).

<sup>33</sup> European Commission, *Bibliothèque - Global Libraries Romania*, 2022.

<sup>34</sup> UNECE, *Ageing in the Digital Era*, 2021 (accessed on 18.11.2022).

<sup>35</sup> ICT for Elderly, *Policy Recommendations*, 2021.

<sup>36</sup> Martínez-Alcalá, Rosales-Lagarde, Alonso-Lavernia, Ramírez-Salvador, Jiménez-Rodríguez, Cepeda-Rebollar, López-Noguerola, Bautista-Díaz, Agis-Juárez, *Digital Inclusion in Older Adults: A Comparison Between Face-to-Face and Blended Digital Literacy Workshops*, *Frontiers Journal*, 2018, p. 12.

learning environment for older persons who want to live more productive and happy lives using mobile devices. Because of the difficulties that come with aging, they may require assistance in learning how to use such devices. Instructors must consider the unique characteristics of older adults when developing a technology course for them in order to provide a supportive learning environment; improve senior digital literacy, learn how to use mobile devices and apps, stay connected with family, friends, and communities, and become an informed information consumer<sup>37</sup>.

It is critical that public health experts, institutions, communities, and society confront the numerous obstacles that older people encounter, since these concerns have far-reaching consequences for discrimination, policy formation, and the elderly's capacity to age properly. The necessity for government engagement to help older citizens integrate into the fast-changing technology world is especially important. This may be accomplished through focused campaigns and projects that raise awareness and provide chances for older people to learn and participate with technology. The importance of technology in determining the future is apparent. Access to the internet and digital resources is not only necessary for keeping connected to modern culture, but it also improves the quality of life for older persons by simplifying everyday routines and encouraging social participation. As a result, authorities have the possibility to guarantee that technology innovation and digital education efforts are available to everyone, regardless of background, gender, social position, financial resources, or age. In essence, emphasizing technology inclusion for elderly is more than just convenient; it is a critical component of promoting social fairness, encouraging active involvement in society, and improving overall well-being. Recognizing the value of digital literacy and access to technology may assist policymakers in creating a more inclusive and equitable society in which individuals of all ages may thrive in the digital age.

To summarize, the marginalization of elderly people in the digital era is a complex and diverse issue that needs specific governmental interventions and institutional changes. Policymakers may empower older persons through digital education and participation by tackling structural inequities such as financial inequality, educational attainment, and digital infrastructure. Policymakers have an important role in reducing structural disparities and building inclusive digital futures for older persons via targeted policy measures. Strategies may include measures to enhance digital infrastructure, offer digital literacy training, and encourage affordable access to technology for the elderly. Policymakers can pave the way for a more equitable and inclusive digital society in which older adults can fully participate in social, economic, and political life by implementing comprehensive digital inclusion policies, age-friendly technology design standards, and cross-sector collaboration.

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