

The Issue of Human Resources Aging in the Education System

Madalina-Ioana Ratiu, PhD student

„Babeş-Bolyai” University of Cluj-Napoca, Romania

[Doi: 10.19044/esipreprint.7.2023.p647](https://doi.org/10.19044/esipreprint.7.2023.p647)

Approved: 24 July 2023

Posted: 29 July 2023

Copyright 2023 Author(s)

Under Creative Commons BY-NC-ND

4.0 OPEN ACCESS

Cite As:

Ratiu M-I. (2023). *The Issue of Human Resources Aging in the Education System*. ESI

Preprints. <https://doi.org/10.19044/esipreprint.7.2023.p647>

Abstract

In contemporary society, the problem of population aging and, related to it, the problem of human resources aging is raised more and more frequently. As documented by many researchers, it has been found that the aging changes occur at both physiological and psychosocial levels and affect each employee differently. When it comes to the educational environment, the aging of teaching staff represents an increased interest at the moment, especially in Romania, even more so in the context of a possible voluntary increase in the retirement age in education. In the first part of this paper, we will carry out a review of the most relevant academic findings in relation to the challenges that arise with the aging of human resources in general and those in education, in particular. Afterwards, we will present possible openings for future research, such as those on the impact of the proposed voluntary extension of the retirement age in the education system in Romania. We will conclude with a series of practical considerations related to the challenges that the management of human resources in education will likely face under the pressure of the mentioned impact.

Keywords: Aging, human resources, education, teaching staff, aging workforce, teachers and technology

Introduction

The World Health Organization claims that "the aging of the population is one of the greatest triumphs of mankind, but also one of the greatest challenges of today's society. Worldwide, the proportion of people aged 60 and over is growing faster than any other age group' (WHO, 2002). Thus, it is important to be aware of the changes among human resources that occur with aging, and more precisely, to observe the effects of this process among teaching staff. Since this topic is little explored in recent studies, we will start in this endeavour by presenting the main aspects characteristic of the workforce aging, and then we will present what the workforce aging entails in the educational system. We will deepen this section and make some literature-based arguments about the challenges of new technologies among older teachers, and then review the major health challenges of older teachers. In the final section of this paper, we will present some openings regarding future research aimed at the impact of a possible voluntary extension of the retirement age in the education system in Romania, and we will conclude by discussing the challenges that human resources specialists will have to manage, following the eventual implementation of the draft law that provides for this extension of the retirement age in education.

Workforce aging

Aging refers, notes Sion (2003, p. 228-231), to the inevitable and irreversible decline of the human body functions, which occurs over time, even in the absence of the negative impact of injuries, diseases, environmental risk factors or life style. Employees with high physical demands at work are at high risk of occupational diseases such as cardiovascular diseases, locomotor disorders and long-term absences from work due to illness. These aspects could affect work capacity (Ilmarinen, 2002, p. 2) and are associated with changes in employee's functional capacity and health condition.

In terms of work organization, shift work affects employee's performance, as summarized by Varianou-Mikellidou et al. (2021). Thus, as a result of the natural aging process, physical capacities decrease (Ilmarinen, 2002), with changes in the cardiovascular and respiratory systems, circadian adaptations and sleep patterns (Varianou-Mikellidou et al., 2021), affecting performance, especially for employees who have physically demanding jobs. Previous studies have also compared work ability between peers of both sexes, showing that women may have lower work ability due to the multiple roles they have in the family and at work (Varianou-Mikellidou et al., 2021). On the other hand, professional experience, expertise, wisdom and strategic thinking accumulate with age (WHO, 1993), factors that can achieve higher performance at work.

A 2019 Estonian study demonstrated that older employees are just as productive as younger employees (Wissemann et al., 2022, p. 2). In general, the evidence seems contradictory, and a meta-analysis proved that the relationship between productivity and the age of employees is not yet clearly established from an empirical point of view (Wissemann et al., 2022, p. 2). Another aspect to consider is that younger employees' knowledge of new ways of working and new technologies is often perceived as more explicit.

The implicit knowledge of older employees, acquired through experience, is particularly important, especially for performing complex tasks. Research has shown that older people perform more consistently on cognitive tasks than younger people. Older employees may have skills that younger employees have not yet developed. Thus, the skills of younger employees and older employees are complementary rather than substitutable for each other (Wissemann et al., 2022, p. 3).

The aging of teaching staff

Over time, studies have identified several important components, related to the evolution of older teachers. First, older teachers were found to have the job stability component in common. Second, older teachers were also found to receive high ratings from principals for their responsible and systematic conduct in the classroom (Ryan & Kokol, 1988, p. 4). If the achievements of older teachers seem positive, we must not forget the wisdom gained and the success gathered while passing through the mid-career period. They are considered to have an increased ability to get along with students. They find that they have made a change in their teaching methods and that they have to get used to membership in professional organizations. However, the level of satisfaction that older teachers derive from long years of service is not very high (Ryan & Kokol, 1988, p. 4).

Content-specific teaching strategies and skills are the next component. This involves knowing the best methods and the best curriculum for the teacher to succeed. During the teacher's internship, this component begins to gain some importance, but the greatest attention needed with this component occurs in the first five years (Ryan & Kokol, 1988, p. 8). The final component for a teacher's development is professional skills outside the classroom, which involve activities such as coaching, membership of professional associations, or curriculum development. Obviously, this is of little interest to the early career student unsure in controlling a classroom, or to a probationary teacher concerned with demonstrating competence in the classroom. However, once teachers feel they have achieved some degree of mastery, they move on to other challenges, other ways to demonstrate their competence and contribute to the school community (Ryan & Kokol, 1988, p 11).

In relation to the aging of teaching staff, there are several concerns in the specialized literature, mentioning here, concerns related to: health, the use of technology, the management of interpersonal relationships. Regarding the health of older teachers, we would like to mention the studies conducted by Vangelova et al. (2018), Lingam & Boulton-Lewis (2012) and Kovess-Masféty et al. (2006). We will briefly present the other two topics in what follows.

Aged teaching staff and adaptation to technology

Considering the increase in the use of technology in schools, teachers are forced to adopt technology as a way to increase the quality of the educational act and also the quality of the students' learning experience. Older teachers have seniority, experience and confidence in using classic/traditional learning strategies, less often using technology in the courses they teach (Tsai, 2015, p. 1).

A study analysed and presented by Tsai (2015), indicates that older teachers are not sufficiently prepared to use technology, not that they do not want to use it. Therefore, there is a need for research that aims to find out whether older teachers, who have many years of experience in the department, despite not having adequate technological skills or facing other difficulties, can sufficiently implement technology integration in class. The main reason for the lack of technology use is that teachers are not able to integrate technology into classroom teaching methods (Tsai, 2015, p. 1). Another study presented by the same author, argues that the integration of technology in the act of teaching should not involve focusing on improving the skills of using technology, but rather, it should support teachers in the appropriate combination of teaching strategies and mandatory knowledge within a discipline.

Teachers generally fall into two categories when it comes to their perspective on integrating technology into the classroom: some teachers demonstrate a positive attitude towards technology and believe that integrating technology will not only make teaching more effective, but also increase student motivation and will demonstrate the knowledge interdisciplinarity (Tsai, 2015, p. 2), while other teachers believe that technology overshadows students' concentration and thus stifles learning. Studies have shown that teachers who do not combine teaching methods and strategies with the frequent use of technology give the illusion of insufficient teaching (Tsai, 2015, p. 2).

As for older teachers, their many years of teaching and extensive experience easily lead to the assumption that they should understand how to integrate technology into teaching and generate successful experiences in integrating technology. However, there are substantial barriers and it is

unclear whether these also limit senior teachers in implementing technology integration (Tsai, 2015, p. 3).

According to analytical reports, senior teachers' perspectives on technology integration ranged from “technology as a teaching tool” to “technology as an enabler of learning.” Experienced teachers focused on their training and whether they have been achieved their teaching objectives. In addition, based on the results of the study, it is possible to identify the factors that determine the teacher's familiarity with technology and the appropriateness of integration with subject contents, influencing the integration of technology. Poor technology management risks reducing the willingness of senior teachers to implement innovative teaching technologies. When technology is an inconvenient teaching tool, teachers do not use it in the classroom. The reason why senior teachers rarely apply technology in teaching is the lack of sufficient skill to use it; however, as for the current generation of secondary school teachers, in-service training has equipped teachers with appropriate technological skills. Assuming that advanced technological skills are not a crucial factor in technology integration, it is reasonable to suspect that external factors such as equipment management are a key factor influencing senior teachers' technology integration (Tsai, 2015, p. 7) .

Teachers' direct experience of using technology in the classroom not only enhanced their computer skills, but also affected their teaching beliefs and commitment to technology. A study presented by Chang & Hsu (2017, p. 1), suggested that the focus should be on changing teaching practices that produced good learning effects. In turn, this would reinforce the change in teachers' beliefs and attitudes.

The previously mentioned researchers stated that teacher learning groups improve teaching practice and student learning. A learning community is a group of people who share common academic interests and goals. Its aim is to continuously improve its knowledge, skills and attitudes through the exchange of ideas, participatory learning and mutual encouragement. A teacher learning community can be defined as a group of educators who share a common belief, vision, and goal, and who are committed to continually improving student learning by engaging in collaborative instructional inquiry and problem solving (Chang & Hsu, 2017, p.1).

In the study carried out by Chang & Hsu in 2017, the evolution of older teachers was explored within a learning community, built on the basis of a partnership between the university where the authors work and a secondary school, in order to improve the quality of teachers in training. Based on data collected over the entire academic year, older teachers appeared to have growth in classroom management, instructional design,

perception of technology integration, and technology competence. In addition, older teachers are used to implementing technology integration in the classroom. This indicates that sufficient technology support from teacher learning communities increases senior teachers' willingness and confidence to integrate technology into their lessons. In such circumstances, senior teachers are more likely to have successful experiences that in turn inspire them to experiment more with technology integration. In conclusion, teacher learning groups strongly benefit older teachers' professional development in terms of technology integration. This study also showed that older teachers' ingrained preference for teacher-centred instruction could limit their creative use of technology.

Conclusion and Openings

Even if aging in general, and that of teachers in particular, brings physical and/or cognitive changes, the role of older teachers in the educational system does not diminish its importance, especially if they accept the transition from traditional teaching methods to modern ones, which involve the use of technology in the classroom. It is very important that pre-service teachers engage in collective inquiry into the content of teaching and learning for a possible shift towards more student-centred approaches. In fact, senior teachers have enormous influence over their younger colleagues. Although several challenges need to be addressed, the professional development of older teachers in terms of technology integration should not be left out and overlooked, but the opposite (Chang & Hsu, 2017, p.5).

In this sense, a draft law is currently being discussed in Romania, which, among other things, proposes the possibility of voluntarily extending the retirement age, up to the age of 70. Future studies must take into account the impact that the implementation of such a project can have, both from the perspective of the teaching staff performances, and from the perspective of students and their parents, but not least, from the perspective of recent pedagogics graduates who want to enter the education labour market.

The challenge is a significant one and this challenge falls to the specialists in the management of human resources, in order to manage effectively and beneficially in the service of the most vulnerable part influenced by this possible change in the education law.

Conflicts of interest

The authors of this paper certify that they have NO affiliations with or involvement in any organization or entity with any financial or non-financial interest (such as honoraria; educational grants; membership,

employment; affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

References:

1. Chang, Y. F., & Hsu, C. L. (2017). Exploring a Senior Teacher's Change in a Learning Community for Improving Pre-service Teachers' Quality. *International Journal of Social Science and Humanity*, 7(3), 158. – <https://doi.org/10.18178/ijssh.2017.7.3.812>
2. Ilmarinen, J. E. (2001). Aging workers. *Occupational and environment medicine*, 58(8), 546-546. – <http://dx.doi.org/10.1136/oem.58.8.546>
3. Kovess-Masféty, V., Sevilla-Dedieu, C., Rios-Seidel, C., Nerrière, E., & Chan Chee, C. (2006). Do teachers have more health problems? Results from a French cross-sectional survey. *BMC Public Health*, 6(1), 1-13. - <https://doi.org/10.1186/1471-2458-6-101>
4. Lingam, G. I., & Boulton-Lewis, G. M. (2012). Ageing in Fiji: how older teachers perceive ageing and their lives. *American Journal of Human Ecology*, 1(2), 65-70. – <https://doi.org/10.11634/21679622150481>
5. Ryan, K., & Kokol, M. (1988). The aging teacher: A developmental perspective. *Peabody Journal of Education*, 65(3), 59-73. – <http://dx.doi.org/10.1080/01619568809538613>
6. Sion, G. (2007). *Psihologia vârștelor*. Editura Fundației „România de Mâine” (The Psychology of ages. The Publishing House of the Foundation „Romania of Tomorrow”).
7. Tsai, H. C. (2015). A Senior Teacher's Implementation of Technology Integration. *International Education Studies*, 8(6), 151-161. <http://dx.doi.org/10.5539/ies.v8n6p151>
8. Vangelova, K., Dimitrova, I., & Tzenova, B. (2018). Work ability of aging teachers in Bulgaria. *Int. J. Occup. Med. Environ. Health*, 31(5), 685-695. <https://doi.org/10.13075/ijomeh.1896.01132>
9. Varianou-Mikellidou, C., Boustras, G., Nicolaidou, O., Dimopoulos, C., & Mikellides, N. (2021). Measuring performance within the ageing workforce. *Safety science*, 140, 105286. - <https://doi.org/10.1016/j.ssci.2021.105286>
10. Wissemann, A. K., Pit, S. W., Serafin, P., & Gebhardt, H. (2022). Strategic guidance and technological solutions for human resources management to sustain an aging workforce: Review of international standards, research, and use cases. *JMIR Human Factors*, 9(3), e27250. - <https://doi.org/10.2196/27250>

11. World Health Organization (2002). Active ageing: A policy framework (No.WHO/NMH/NPH/02.8). World Health Organization.