

Alexandra Withnall*

NEW PERSPECTIVES ON LATER LIFE LEARNING IN THE AGE OF LONGEVITY

ABSTRACT: Recent decades have witnessed the ageing of populations in many countries across the world accompanied by unprecedented social, cultural, and technological change as well as recognition of the implications of climate change. As this demographic transformation has posed a full range of challenges to policy dimensions in certain countries, the importance of older people being able to access appropriate learning opportunities has become more widely recognised. Increasingly, it is understood that this is necessary not only for the economies of different countries, which may require people to remain for longer in the labour market but also as an essential component of a fulfilling later life. However, a focus only on chronological age and ageing fails to allow for the more positive aspects of what may be termed “the longevity effect” which has been driven by a better understanding of the factors that influence increased life expectancy in different countries, enabling people to live longer, happier and more productive lives. It is argued firstly that we need to rethink the current focus on “aging” and replace it with a more positive emphasis on “longevity” that includes an understanding of what happens to our brains as we grow older. Secondly, the concept of “long life learning” which is beginning to appear in different contexts is explored. Thirdly, it is acknowledged that the worldwide spread of COVID-19 has both opened up some novel ways of helping some older people to learn and, simultaneously, widened the so-called digital divide. Finally, the pernicious influence of ageism is considered.

KEYWORDS: longevity, learning, brain, ageism.

Introduction

One of the most important occurrences of recent decades has been the growth in life expectancy and the ageing of populations in many parts of the world. Although, health inequalities may exist within a particular country which means that not everyone everywhere enjoys a long and healthy life. However, as the possible implications of an ageing population have become clearer, a range of supra-national organisations such as the World Health Organization (WHO) alone and in collaboration with the United Nations (UN) have developed large scale programmes designed to address what are seen as some of the most urgent issues. Especially as this demographic change has been accompanied by unprecedented social, cultural, and technological change in many parts of the world as well as by the realisation of looming environmental challenges.

Opportunities to learn throughout life and access to such opportunities have featured prominently in these programmes, although the sheer diversity of older populations and the inequalities they may suffer are acknowledged (WHO, 2002; WHO, 2020).

* **Alexandra Withnall** – University of Warwick Centre for Lifelong Learning, United Kingdom; e-mail: A. Withnall@warwick.ac.uk; ORCID: <https://orcid.org/0000-0002-7805-3431>.

Interestingly, there is recent evidence that the participation of older adults in learning (formal, non-formal and informal) has decreased in almost a quarter of 159 countries surveyed in UNESCO's 5th Global Report on Adult Learning and Education known as GRALE 5, however, it has increased by much the same amount in others (UNESCO Institute for Lifelong Learning, 2022).

Nevertheless, the promotion of lifelong learning in conjunction with investment in health and wellbeing is regarded as particularly important in order for countries to stay abreast of rapid developments in technology and the maintenance of skill flexibility. Certainly, a pressing issue is the need for people to remain for longer in the labour market as the age of entry to many government pension schemes rises. It is already apparent that, as people live longer, there must be more and better opportunities for training and retraining throughout the life course with appropriate investment and an acknowledgement that ways of working are already changing. Indeed, it is widely accepted that as younger generations grow older, they will be employed in jobs that currently do not exist. Overall, such thinking goes some way towards the achievement of the UN's Sustainable Development Goals 3 and 4 which focus on good health and wellbeing together with an emphasis on quality education throughout life (UN, 2018).

This century has also witnessed the development of a wide-ranging international research field concerning learning in later life accompanied by a burgeoning interdisciplinary literature. The overall aim here is to contribute to current debates about later life learning by moving the focus of discussion from "ageing" to a more positive emphasis on "longevity" that includes a brief analysis of what happens to our brains and capacity to learn as we grow older. Additional aims are to examine an emerging theoretical perspective on later life learning, that is, the concept of "long life learning"; to discuss the impact of COVID-19 on learning opportunities for older people; and to comment on the widespread and discriminatory phenomenon of ageism and the implications for older people's learning opportunities.

From "ageing" to "longevity"

Nothing has illustrated the fact that people can continue to be active well into later life when they are usually considered *too old* than firstly, the election of Joe Biden as the 46th President of the United States (USA) in the 2020 presidential election. He assumed office in January 2021, at the age of 78 as the oldest person to have done so. Secondly, the death of Queen Elizabeth II in the United Kingdom (UK) at the age of 96 took many people by surprise in that, although appearing physically frail, she had been seen on television still working until two days before her death. Her eldest son,

Charles III, has assumed the throne at the age of 73, the oldest person ever to do so in the UK, whilst Camilla, his Queen Consort is 75.

Of course, these examples are doubtless exceptions, but they serve to draw attention to the phenomenon of longevity. In regions of the European Union (EU), life expectancy at birth in 2020 was 83.2 years for women and 77.5 years for men. Compared with the previous year, these figures represent a slight decrease which is related to the sudden increase in mortality in 2020 as a result of the COVID-19 pandemic. Across the EU, the countries with the highest levels of life expectancy were France, Spain, Italy and Greece (Eurostat, 2022). However, it is well known that across the world, Japan, Italy and Germany have the world's oldest populations, although it must be acknowledged that ideas about what constitutes "old" are changing. For example, Warren C. Sanderson & Sergei Scherbov (2019) reject the idea of chronological age as a benchmark and suggest substituting it with "prospective age" – how many years we have left combined with other health metrics which they believe will generate better demographic estimates in order to inform social and economic policies in the future.

Lynda Gratton & Andrew J. Scott (2016) have envisaged a scenario in which living beyond 100 years will not be unusual. They argue that we need to focus not necessarily on the downsides of ageing – ill health and infirmity – but to concentrate on how we can structure our lives in new ways in order to make the most of our extra years. They reject the traditional three-stage model of the life course – education, work, retirement – and suggest some novel ways in which the life course might be reconsidered. Certainly, it is likely that people will experience a healthier later life, but they will also need to work for longer while being able to demonstrate flexibility in their skills, willingness to learn and resilience in the face of adversity. Investing in skills and knowledge will become a priority as will the need to keep abreast of technological innovation and to be able to display agility in learning, creativity, and the ability to innovate. It is also likely that how people learn will undergo a seismic change; we have already witnessed the growth of online learning during the COVID-19 pandemic, and we will return to a discussion of this in relation to older people later in the text.

In a subsequent publication, Andrew J. Scott & Lynda Gratton (2020) elaborate on their original thesis by devising a framework for helping people to navigate this new world drawing on insights from the fields of psychology and economics. In respect of education, they stress that initial education will need to focus less on specific knowledge and skills and increasingly on learning how to learn throughout life. They are enthusiastic supporters of a system of lifelong learning with opportunities open to everyone, making optimum use of innovative technology and intergenerational learning. Such an inclusive educational system would offer the possibility of building what they term

“stackable” and portable credentials that could be recognised by employers rather than the current reliance on expensive degrees as a standard of achievement. However, they have little to say about people who are not in the workforce.

It is notable that a similar philosophy has also appeared in the work of a number of American feminist writers such as Karen Sands (2016) who, calling herself an Educational GeroFuturist, forecasts that women, notably women entrepreneurs, will reframe what it means to be an older woman and that notions of being *too old* will have to disappear. It will be incumbent on older women in particular to get rid of outdated assumptions and beliefs around growing older and to change the narrative towards an aspirational ageless future as we all come to terms with living longer. This will involve opening our minds to having conversations with other generations and, as Gratton & Scott (2016) have envisaged, discovering positive ways to benefit from our increasing longevity.

At this point, it is worth highlighting the introduction of a number of practical responses to the extended duration of people’s lives. One example is the work of the International Longevity Centre Global Alliance, a multinational consortium of member organisations designed to help societies address population ageing and longevity in constructive and creative ways, using a life course approach. The alliance boasts member organisations in a range of countries across the world from the USA to Australia who conduct research, develop novel ideas for action and offer fora for debate; older people themselves are key stakeholders (ilc-alliance.org). As an illustration, the International Longevity Centre-UK (ILC) was founded in 1997 and has since run a number of programmes using an evidence-based approach which focuses on the impact of longevity on society and how society will have to adapt to this new reality. It holds an annual policy conference which aims to explore the impact of longevity on society and to discuss possible future scenarios (ilcuk.org.uk).

On a smaller scale, the Longevity Forum, based in the UK, is a non-profit initiative whose aim is to help achieve longer, healthier, and more fulfilling lives for as many people as possible. To benefit from increasing longevity, the Forum advocates thinking about change from the early stages of the lifespan from a multidisciplinary perspective. It engages stakeholders who have the power to influence change and produces a series of accessible podcasts as well as organising an annual Longevity Week with a mix of virtual and in-person presentations from a range of innovators, policymakers and academics (thelongevityforum.com). It is also notable that Florida State University in the USA has set up an Institute for Successful Longevity that aims to explore how technology can promote the wellbeing and quality of life for older people (news.fsu.edu).

Other initiatives focus more specifically on longevity and the importance of offering learning opportunities throughout life. Launched in 2013 by the UNESCO Institute

for Lifelong Learning, the UNESCO Global Network of Learning Cities has witnessed a rapid expansion. The Learning Cities vary in their structures and operation but are fundamentally designed to foster a vibrant culture of learning throughout life accompanied by a set of indicators or key features by which progress can be monitored. The Sustainable Development Goals have been adopted as part of UNESCO's core policy framework so that Learning Cities have to comply with all 17 SGGs especially SDG 4 which, as has been seen, is concerned with the promotion of lifelong learning opportunities for all. There are currently around 200 cities in 40 countries in the network, but new cities are joining all the time (uil.unesco.org).

A further relevant but different development is the rise of the Age Friendly University Global Network, founded in 2012 and led by Dublin City University (DCU) in the Republic of Ireland. This network specifically recognises that people are experiencing increasing longevity and promotes an inclusive approach to healthy and active ageing having developed Ten Principles for an Age Friendly University. These include encouraging the participation of older adults in all the core activities of a university; to assist older people who may wish to pursue a second career; to promote intergenerational learning and to increase younger students' understanding of the benefits of longevity.

Among a range of activities, DCU itself specifically offers learning opportunities for older people on its Dublin campus together with an intergenerational programme where students and older people share skills. DCU has commissioned an independent evaluation of its own Age Friendly Universities Programme, but the network now has a membership of over 60 universities based in Europe, North America and South-East Asia (dcu.ie). The overall impact at international level has not yet been analysed but emergent literature suggests that both older people and universities themselves stand to benefit (Talmage et al., 2016; Montepare et al., 2020).

These developments demonstrate a growing acceptance of longevity and the need to face the issues an older world implies and to find practical solutions. However, we also need a better understanding of what longevity means to those living to very old age in respect of what happens to their brains and their ability to learn.

Longevity, the brain and the capacity to learn

Our understanding of older people's capacity to learn has fortunately moved on from the belief that they are all incapable of learning anything new. However, it is only recently that work by neuroscientists and others has begun to inform our knowledge of the impact of longevity on older bodies and brains with implications for older people's learning. Obviously, new findings are being published all the time, but here we will comment on some recent work which has particular relevance to our theme.

Some of the most important work in dispelling negative ideas about old age is to be found in research by the Canadian neuroscientist Daniel J. Levitin (2020). He draws on a range of disciplines to demonstrate that ageing is a unique developmental stage and that we can all make choices that will enable us to remain mentally alert and adaptable well into later life. His thesis is that how well people age can be traced back both to a number of factors relating to their childhoods and to their responses to stimuli in their environments and changes in their individual habits. He comments on the importance of personality traits, memory, lifestyle, and community on ageing and provides an analysis of what happens to the brain from birth to old age when we may experience a general slowing down of cognitive function. However, he believes learning a manual skill when young and keeping it up through life has an extremely protective effect against ageing as does starting to learn something new in later life although it has to be accepted that the efficiency with which we might learn new motor skills declines with age. Older people may also be slower at adjusting to new demands which may explain why some find dealing with technology difficult, especially as other senses – hearing, vision – tend to wear out more quickly than other faculties. Nevertheless, there are other compensations in that abstract thinking has been shown to get better with age and, as others have observed, the rate at which cognitive abilities decline is highly variable.

Levitin (2020) ends with a list of suggestions for rejuvenating the brain such as regular exercise, remaining engaged with meaningful work, promoting cognitive health through a range of activities such as experiential learning and participating in new activities and situations. In this, he echoes the earlier work of Patrick Rabbitt (2015), a cognitive gerontologist who chose to interpret his personal experiences of the processes of ageing through what research has revealed about the ageing of our brains and bodies. Rabbitt found a considerable amount of evidence pointing to the conclusion that taking more exercise in youth and middle age and even exercise begun in later life are essential in maintaining and improving memory and intelligence and the ability to learn new things. However, the type of exercise undertaken is important with aerobic exercise being most beneficial; weight training, stretching and improving balance and posture, although important for enjoying an easier later life, do not improve mental abilities to the same extent.

A very different approach can be detected in the work of Gene D. Cohen (2005), a psychiatrist and gerontologist. Rather than studying the brain as such, he began from the premise that the brain is capable of learning at any age. His research with older people led him to formulate what he termed an empowering view of the second half of life (though there may be disagreement as to when this actually begins). Following the work of Erik H. Erikson (1980), he described four stages of later life involving four

phases of growth and development beginning around the early forties and ending between the late seventies and the end of life although the stages tend to overlap, and people may pass through them at different speeds. The four phases, briefly summarised, consisted of midlife re-evaluation; liberation to include experimentation and innovation; recapitulation, resolution and contribution involving, for example, trying to find meaning in life and dealing with any unfinished business; and finally, continuation, reflection and celebration – a desire to live a good life until the end.

Cohen argued that people enter and complete these phases under the influence of what he termed the “Inner Push”, drives and urges that are present throughout life and which may motivate people to move in new directions as they age. His research with older adults revealed the importance many of them placed on opportunities to participate in a whole variety of learning activities to challenge their minds and to enable them to tap into their creative energy in later life. In a similar vein, the Argentinian scientist Estanislao Bachrach (2012) has explored how the brain helps people to become more creative and suggests a range of methods and techniques for people to achieve their full potential at any age.

Although we cannot know what the future holds, research by other scientists such as David A. Sinclair (2019) is already alerting us to the possibilities of prolonging disease-free human life even further. Similarly, Andrew Steele (2020), a biogerontologist, envisages a time when we might be able to *cure* ageing through medical advances in order to help us live even longer, healthier and happier lives. Such possibilities open up a whole new range of questions regarding the place of learning in later life.

Long life learning: towards a new theoretical perspective

Growing awareness of longevity, the importance of later life learning and the growth of opportunities in many countries has not so far led to the development of any persuasive new theoretical perspectives. After Dominique Kern (2018) attempted to qualitatively analyse nine models of what he identified as older adult education published in seven different countries and across three continents, he concluded that the absence of shared paradigms made it too difficult to compare or transfer results from current research and that progression will only be possible with a solid foundation of academic research.

Hany Hachem (2020) has also pointed out that early attempts to theorise later life learning in the 1990s were very much of their time and located in a mainly Anglo-Saxon field of developing practice thus making them barely relevant today when the importance of later life learning is coming to be acknowledged across the world and in different cultures. Together with the growth of an interdisciplinary, international research field there is certainly scope for new ways of thinking. Accordingly, the concept

of “long life learning” is beginning to appear in the international literature, although it has been interpreted in different ways often connected with learning for an extended and different working life (Conley, 2018; Weise, 2021). However, Alexandra Withnall (2010) originally suggested that the concept should acknowledge longevity and the need to accept a dynamic model of learning throughout the course of life. This would recognise the requirement for social and economic progress at a societal level whilst also acknowledging democratic and personal concerns for growth and development as people age. It would emphasise the sheer complexity of learning in that it can take place in a range of different contexts during the life course and, frequently, against a challenging external background. Learning that respects individuality and diversity at every age may not necessarily be cumulative in character but it would be meaningful and connective at a personal level.

Withnall (2010) believes that this would help to recognise everyone’s potential as a capable learner, regardless of their chronological age and situation, and would recognise and value people’s learning achievements thereby releasing untapped talent within a community. In this way, older people would become more visible as learners and could contribute towards a culture of learning within their families, communities and countries.

In recent years, the growth of Learning Cities, previously discussed, which frequently involves building learning networks across a city or community through a digital badging platform that credits the skills and knowledge people have acquired offers a way forward by giving people of any age better ownership of their learning. This seems to accord with the idea of “stackable” credentials suggested by Scott and Gratton (2020). It should certainly be acknowledged that we are still very much at the beginning of a technological revolution that will disrupt traditional learning experiences for future generations of older learners. To speak of long-life learning is to offer a novel lens through which to view and explore their experiences. And hopefully, point to new avenues of research that will lead to more and better understanding of their learning needs and help to formulate new theoretical perspectives in the future.

The impact of the COVID-19 pandemic

Appearing early in 2020, the COVID-19 pandemic, probably the most challenging crisis the world has faced this century, has affected 228 countries and territories and has resulted to date in the deaths of over six million people across the globe. In spite of the arrival of effective vaccines late in 2020, there are still over 13 million patients currently affected worldwide most of them fortunately now only mildly (worldometers.info, September 2022). From the start it was apparent that although all age groups

were at risk from the virus, older people (and those with underlying conditions) were quickly identified as being especially vulnerable. With the imposition of one or more lockdowns for varying periods of time in most countries, daily life for everyone became much more restricted. For many older people, particularly those living alone, social isolation was feared to add to their plight especially as opportunities to socialise and to take part in a range of face-to-face activities including classes and courses disappeared virtually overnight.

Although distance learning has long been available in various modes, it is not clear how far it ever appealed to older people as a way of acquiring new knowledge and skills. Yet as the pandemic struck, many providers of both formal and informal learning opportunities for older people began to explore the internet as a way of reaching older learners and expanding their repertoire. For example, the University of the Third Age (U3A) in the UK made strenuous efforts to teach older people how to communicate online using the popular conferencing tool Zoom, whilst many other organisations for older people offered online advice on how to stay fit and mentally healthy during lockdown.

Overall, the internet also has become a major resource for people of any age wishing to follow an interest or to study something new enabling them to continue learning online. In the USA, Sandra von Doetinchem & Lucas Livingston (2020) have provided a brief overview of some initiatives offered for older people by different organisations including Institutes of Lifelong Learning, churches and arts and creative engagement programmes presented through video conferencing. In addition, GetSetUp, an American site that describes itself as “the largest senior to senior live interactive educational platform” (getsetup.io), is accessible from anywhere in the world. In the UK, Rest Less, the fastest growing digital community for over-50s started providing information, advice and talks on a wide variety of subjects including looking for a job in retirement (<https://restless.co.uk>). A variety of similar offerings appeared in other countries.

The internet has certainly become an important educational tool during the pandemic, although it is likely that increasing numbers of older people were familiarising themselves with its possibilities prior to this time. However, there is some evidence that whilst COVID-19 has been instrumental in encouraging many older people to get online and to discover new modes of learning, it has also served to deepen the so-called digital divide. Those who cannot afford to have computer access or have no interest in acquiring relevant skills are at considerable risk of being left behind in all kinds of areas of life. It has been shown that age is still the biggest predictor of whether or not a person is able to get online and whether they are more likely to suffer poorer health, be less well-off and less well educated than their peers (Centre for Ageing Better, 2020). Older people with disabilities, second language speakers, others with

Alzheimer's disease, other forms of dementia and Parkinson's will also need special consideration and provisions.

A recent qualitative study of U3A members based at the University of Malta, whose usual classes were swiftly transferred to the University's radio and online platforms, during Malta's lockdown raises some other pertinent issues (Formosa, 2022). Whilst about a third of members declined to participate, some others found these new forms of teaching and learning offered them welcome flexibility or they enjoyed the anonymity the new provision offered. Others commented that they had acquired new levels of digital competence and an accompanying boost to their self-esteem. However, some older learners missed the dynamic interaction of face-to-face classes and contact with the tutor (other than by email) or found their motivation waning especially as they sometimes felt isolated. Formosa also comments on issues of equity, accessibility and lack of digital literacy raised above and stresses the pressing need for tutors to be well trained in online teaching instruction, since it is obviously important that online material is presented in ways that take any age-related sensory changes into account.

Currently, in Europe and indeed, across the world, there is a range of research programmes underway that attempt to discover ways in which to overcome the digital divide to improve the lives of older people in general; this includes helping them to progress in job training where appropriate or assist them in pursuing hobbies and learning interests. Most pressing is the need to ensure that older learners possess the necessary skills to learn online since unfamiliar technology can present a major barrier to their participation. As younger generations who have grown up with technology move into later life, this may become less of a problem, but it will still be necessary to ensure that they are able to update their skills as technology continues to evolve at an accelerated rate of change.

The impact of ageism

Finally, when considering later life learning in the context of longevity it is particularly important to consider the impact of ageism, a term first coined by Robert N. Butler (1969), which has frequently been found to play a part in the general public's perception of older people, their ability to continue learning and the value of encouraging them to pursue educational opportunities in later life. In the UK, a study by the Royal Society for Public Health (2018) found that negative attitudes towards age can be formed early in childhood and that ageism is rife. Survey respondents were found to view getting older most negatively when considering participation in activities, memory loss and appearance; sadly, these ageist attitudes tend to harm individual people as they grow older and apply these negative stereotypical images to themselves. Certainly, it has

been shown that ageism can have devastating and long-term consequences for people's health and wellbeing as well as their human rights (WHO, 2021). Indeed, Tracy Gendron (2022) found that people with negative attitudes towards ageing tend to live seven and half years less than those with a more positive attitude.

Currently, there are a number of vigorous campaigns against ageism. The WHO has published a Global Report on Ageism (2021) with the aim of bringing together the best available evidence on the nature and extent of ageism in order to present a framework for action to counter and prevent it. The report notes that ageism can also disadvantage younger people. It is also noticeable that many campaigns against ageism in western countries are being led by feminist writers such as Sands (2016), Margaret M. Gullette (2017) and Ashton Applewhite (2019) as well as by a health professional (Levy, 2022). Applewhite writes positively concerning the effect of the ageing processes on the brain which, as she points out, are normal in the absence of disease; she also discusses some ways in which we can build cognitive reserve through sustained effort. Through her work, Applewhite (2019) is now regarded as a leading figure in the fight against ageism and the push towards an age-friendly world.

Then there are more practical campaigns such as Art Against Ageism set up in the USA but also active elsewhere. It is an alliance of artists and other creative people whose aim is to confront and address damaging stereotypes of growing older and to assist others in setting up their own campaigns (artagainstageism.org). However, Gendron (2022) has argued that many anti-ageist strategies are in fact ageist themselves in that they deny age which she believes is an important aspect of being human. She is opposed to the notion of age friendly language, suggesting that we should instead be talking about "an age-inclusive environment" and "elderhood" rather than the current terms in use when discussing older people. Above all, she advocates reclaiming being old as "the manifestation of a long life instead of a dreaded state that we fear" (Gendron, 2022: 164).

Conclusion

This attempt to identify some new perspectives on later life learning in a changing world has led to the consideration of some wider issues, all of which would benefit from further research and analysis. It has been argued that we need to move the locus of discussion on from thinking about ageing towards a more positive view of the dividends of longevity. In tandem, we would have a better grasp of the possibilities of later life learning if we understood more about the brain and the changes it is seen to undergo as people grow older, acknowledging that there is a range of different disciplinary approaches. Such knowledge would be helpful in devising learning and teaching strategies for older people especially in view of the move towards online learning since

the COVID-19 pandemic, and the realisation that some older people, for a myriad of reasons, are being deprived of new opportunities to learn.

It has also been seen that existing theories relating to older people's learning and education are no longer fit for purpose or reside in an insufficiently researched academic base when the importance of continuing to learn has increasingly been acknowledged across the globe. It is suggested here that we explore further the concept of "long life learning" to assist us in developing a more effective theoretical framework that could provide a conceptual basis for further research in different countries with varying cultural traditions. Lastly, it has been seen that the pernicious influence of ageism is coming to be challenged with far reaching consequences for learning in later life – although there is some way to go still in changing beliefs and attitudes, not least among older people themselves. It is in everyone's interests that we do so.

References

- Applewhite, A. (2019) *This chair rocks. A manifesto against ageism*. London: Melville House UK.
- Bachrach, E. (2012) *The agile mind*. London: Virgin Books.
- Butler, R.N. (1969) Age-ism: Another form of bigotry. *The Gerontologist* [online], 9(4), 243-246. Available at: https://doi.org/10.1093/geront/9.4_Part_1.243.
- Centre for Ageing Better (2020) *How has COVID-19 changed the landscape of digital inclusion? Briefing* [online]. Available at: www.ageing-better.org.uk [2.02.2021].
- Cohen, G.D. (2005) *The mature mind*. New York: Basic Books.
- Conley, C. (2018) *Wisdom at work: How to reinvent the second half of your career*. London: Portfolio Penguin.
- Erikson, E.H. (1980) *Identity and the life cycle*. New York: W.W. Norton & Company.
- Eurostat (2022) *Key figures on Europe. 2022 edition* [online]. Available at: <https://ec.europa.eu/> [31.08.2022].
- Formosa, M. (2022) Online learning for older persons during the COVID-19 pandemic in Malta: the good, the bad and the ugly. In: M. Łuszczynska & M. Formosa (eds.) *Ageing and COVID-19: Making sense of a disrupted world*. London & New York: Routledge, 169-182.
- Gendron, T. (2022) *Ageism unmasked. Exploring age bias and how to end it*. Steerforth Press: Lebanon, NH.
- Gratton, L. & Scott, A.J. (2016) *The 100-Year Life*. London & New York: Bloomsbury Information.
- Gullette, M.M. (2017) *Ending ageism or how not to shoot old people*. New Brunswick, NJ. & London: Rutgers University Press.
- Hachem, H. (2020) Is there a need for a fourth statement? An examination of the critical and humanist statements of educational gerontology principles. *International Journal of Lifelong Education* [online], 39, 465-477. Available at: <https://doi.org/10.1080/02601370.2020.1801869>.
- Kern, D. (2018) Research on epistemological models of older adult education: the need of a contradictory discussion. *Educational Gerontology* [online], 44, 338-353. Available at: <https://doi.org/10.1080/03601277.2018.1475123>.
- Levitin, D.J. (2020) *The changing mind*. London: Penguin Life.
- Levy, B. (2022) *Breaking the age code*. London: Vermilion.

- Montepare, J.M., Farah, K.S., Bloom, S.F. & Tauriac, J. (2020) Age-friendly universities: Possibilities and power in campus connections. *Gerontology & Geriatrics Education* [online], 41(3), 273-280. Available at: <https://doi.10.1080/02701960.2020.1726744>.
- Rabbitt, P. (2015) *The ageing mind. An owner's manual*. London & New York: Routledge.
- Royal Society for Public Health (2018) *That age old question* [online]. Available at: <https://www.rsph.org.uk/our-work/policy/older-people/that-age-old.question.html> [5.10.2018].
- Sanderson, W.C. & Scherbov, S. (2019) *Prospective longevity. A new vision of population aging*. Cambridge, MA: Harvard University Press.
- Sands, K. (2016) *The ageless way*. Roxbury, CT: Broad Minded Publishing.
- Scott, A.J. & Gratton, L. (2020) *The new long life*. London: Bloomsbury Publishing.
- Sinclair, D. (2019) *Lifespan. Why we age and why we don't have to*. London: Thorsons.
- Steele, A. (2020) *Ageless: The new science of getting older without getting old*. London: Bloomsbury Publishing.
- Talmage, C., Mark, R., Slowey, M. & Knopf, R.C. (2016) Age friendly universities and engagement with older adults: moving from principles to practice. *International Journal of Lifelong Education* [online], 35(5), 1-18. Available at: <https://doi.10.1080.02601370.2016.1224040>.
- UNESCO Institute for Lifelong Learning (2022) *5th Global report on adult learning and education: citizenship education; empowering adults for change* [online]. Available at: <https://unesdoc.unesco.org> [15.08.2022].
- United Nations, Department of Economic and Social Affairs. Division for Sustainable Development Goals (2018). *The 17 goals* [online]. Available at: <https://sdgs.un.org> [15.01.2021].
- von Doetinchem, S. & Livingston, L. (2020) Lifelong learning in the age of COVID-19, *Generations Now* [online]. Available at: https://www.academia.edu/43950987/Lifelong_Learning_in_the_Age_of_COVID_19 [15.09.2022].
- Weise, M.R. (2021) *Long life learning*. Hoboken, NJ: John Wiley & Sons, Inc.
- Withnall, A. (2010) *Improving learning in later life*. London & New York: Routledge.
- World Health Organization (2002) *Active Ageing. A policy framework*. Geneva: WHO.
- World Health Organization (2020) *UN decade of healthy ageing 2021-2030* [online]. Available at: <https://www.who.int/> [15.01.2021].
- World Health Organization (2021) *Global report on ageism* [online]. Available at: <https://www.who.int/teams/social-determinants-of-health/demographic-change-and-healthy-ageing/combating-ageism/global-report-on-ageism> [15.07.2022].
- Worldometers (2022) Available at: <https://www.worldometers.info/> [25.09.2022].