Active ageing, social inclusion and wellbeing
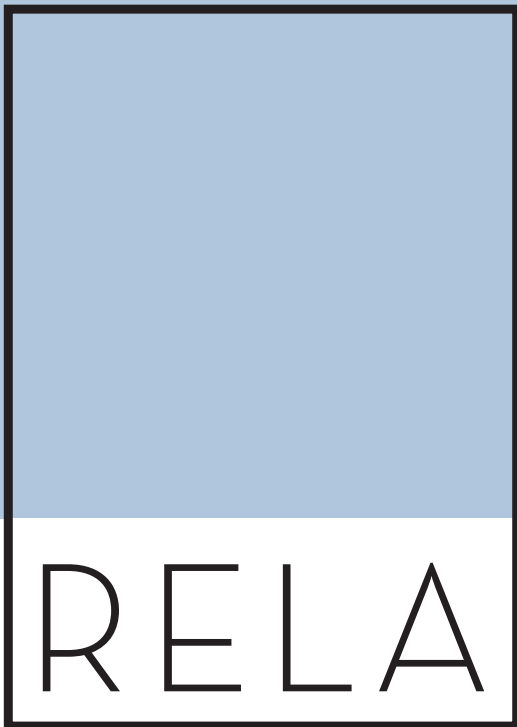
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Editorial: Active ageing, social inclusion and wellbeing: Benefits of learning in later life

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The education of older adults has been considered the fastest growing branch of adult education in post-industrial countries and one of the most crucial challenges facing current adult European education (Formosa, 2000). Early research on the learning preferences, motivations and trends of older persons – as well as the impact of learning on the quality of life of older learners – can be traced to the 1950s (Havighurst, 1953), even before the field of educational gerontology was formally established in the 1975 by David Peterson (1976). In recent years, an unprecedented level of influence of the concept of lifelong learning on policies on active ageing have led to a 'renaissance' moment in the practice and research of older adult learning (Glendenning 1992; Findsen & Formosa, 2016). Whilst at the turn of the millennium, one found only a handful of book publications in the field of older adult learning, and the few published articles were often in specialised and off the radar journals, in a space of less than two decades the situation is markedly different. Nowadays, as societies are experiencing, or anticipating, unprecedented number of older persons, the field of late-life learning is firmly established in both adult education and gerontology graduate programmes, as well as mainstream adult education and gerontology journals. Indeed, the field of older adult learning boasts an exciting and innovative field of practice, led by experts who group themselves under the mantles of adult educators, educational gerontologists, geragogists or gerontagogists (Kern, 2014). Learning in later life has entrenched itself as an integral part of adult education research, focusing on the diverse provision of late-life learning, the motivations and interests of older learners; wide-participation and emancipatory policies for older adult learning; and the benefits of learning for learners, providers, and society in general.

Whilst this is certainly a cause for celebration, the present scenario is not without its fair share of challenges. Indeed, very few educational theories include considerations on learning in later life by taking in older learners' interests and needs, despite the fact that the past three decades witnessed a burgeoning number of older adults enrolling in formal and non-formal adult learning programmes. Whilst one can never overstate that further longitudinal studies are required to measure the real impact of learning on the

wellbeing and quality of life of older persons, the emergent evidence of positive effects of late-life learning on participants' physical, psychological, and social wellbeing is surely compelling and encouraging (Formosa, 2019). Indeed, participation in learning has been found to enable residents in care homes to learn new skills (e.g. painting), keep the body active (e.g. knitting), learn about current affairs (e.g. discussion of news), keep an active mind (e.g. reading clubs), stimulating the process of affective learning (e.g. arts-based learning), and engage in transformative reminiscence (e.g. films, biography, stories) (Sabeti, 2017).

This interface between older adult learning on one hand, and impact on wellbeing and active ageing on the other, is precisely the focus of the specific theme chosen for this thematic issue of RELA. Such a focus constitutes a continuation of the international research on the wider benefits of learning trusted by Bynner, Schuller, and Feinstein (2003), and colleagues at the Center for Research on Wider Benefits of Learning as the work of John Field (2009). A more recent European research project also picked up this research focus (Manninen, 2012), asking for the outcomes of adult learning and adult education. This focus is urgently warranted because emergent large-scale data has been limited solely to middle-aged adults. Thus, little is known about effects of learning in later life on benefits ranging from human capital, social capital to identity capital grouped different forms of benefits (Bynner et al., 2003). It also remains unclear if such dimensions are the most relevant for older adults and if there are other kinds of outcomes that have to be taken into account when investigating benefits of learning in retirement. As this focus on forms of capital, distinctively promoted by the OECD (2007), has been criticised for its neo-liberal standpoints, there is no doubt that other dimensions of social and personal benefits, especially their impacts on existing social inequalities, require urgent attention and deliberation.

The studies mentioned above share a common ground whereby they focus on benefits that are measurable by standardised instruments, with the result that other forms of, non-quantifiable, educational outcomes are running the risk of being left out in the cold. Educational theories underline among other benefits of education on individual development (Mezirow, 2000), the changing relation of the individual to the world and itself (Koller, 2011), as well as the possibilities to transform the social milieu by bringing advances not only in a materialistic sense but also in psycho-social (habitus) spheres (Bourdieu, 2004; Eribon, 2009). These latter studies - which tend to hold a qualitative, narrative, and autobiographical approach - are highly equipped to inform us as how educational benefits occur as well as how they are interrelated with the social environment since, after all, educational outcomes are not only dependent on the *ethos* of particular learning programmes but are also hinged on the surrounding institutional contexts. Nevertheless, despite the fact that these studies all point to a broad spectrum of benefits for learners and societies as an outcome of adult education, they neglect to differentiate between different phases of adulthood. Whilst one may assume that the outcomes of learning found in these research projects are similar to those experienced in later life, so far there is no clear evidence that this is the case. Indeed, the question of interdependencies between educational activities, the social environment, and learning benefits in later life remains relatively unexplored to-date.

This RELA thematic issue directs attention to the possible learning outcomes which become more or less relevant in later life, and may range from an active lifestyle (Brustio et al., 2018; Ross et al., 2018), wellbeing (Langlois et al., 2013) and social inclusion (González-Palau et al., 2014). Therefore, this thematic issue demands academic attention on effects of education and learning in later life on social, psychological and health-related dimensions. However, a central focus is commanded on the notion of active ageing

as a vehicle to foster healthy ageing (Paúl, Ribeiro & Teixeira, 2012) and to strengthen the impact of older adults in ageing societies (Chen & Gao, 2013). Following a range of empirical research, it can be assumed that being active keeps older people healthy, autonomous, and socially included (Mestheneos & Withnall, 2016; Lido et al., 2016), whilst also strengthening the productivity and living standard in a society in times of demographic change (Henkens & Schippers, 2012). However, active ageing is not immune to criticism, as it puts pressure on the older adults to engage in different fields, whilst ignoring the obstacles that some elders may experience in participating in a broad range of activities due to social disadvantages (Ranzijn, 2015).

Social inclusion is, of course, necessary for wellbeing throughout all stages of life (Deci & Ryan, 2008), and a prerequisite for democratic societies (Martin, 2000). Older adults can be perceived as a vulnerable group and at high risk of social exclusion as they are exit the labour market. Gainful work remains a key driver for social inclusion in post-industrial societies, especially in the face of an empty nest, as elders' children leave the nuclear family, and as a growing number of friends, relatives and acquaintances pass away as they reach the latter parts of the life course. In the same way, the digitalisation of many areas of daily living increases the risk of social exclusion of older adults, who are - on average - not as digitally literate and competent as younger peers (Schmidt-Hertha & Strobel-Duemer, 2014). In this respect, more attention could be given to contributions of older adult learning towards active ageing, social inclusion, and wellbeing in later life.

The World Health Organization (2012, p. 9) proposed a definition of well-being that considers a subjective and an objective dimension, in that well-being "comprises the individual's life experience as well as a comparison of life circumstances with social norms and values". In recent years, there was a growing concern on that interface between quality of life and wellbeing on one hand (e.g. DeNeve et al., 2013), and the ageing transition on the other. A significant research emphasis was spent in determining which factors are most influential in propelling older persons to higher levels of physical, psychological, and social wellbeing. This led to the development of measurement scales that measure subjective and objective well-being in the hope of uncovering the key determinants of active, successful and positive ageing such as the Satisfaction with Life Scale (SWLS) (Diener et al., 1985) and the Positive and Negative Affect Schedule (PANAS) (Watson, Clark, & Tellegen, 1988), and the World Health Organization Quality of Life (WHOQOL) (Power et al., 2005) to mention a few. Whilst there is no doubt that measuring subjective and objective well-being can assist us in taking a comparative snapshot of ageing, nevertheless the reliable and valid combination of qualitative and quantitative data is not without its challenges. It is tricky to measure and gauge the extent that social exclusion and inequalities, relations and social life, as well as events and transitions, impact on different older persons with diverse levels of personal resilience and social capital, and living in dissimilar geographical regions which may include positive or negative community environments. Yet, the emerging evidence that older people may be becoming decreasingly satisfied, lonelier and more depressed, and living with low levels of wellbeing (Steptoe, Deatus & Stone, 2015), can no longer be swept under the carpet, and rather, should be researched as best one could.

One trustworthy way to protect against a deterioration in wellbeing in later life is through engagement in social events, but especially, learning activities. As per RELA's interest focus, the study of well-being and quality of life should definitely be linked with education and learning processes. Indeed, despite the fact that both wellbeing and quality of life has both been awarded increasing attention in recent years (e.g. Merriam & Kee, 2014; Jenkins & Mostafa, 2015; Mestheneos & Withnall, 2016; Narushima, Liu, & Diestelkamp, 2018), the questions surrounding the real benefits of older adult learning

for older learners are far from settled, and no consensus has yet been achieved on this area as far as policy, research and action are concerned. As Field (2009) stated, the implications are immense:

> A focus on well-being presents significant challenges to public policy, to providers, and to learners themselves. It suggests the following: The evidence that learning promotes well-being is overwhelming. This has huge implications in a society that is experiencing unprecedented levels of stress, mental illness and anxiety about the future – combined with the adoption of public policies that require individuals to take responsibility for planning against future risk. Learning providers must make much more of their contribution to well-being, as well as promoting the well-being of their own staff. (Field, 2009, p. 5).

This thematic issue on active ageing, social inclusion and wellbeing includes six articles from scholars across Europe. The first paper is titled 'Inclusion in education later in life: Why older adults engage in education activities?'. In it, Cecilia Bjursell questions the motives why older adults choose to engage in education activities. The article combines the results from two previous empirical studies among Swedish pensioners. Although the dominant arguments can be found in both studies (staying active and socialising), it seems to be a fusion of extrinsic and intrinsic motivation. A closer reading of the narratives reveals that many participants enrolled in Senior University because other family members, friends, and former work-colleagues had enrolled. This suggests that what on the surface may appear as an individual's choice could, in fact, be explained by social factors.

In 'The role of empowerment and agency in the lives of older men living alone', Miranda Leontowitsch, Insa Fooken and Frank Oswald report on a study aiming to understand closely this group – men living alone at later life. The study used interviews with stakeholders and biographical interviews with older men living alone in Frankfurt/Main. On the one hand, the article shows that service providers used an approach inspired by empowerment and active ageing strategies. On the other hand, the biographical data shows that living alone was a learning process and involved the ability for men to care for themselves as well as others. Learning to live alone enabled them to maintain an identity as an independent individual.

Rute Ricardo and Andrea Porcarelli authored 'Education and socialisation in later life: The case of a University of Third Age in Portugal', and used documentary analysis, naturalistic observation, and semi-structured interviews to make an exploratory case studies, which revealed the University of Third Age to be a non-formal learning space in which older adults engage in educative practices and socialisation. In some cases, older adults had the opportunity to participate in new activities. Socialising spaces are key to build new social networks and maintained the pre-existing ones. Such networks help to counteract older adults' isolation and loneliness. The study revealed important clues regarding the relationships between the individuals' education, socialisation and wellbeing.

The fourth paper of this thematic issue, titled 'Should age-specific knowledge about older learners be shared with teenaged tutors as part of their preparation for intergenerational learning?', by Tiina Tambaum focused on teenagers acting as non-professional tutors, which are able to build digital skills with older adults in intergenerational programmes. Tambaum analyses the connections between geragogical principles and the nature of scaffolding assistance. It proposed a focus on tutors' scaffolding skills instead of older learners' peculiarities when preparing teenaged tutors. The theoretically grounded idea provides a point of origin for future empirical studies.

Carla Vilhena, Sandra T. Valadas and António Fragoso used the data from the European project Old Guys in 'Education matters: cumulative advantages and disadvantages amongst Portuguese older men' to analyse the influence of the educational background over various dimensions of the lives of older men aged 60-plus across the life course. Drawing on the theory of cumulative advantages and disadvantages the authors used biographical research to understand deeply the lives of men with a very low educational background and men with a medium/high educational background. The results show the influence of educational background in the life course, and how it can contribute to accumulation of advantages/disadvantages that explain their biographies and the very different situations in which they live today.

Finally, in 'The potential of statistical matching for the analysis of benefits of learning in later life' Maja Wiest, Tanja Kutscher, Janek Willeke, Julie Merkel, Madlain Hoffmann, Katrin Kaufmann-Kuchta and Sarah Widany show the potentialities of statistical matching (The potential of statistical matching for the analysis of wider benefits of learning in later life). Statistical matching opens the possibility to exploit the existing data by combining data sources with complementary features based on shared information. The article describes the matching of two data sources (German Ageing Survey and Study of Educational Attainment and Interests of Older People) with the aim to analyse the effects of educational participation on well-being in later life. Based on matched data, the effects of educational activities on life satisfaction are examined. The discussion focuses on future demands on data and methods for investigating wider benefits of adult learning in quantitative research.

All papers together point to the heterogeneity of ageing with respect to gender, economic status, culture, and education. They make visible which kinds of educational benefits can be found in later life and what their relevance is for the individual as well as the society. Looking at the impact of education on active ageing, social inclusion, and wellbeing in later life, it is incomprehensible that big international comparing studies on education and learning of adults (such as the Adult Education Survey or PIAAC) exclude adults older than 65. At the same time, we can see the potentials of qualitative or small-scale studies to shed more light on the complex interaction of education, learning, social inclusion and wellbeing in individual biographies and to understand the needs of specific groups of older adults. For future both kinds of research are needed as well as further development of theories on education and ageing, also to inform older adults, adult education providers and policy makers about the potentials and benefits of learning in later life.

The thematic issue also includes an open paper titled 'Measurement of media pedagogical competences of adult educators' authored by Matthias Rohs, Bernhard Schmidt-Hertha, Karin Julia Rott, and Ricarda Bolten. Arguing that media pedagogical competence is critical for the modern-day adult educator, the authors demonstrate that in the process of adult learning both the use of digital media in the classroom and the transfer of knowledge in dealing with media are the basis for social participation and individual development. On the basis that sparse research has been conducted that assess media pedagogical competence of adult educators, the authors designed and piloted an instrument for objectively measuring media pedagogical competence with adult educators (n=622), so that the paper provides the first results concerning objective measurement of adult educator media pedagogical competence.

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Inclusion in education later in life: Why older adults engage in education activities

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Abstract

The connection between education and wellbeing is presented as a general argument for the participation of older adults in education, but is this reason why older adults themselves choose to engage in education activities? This paper combines the results from two previous empirical studies and addresses how older adults account for their participation in education activities. The first empirical data set comprises a survey completed by 232 Swedish pensioners. The second empirical data set comprises stories by 53 Swedish pensioners about their participation at Senior University. The same dominant arguments for their participation in education emerged in both studies; namely (i) staying active and (ii) socialising. However, this observation can be understood in terms of motives and benefits, something which indicates a possible fusion of extrinsic- and intrinsic motivation. A closer reading of the narratives reveals that many participants enrolled in Senior University because other family members, friends, and former work-colleagues had enrolled. This suggests that what on the surface may appear as an individual's choice could, in fact, be explained by social factors.

Keywords: Health and wellbeing; learning late in life; motivation and inclusion; older adults' learning

Introduction

Current age demographics in Sweden include a large proportion of senior citizens who are physically and cognitively better equipped than previous generations. This has led to a situation which is historically unique. At the same time, an ageing population is often presented as a problem, since it puts pressure on pension systems and healthcare

systems. When problems related to changes in our demographic profile are discussed, education and learning is often presented as the solution. Education that takes place later in life is regarded as a means to ensure a prolonged working life as well as a means to promote increased wellbeing in the post-work population. The connection between education and health has been established in previous research studies and will be described in more detail later in this paper. When we consider the connection between education and health, we are prompted to question whether the health benefits associated with learning later in life is also an argument that is used by older adults as they participate in education activities. The aim of this paper is to explore this very question, by examining older adults' accounts of why they participate in education. This will allow us to develop strategies which can be used to include a greater proportion of older learners in education activities. This paper is based on two previous studies: the first was conducted in the context of Swedish national organisations for retirees and the second was conducted in the context of the Swedish Senior University.

Older adults' learning

What do we mean when we refer to lifelong learning for older adults? A common categorization is that it can be divided between formal-, non-formal-, and informal learning activities. Findsen and Formosa (2011) suggested an alternative distinction by claiming that lifelong learning concerns learning throughout life and in several different areas, while lifelong education is organized and intentional learning for a specific purpose. It has been previously recognized that non-formal learning activities are preferred by older adult participants (Jenkins & Mostafa, 2014; Bjursell, 2018), but no matter the formality of the process, note that learning may be incidental, unanticipated, or imposed (Boulton-Lewis, 2010). Below, the terms learning and education are used interchangeably, depending on the particular terms used in the referenced studies. When we discuss the empirical studies, the term education activity is used to refer to both formal- and non-formal education settings. It is assumed that an education setting will stimulate learning of some kind, although it may be difficult to fully describe all aspects of the "unruly" learning process.

Education and learning later in life

The post-work population is a heterogeneous group, but there currently remains a lack of knowledge about this heterogeneity in relation to education and learning. Previous studies have tended to treat older adults as a single group, but changed demographics means that, just in terms of age, the 'post-work population' consists of a group of people who span several generations. In addition to age, other variables can be used to differentiate across this group; such as gender, class, ethnicity, and able-bodiedness. Although the current demographic situation is new, theories about older adults' learning have a long history. For example, based on the idea that teaching older adults is qualitatively different from teaching adults, the theory of geragogy has been introduced. The basic premise in geragogy is that learning should be based on enjoyment and curiosity, and consequently, tutors should stimulate learner engagement with positive comments and encouragement. Geragogy further provides tutors with a set of principles that can guide them in how they might structure a course. For example, to present the outcomes of a course before the course is taught. Other principles refer to (i) using of a variety of teaching methods, (ii) adopting a flexible approach, (iii) taking the learners'

past experiences into consideration, since they can be useful in grounding the learners' understanding, (iv) maintaining a clear focus on the topic, (v) adapting the course structure to the learners' pace, and (vi) paying attention to cases where a participant may need to "unlearn" certain information from the past. Geragogy has been subject to some criticism, for example, by Formosa (2012), who states that this theory promotes a distinctly top-down approach, where teachers are expected to satisfy older adults' need for stimulation. This approach can also be seen as counter-productive in the sense that it treats participants as consumers of education, rather than creators of knowledge.

In the context of older adults' learning, the *learning atmosphere* is also very important, since older adults bring with them their past education experiences which may influence their approach to learning later in life. Research on older adults' transition back into a classroom setting after a long period of absence has revealed that these learners undergo a shift in attitude, from being an independent adult to becoming a submissive learner. This shift takes place in accordance with the educational experience of their youth (Formosa, 2012). Negative classroom experiences from the (past) formal school system that are recalled later in life are not conducive to older adults' learning. In contrast to formal educational settings, older adults are reported to thrive in settings that enable peer-teaching, where the curriculum is developed in consensus with the group of learners, and where they can learn through activities that are perceived as being meaningful. Older adults are positive towards peer teaching for example, which is a learner-centred activity where members of an educational community plan and facilitate learning opportunities for one other (Brady, Holt & Welt, 2003). A positive rapport between tutor and learner and a feeling of social inclusion generates a great deal of motivation within older learners and provides them with a sense of community. Participation in non-formal lifelong learning provides older learners with a compensatory strategy which they can use to strengthen their reserve capacities, allowing them to be autonomous and feel fulfilled in their everyday life (Narushima, Liu & Diestelkamp, 2018a). Furthermore, flexibility is a key condition for older adults' motivation to participate in education (Bjursell et al., 2014). Flexibility can be particularly important if one is to make adjustments to one's life in response to external changes, as well as changes within the individual, including physical- and psychological changes. The ability to have control over one's time and the activities that one engages in enables older adults to adjust to changes in their surroundings, such as losing a spouse or having to take care of grandchildren.

Participation in education activities

Although the ability to learn remains throughout one's life, one may change the way in which one participates in education or educational activities. The interest that many individuals show in education remains, however, consistent. This is something which is illustrated, for example, by the growing global University of the Third Age (U3A) movement (Formosa, 2019). Whilst U3As support wellbeing, there exist problematic issues concerning gender, social class, ageism, and ethnic biases (Formosa, 2014). With respect to gender, many people hold the notion that it is mainly older women who participate in education. However, one study of participation in education later in life shows that gender cannot necessarily be used to predict participation (Bjursell et al., 2017). The only factor relevant to predicting participation in education, according to the latter study, consisted of the individual's previous level of educational attainment: the higher the level of educational attainment achieved earlier in life, the more probable it was that the individual would take part in educational activities later in life. This

insight, that the level of educational attainment correlates positively with participation in education later in life, has been repeatedly demonstrated in studies from different countries. This observation has prompted a number of initiatives, even initiatives to include marginalized groups, so that they too can benefit from the positive effects that education brings about in people's lives. The inclusion of older men with low levels of educational attainment in education has been facilitated, for example, by the social movement called 'the Men's Shed', initially developed in Australia (Ahl, Hedegaard & Golding, 2017; Golding, 2015). Inter-generational learning is another way which organisations can create attractive and meaningful learning contexts for different generations, including the older adults (Boström, 2003, 2012, 2014, 2017; Lüscher, et al., 2017; Schmidt-Hertha, Jelenc Krasovec, & Formosa, 2014). Changes in society may also bring about conditions where further education is needed later in life, for example, note that the development of new technology often demands new skills in the users of such technology. A study of older adults' access to and use of information and communication technology (ICT) revealed a positive correlation between levels of material resources (e.g., income), discursive resources (e.g., English skills) and social resources (e.g., social networks) and access to ICT (Olsson, Samuelsson & Viscovi, 2019). The same study identified a negative correlation between age, access, and literacy. With increasing age, both access and literacy w.r.t. ICT decreases. This raises questions about the role of education regarding inclusion and participation in a continuously digitalizing society.

While there exist studies on a number of the sub-groups within the category of 'older adult learners', more knowledge about the post-work population with regard to education and learning is needed. In a systematic review of how older adults were portrayed in adult education journals, three main themes were found (Chen, Kim, Moon & Merriam, 2008) - namely, (i) older adults portrayed as a homogeneous group in terms of age, gender, race, class, ethnicity, and able-bodiedness; (ii) older adults viewed as capable and motivated learners with few cognitive or physical limitations; and (iii), programmatic responses provided by older adults and driven by the life context of older adulthood. Although Chen and colleague's review was concluded over ten years ago, these themes still inform ideas about older adults in education. This stands in contrast to identified barriers that prevent participation in education, where the most significant barriers are those associated with physical disabilities (Purdie & Boulton-Lewis, 2003). Elsewhere, Narushima and colleagues (2013a) reaffirmed the importance of maintaining and developing an affordable, accessible, and inclusive continuing education program in local communities, if successful and active aging for everyone is to be achieved. There is thus a need to include different groups of older adults in such research, and it is also necessary to study a number of different educational settings where older learners are to be found, including the reasons why they decide to engage in education and learning.

Motives for learning later in life

Participation in education and learning later in life has been shown to bring positive effects, thereby stimulating academic research interest in this area. There are several reasons why older adults might wish to engage in learning. Such reasons may differ between individuals and groups, especially since the so-called 'post-work population' is quite heterogeneous in its makeup and contains a diversity of experience. Amongst a wide range of different variables, the individual's health and attitude towards learning were found to be the most important factors for 'active aging' (Boulton-Lewis, Buys &

Lovie-Kitchin, 2006). But while good health and a positive attitude may prerequisites for participation, they are not necessarily reasons for participation. So why do older adults people engage in education? In the 1980s, McClusky (1982) suggested a hierarchical theory of educational needs. This theory was developed in response to the claim that education for and of the older adult was *ad hoc* in character - that is, it lacked systematic design. The proposed theory would support the dynamics of participation and program development, and assist older adults in creating margins of power for the attainment and maintenance of wellbeing and continued growth. The educational needs included were:

- Coping Needs: dealing with changes in the condition of the individual and to overcome obsolescence in dealing with societal changes.
- Expressive Needs: activities undertaken for their own sake and allowing the person to express herself or himself, with enjoyment as the reward.
- Contributive Needs: a response to altruistic desires to assist others in coping with problems or in achieving their developmental tasks.
- Influence Needs: getting involved in the general functioning of society and community groups, which promote a sense of generativity.
- Transcendence Needs: gaining deeper understanding of the meaning of life and a review of what life has been.

Similar to Formosa's (2012) critique on geragogy, namely that the approach is based on an asymmetric power relation, McClusky's (1982) theory also assumes a top-down approach with respect to older adults, since they are treated as 'receivers' of education. Both theories were developed in different time periods, something which could explain McClusky's approach as being informed by attitudes towards older adults at the time (the 1970s and 1980s). However, the needs identified in McClusky's theory are of interest, and deserve further exploration in relation to why people chose to participate in education. Within the current post-work population, most people are able to make decisions for themselves, except people at the later stages of serious illnesses. A lack of good health and physical disabilities are, in fact, barriers that prevent participation in education (Purdie & Boulton-Lewis, 2003).

The relationship between education and health has been highlighted in several research studies on older adults' learning. In a systematic review of health promotion interventions, it was found that 9 of the 10 most effective interventions consisted of group activities which included a dimension of educational- or support input (Cattan, White, Bond & Learmouth, 2005). A recent publication, based on a longitudinal study (over a period of 44 years) of risk for dementia in women, has shown how cognitive- and physical activities in a person's midlife period reduce the risk for dementia (Najar, et al., 2019). Five groups of cognitive activity were included in the study. These were intellectual-, artistic-, manual-, club-, and religious activities. A survey conducted in Canada (n=416) found that continuous participation in non-formal lifelong learning helped sustain older adults' psychological wellbeing (Narushima, Liu & Diestelkamp, 2018a, 2018b). Psychological wellbeing involves the individual's subjective evaluation of various aspects of life that contribute to positive functioning and self-actualization. 'Commitment to learning' can positively influence older adults' perceived life quality, as well as their ability to deal with changes in later life (Boulton-Lewis, 2010; Boulton-Lewis & Buys, 2015; Narushima, 2008; Narushima, Liu & Diestelkamp, 2018b). It has also been suggested that a positive correlation exists between 'duration of learning' and 'wellbeing' (Narushima, Liu & Diestelkamp, 2013b). Education is presumed to serve

preventive-, facilitative-, remedial-, and preparatory functions and it helps participants master the developmental tasks associated with their stage in life (Mehrotra, 2003). Keeping the mind active and social contact are common motives that is given by older adults who wish to remain engaged in learning (Boulton-Lewis & Buys, 2015; Boulton-Lewis, Buys & Lovie-Kitchin, 2006; Jenkins, 2011; Kim & Merriam, 2004; Narushima, 2008; Withnall, 2010; Åberg, 2018).

Adapting to a changing situation

In addition to a desire for keeping one's mind fit, interacting with others, and feeling good about life, external factors may also influence a person's decision to engage in education. Learning can be triggered by external events, such as the death of a spouse or other kinds of changes in a person's life situation. Another motive to participate in education could be based on the need for expanding one's current knowledge base, for enjoyment or out of necessity. A classic definition of motivation distinguishes intrinsic motivation from extrinsic motivation. *Intrinsic motivation* is what motivates a person to engage in an activity for its 'inherent satisfaction', while *extrinsic motivation* is associated with the performance of an activity that is directed at achieving some separable outcome (Ryan & Deci, 2000). However, one's adaptation to a particular situation does not necessarily stand in contrast to the notion that one might be intrinsically motivated to acquire self-understanding and self-fulfilment. Since participation in education and educational activities is voluntary for older adults who have retired, this participation can be understood as 'doing things for its own sake', based on the person's interest and sense of enjoyment. At the same time, we should recognize the fact that extrinsic- and intrinsic motivation can coexist in a fluid and interrelated way. Competence is necessary for any kind of motivation to exist, since a lack of competence may create feelings of helplessness; a state of complete lack of motivation. In fact, it has been shown that people need to feel both competent and autonomous if they are to experience intrinsic motivation (Dysvik, Kuvaas & Gagné, 2013). This condition is intriguing, especially when it is situated in an education context. An investigation into the nature of the motivation why someone might participate in education can be based on asking individuals who have completed a full working life and are now in an "autonomous" position, in the sense that they have greater control over their own time and the activities they choose to engage in; namely the post-work population (Boulton-Lewis, 2010; Withnall, 2006). The following research questions were key to such an investigation: Have members of the post-work population decided to participate in education after retirement? If so, what are their reasons for this participation? Why older adults participate in education activities, is examined in the two empirical studies that are described in the next section.

Empirical studies

This paper combines the empirical material that was collected in two different studies: (i) a survey about older adults' views on work and learning, and (ii) a collection of stories about older adults' participation at Senior University (also known as the University of the Third Age). The results from the survey were presented in a Swedish report (Bjursell et al., 2014). The survey data was also analysed and presented in a separate article (Bjursell et al., 2017). The second set of empirical data, a collection of personal narratives, has been introduced in a book chapter (Bjursell, 2019a) and a

separate article (Bjursell, 2019b). However, the specific narratives that are discussed in the present paper have not been presented before. It should be noted that the empirical material included in this paper is sourced from groups of people who already participate in activities of various kinds, and thus have margins of power for the attainment and maintenance of wellbeing and continued growth.

The studies were undertaken in a Swedish context. Sweden has a long tradition of adult education and, since the 1960s, has been ranked highly among European countries in terms of participation rates in adult education. The education system in Sweden comprises a formal national adult education system, labour market training schemes, and non-formal systems of adult education called *folkbildning* (a liberal or popular education movement) (Bjursell, 2019a). The basic premises in *folkbildning* are (i) education is open to all and (ii) adult education is voluntary – it relies on the motivation of the participants to study for their own personal and social development. The post-work population make up approximately one fifth of the population in Sweden, and this part of the population are active participants in *folkbildning* in general, including the Senior Universities. Senior Universities consist of a number of non-profit, volunteer associations which offer courses and activities to their members. The number of Senior Universities in Sweden is on the increase, as is the overall number of participants. Currently, there are 34 Senior Universities across the country. They are organised as associations and are formally linked to the Swedish Folkuniversitet system: one of ten educational associations that exist in the Swedish *folkbildning* system. In total, the 34 Senior Universities include 25,000 members (Bjursell, 2019a)

The survey

In the spring of 2013, we designed a survey that would provide an overview of Swedish pensioners' views on work and education. The survey was distributed in April and May of 2013 to the local unit of four major senior citizens organisations. These included Pensionärernas Riksorganisation (the Swedish National Pensioners' Organisation, 400,000 members), Sveriges Pensionärsförbund (270,000 members), Svenska Kommunal Pensionärernas Förbund (170,000 members), and Riksförbundet Pensionärs Gemenskap (15,000 members). A geographical limitation for the survey was set to include a region in the middle of Sweden. This was done so that the researchers could visit the organisations in person and hand out the survey directly to the respondents. The survey was handed out at ordinary meetings at the senior citizens organisations. In all, 381 surveys were handed out, and 232 responses were collected, giving a response rate of 61%

The survey started with establishing a number of background variables; gender, age, and level of education. Of the 232 individuals who participated in the study, 72 were men (31%) and 155 were women (66.8%). Five individuals (2.2%) did not provide their gender. 213 persons (91.9%) were between the ages of 66-85 years of age. One person did not answer this question. Seven people were older than 85, and 11 persons were younger than 66 years of age. In terms of level of education, 63 people (27.2%) had attended school for a period not exceeding six years, 75 individuals (32.3%) went to school for nine years, 54 people (23.3%) had attended upper secondary school, had a vocational education or similar, and 38 respondents (16.4%) held a university degree. Two individuals did not indicate what level of educational attainment they had achieved. In the survey, the respondents were asked to state if they had participated in work and/or education after retirement, what kind of education activities they engaged in, and the meaning they ascribed to these activities. The survey focused on formal and

non-formal education activities and did not include reference to informal learning - that is, the learning that continuously takes place in everyday life.

The study of narratives

In an effort to review the current situation of how participants view their own engagement in the Senior University movement, a request for narratives about participation was sent to the different associations across Sweden in the spring of 2018. The request was formulated as a simple question that was put to the members of Senior University associations: *Could they report on their thoughts about their participation in Senior University?* The majority of these associations have policies which prohibit the distribution of questionnaires to their members, but despite this, 53 letters were sent back in response (four by ordinary post, the rest by email). These letters contained a range of responses; including short comments of a few lines to one response which was five pages in length. The letters were authored by 38 women and 15 men. The excerpts from the letters that are provided below have been kept anonymous, but the gender of the author is indicated by "f" - female, and "m" male. Each letter was ascribed a unique number so as to indicate to the reader when multiple excerpts or quotations are made from the same letter.

Both participants and Senior University lecturers responded to the request for stories, and, in some instances, certain respondents held the roles of both participant and lecturer. It was common for the respondents to have received some form of academic training earlier in life and some sort of professional career, for example, as an engineer, physician, sociologist, or veterinarian, amongst others. Many had worked as teachers. The majority of the respondents who shared their thoughts and experiences were between 70 and 80 years old. The oldest respondent was 93 years of age. It should be pointed out that the collection of narratives and reflections that was shared with the author does not constitute the result of a systematic investigation, but, rather, establishes an exploratory examination of why one might choose to participate in the Senior University movement.

Limitations

This study has several limitations that must be taken into consideration when one evaluates the result of the study. The survey study was conducted in a defined geographical and organisational context. The survey was only distributed in Jönköping County, Sweden. Consequently, if there are differences between groups of pensioners based on their geographical location across Sweden, such differences cannot be remarked upon in this report. The manner in which the survey was completed was somewhat different, depending on the situation in each organisation. This entailed that the questionnaire was completed by the respondents under different conditions. The decision to contact pensioners' associations as a way of distributing the survey was based on the fact that they are large organisations which represent a large number of individuals. Individuals who cannot or choose not to be a member of a pensioner's association are thus not represented.

The examination of the narratives included in the present study allows the researcher to engage in an exploratory interrogation of the topic on hand by using a 'sample of convenience'. By asking individuals to share their story, the empirical material that is ultimately collected is limited in the sense that those individuals who

actually chose to share their story might have a specific reason for doing so. Note that the stories that were collected tended to reveal a strongly positive attitude towards participating in education activities. This *could* be representative of the larger population of Senior University members, but we are forced to admit that the results of the present study are not generalizable because of this limitation on the empirical material that was included in this study. While we mention this as a possible limitation, the purpose of studying narratives is to present detailed and complex material, rather than produce a statistical overview.

Results

In this section, the results from the two studies are presented in descriptive form. First, the results of the survey study are reported on, which is then followed by the results of the analysis of the stories that were collected. In the discussion that follows, these results are placed in relation to previous research into why older adults participate in education activities.

The survey results

In the survey, the respondents could indicate whether they participated in formal and/or non-formal education activities and they were given the option to fill in multiple answers, if necessary. The options that were provided in the survey were common education activities in the Swedish lifelong learning system. These included study circle, book club, Senior University, university courses on site, university courses online, folk high school, or other education activities.

Figure 1. Participation in formal and/or non-formal education activities (multiple responses were possible).
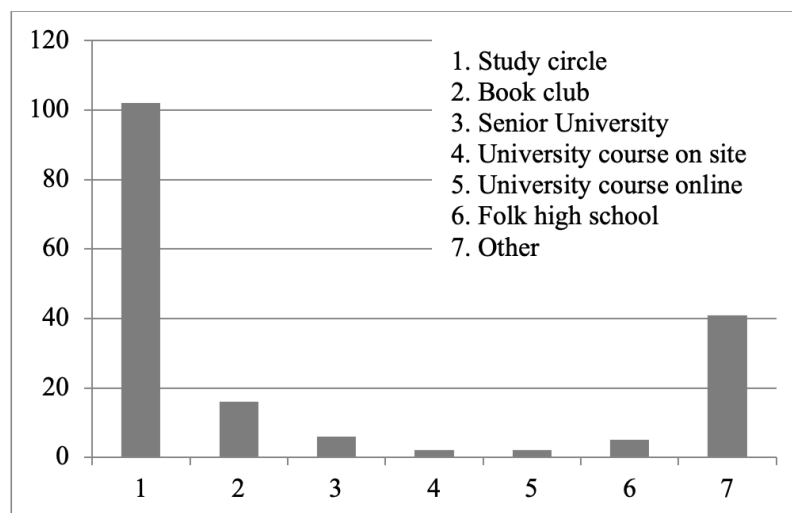
Participation in a study circle was most common in this group. There were 102 individuals (44.0%) who participated in a study circle. There were 16 individuals (6.9%) who indicated that they participated in a book club, and six individuals (2.6%) were enrolled at Senior University. With respect to participation in higher education,

two individuals (0.9%) attended to a course at university and 2 (0.9%) participated in online courses. There were five people (2.2%) who were currently participating in folk high schools. Finally, 41 individuals (17.7%) indicated that they were involved in other forms of education activities. The comments that were prodived by the respondents reported that these included training for assignments within the pensioners' association, but other forms of education are also included in this answer alternative. Figure 1 in fact shows that non-formal education is the dominant form of education participation, namely, study circle, book club, and Senior University courses. Only a few respondents reported that they were participating in formal educational activities via university courses or courses at folk high school.

In the survey, the respondents also indicated their motives why they participate in formal- and non-formal education activities. In the survey, a number of arguments why older adults participate in various education activities were provided. These arguments were based on the research groups experience of older adults' learning. These arguments were then examined by researchers in gerontology, who provided further opinions on whether the arguments could be related to the literature on the subject, as well as practice. The respondents were provided opportunity to include their own argument in the survey, if none of the alternatives that were provided to them in the survey were suitable (i.e., 'other reason'). Table 1 below presents the arguments. Note that their order of appearance in the survey is not reflected in the table; instead, they are presented in terms of their frequency of use.

Table 1. Arguments why the respondents participate in formal and non-formal education activities (multiple responses were possible)

Ranking	Statement	Number of responses
1.	I think it is important to participate in various activities.	93
2.	I get an opportunity to meet new people.	74
3.	I want to learn more about an area of interest.	67
4.	I get an opportunity to meet old friends.	45
5.	I am in need of new knowledge in an area.	34
6.	I want to share my knowledge in an area.	23
7.	I am in education for a job/an assignment.	13
8.	I participate to support a partner or a friend.	7
9.	Other reason	7

The most frequent response was 'to participate in activities of different kinds' (93), thereby indicating that staying active was important to the respondents. This was followed by 'the opportunity to meet new people' (74), 'to learn more about an area of interest' (67), 'to meet old friends' (45), 'the need for new knowledge' (34), 'to share one's knowledge' (23), 'learning for work/assignments' (13), 'to support a partner or a

friend' (7), and 'other reasons' (7). It is noteworthy that the importance of 'engaging in activities' and 'the opportunity to meet new people' was mentioned more frequently than the actual content in the course ('to learn about an area of interest' - that is, a particular subject). The three most common arguments are in harmony with the observation that the study circle is the dominant education activity form, since the study circle is based on active participation, social interaction, and the content of study.

Narratives from Senior University

When the stories sent in by Senior University participants are summarized, two overarching motives for participation emerge: (i) 'a desire for *bildung*' and (ii) 'social fellowship'. The participants wish to educate themselves by increasing their knowledge of a particular area, either via further development of a subject that is already known to the participant, or by becoming proficient in an area that is new to them. Their participation also offers them a social context; and, for some, this dimension is as equally important as the subject content which they endeavour to study. A description of the meaning of '*bildung*' and 'social fellowship' has been presented in previous papers (Bjursell, 2019a, 2019b). One Senior University participant reported that 'the reason to continue with learning for the elderly is to maintain and develop one's knowledge and to be a part of society, and it is social and promotes good health and it gives one a more meaningful life' (SU2018: f18). While this respondent revealed profound insight into the benefits of education, other respondents were more down-to-earth when they described how they initially enrolled at Senior University. Several of the respondents who wrote about their participation at Senior University had family members who were already part of the Senior University movement: 'My husband was a member before I was and so I followed along too when I retired nine years ago.' (SU2018: f50); 'When my wife retired in 2008, we decided together to apply to become members of the Senior University in Norrköping.' (SU2018: m30). Others had former work colleagues who were members and recommended that they join Senior University: 'I knew about Senior University even before I retired. Some of my older work colleges told me about the fun courses and excursions.' (SU2018: f36); 'I heard about the Senior University from an ex-work college and from my husband, who retired before I did.' (SU2018: f13). Recommendations also came from friends and acquaintances: 'I was tipped off by a friend.' (SU2018: m39); 'Recommendations made by acquaintances.' (SU2018: f32).

   Amongst those respondents who were not informed about Senior University from family, friends, or colleagues, a number of different pathways led them to Senior University. Information about Senior University is sometimes distributed by various *folkbildning* organisations and one respondent learnt about Senior University this way: 'When *Folkuniversitetet* had an information evening several years ago I attended and it was there that I learnt about Senior University.' (SU2018: f51). Some people joined the organisation after being asked to perform certain tasks: 'I was asked to lecture on a course for autumn term, 2017.' (SU2018: f37); 'I was "recruited" as the IT technician for the association.' (SU2018: m24). One responded reported that a survey had been sent out by the organisation and this piqued the respondent's interest, who joined the organisation after that: 'I was widowed and retired almost at the same time and found out about the Senior University in Uppsala via a questionnaire that was sent out to recent retirees.' (SU2018: f19). The content of the courses is also something that draws certain participants to the organisation: 'I saw the course catalogue when I retired and thought that there was a lot of nice things to do at a reasonable price.' (SU2018: f09).

One person stated that a German language course, a gift from his children, was the reason why he started participating in an education activity: 'When I retired in 2008, our children gave me a birthday gift which was enrolment on the senior universities German language course. I started in the spring of 2009, and I am still enrolled.' (SU2018: m28). This person chose to continue with his studies after completing his first course. Another motive why certain participants enrol at Senior University is the perceived connection between keeping oneself active and maintaining good health. In several of the stories, it was mentioned that it is important to keep one's mind active: 'Stimulation is extremely important for improved wellbeing and to get input for one's thoughts. Now there is time for reflection.' (SU2018: f20). Another respondent claimed that she 'believes that you can keep your brain healthier by learning new things and not least by having contact with other people with whom you might not normally socialise – you can't just solve crossword puzzles.' (SU2018: f06). A third participant stated that 'being a part of an association or the equivalent is also a very important health factor. It contributes to having a meaningful and rewarding life in one's old age.' (SU2018: f05).

Discussion: Participation in education in later life

The findings presented above show that older adults have many different motives as to why they engage in an education activity. On an overall level, two clusters of motives why they participate in education activities can be identified; namely, (i) staying active and (ii) socialising. This observation corresponds well with previous studies. In the subsequent sections, these two motives are further examined and is followed by a more detailed discussion of extrinsic motivation and intrinsic motivation.

'Staying active' and 'socialising'

The two broad notions of 'staying active' and 'socialising' capture the general motives why older adults wish to participate in education activities. This observation corresponds to what is reported on in the literature (Boulton-Lewis & Buys 2015; Kim & Merriam, 2004; Åberg, 2018). In the survey used in the present study, 'staying active' and 'socialising' were ranked as the top two motives why the respondents participate in education activities and they were also found in the narratives that were provided by people attending Senior University. However, since these two general motives repeatedly appear in studies into the motives why older adults participate in education activities, they deserve much closer scrutiny to establish what they signify. 'Socialising' was defined by some participants as the basis for expanding the mind and engaging in self-fulfilment (Bjursell, 2019b). For example, interaction with others can be a prerequisite to engaging in dialogue on a topic or about existential questions in life. Engaging in education activities, as introduction or entrance to social networks, can also be understood as a way of preventing isolation, and is thus connected to issues of 'health' and 'wellbeing'. Note that 'socialising' is not merely understood as a physical activity. If that were the case, we would not expect that 'socialising' be something that is used to 'expand the mental space' (Narushima, Liu & Diestelkamp, 2018b). Notwithstanding this, it could still contribute to wellbeing in other ways. Just as we note that 'socialising' is a complex notion, the concept of 'staying active' is also complex since it encompasses both a person's 'physical' and 'psychological' wellbeing. While 'health' is not explicitly mentioned in the empirical material as a motive, 'staying active' and 'keeping one's mind fit' are mentioned as central reasons why certain

respondents participate in education activities. In the survey, 'health' was not added as a response option which could explain why it was not mentioned directly, but it could be implied in the alternative 'I think it is important to participate in various activities'. In the narratives, 'health' was not mentioned either. Instead, the participants reported that 'to stay active' and 'to keep one's mind fit' were important considerations and were offered as reasons why some respondents attended Senior University courses. Ways of keeping the mind active include learning new subjects, improving one's knowledge of a particular area by engaging in further studies, enrolling in higher education, and having bildung as a personal goal, the importance of 'keeping one's mind fit' corresponds to discussions in previous studies (Boulton-Lewis & Buys 2015; Boulton-Lewis, Buys & Lovie-Kitchin, 2006; Jenkins, 2011; Narushima, 2008; Withnall, 2010). 'Staying active' is associated with 'wellbeing' (that is, 'feeling good about life') rather than 'health' *per se* (that is, minimising the risk of death or physical decline). 'Perceived life quality' and 'the ability to deal with change' are important dimensions of wellbeing (Boulton-Lewis, 2010; Boulton-Lewis & Buys, 2015; Narushima, 2008; Narushima, Liu, & Diestelkamp, 2013a, 2018a). The studies that argue for a connection between 'education' and 'health' do not necessarily specifically enquire about education, but, instead, examine health later in life from a broader perspective (Cattan, et al., 2005; Najar, et al., 2019). 'To stay healthy' may be a motive of specific relevance to older adults, as the current literature and the empirical material included in the present study demonstrate. But given this, to claim that 'health' is a direct motive may be problematic; is 'health' the reason why older adults participate in education activities or is it the case that 'health' is a positive outcome of participation?

Extrinsic motivation and intrinsic motivation

'To be motivated means *to be moved* to do something' (Ryan & Deci, 2000, p. 54, italics in the original). The title of this section may hint at a dichotomy, but the reader is kindly reminded that extrinsic- and intrinsic motivation may coexist in a fluid and interrelated way and should be understood as parts of a process. In addition, extrinsic motivation can either reflect external control or true self-regulation (Ryan & Deci, 2000). Take the example of 'health' and 'wellbeing'. 'Health' and 'wellbeing' have been identified as experienced benefits when older adults participate in learning activities. There is evidence for the connection between participating in education activities, (as a way to stay physically and mentally active), and 'health' and 'wellbeing'. However, the mere identification of these benefits might not be enough to understand an individual's motive for participation. In the narrative material, the stories reveal that the participants know this and that they want to benefit from active participation. This may well be understood as an instance of extrinsic motivation; they do something so as to achieve a separable outcome. But the narratives also give the impression that participation is voluntary, and that education is an activity that brings about inherent satisfaction. This could be an indication that (i) participation in education reflects true self-regulation (extrinsic motivation, but not controlled by others), or that (ii) with respect to 'health' and 'wellbeing', the participants have internalized a notion of achieving a certain outcome as intrinsic motivation, so that they feel that they are participating in the education activity *for its own sake*. In addition, a person's motivation why they might engage in education may have multiple and changing aspects. This is especially true in later life, when a person may be subject to a variety of changes in their outer- and inner lives. Participation in different education activities is often just one of many contexts that older adults find themselves in.

When the narrative material is closely examined, we note that several of the explanations why certain participants came to enrol at Senior University are quite simple. It was frequently reported that participants had joined education activities because others had done so (family, friends, or former work-colleagues) or that it was mere happenstance that they heard about Senior University courses, or were invited by someone else (to take care of the IT-system or hold a lecture). This stands in contrast to the grand idea of participating so as to 'improve one's life'. It seems that it was almost by chance that these respondents came to engage in education activities; but once they had enrolled, they found joy and fulfilment in the activity. Note that those individuals who did not find joy and fulfilment are most probably not represented in the empirical material, since the material represents older adults who chose to continue with the education activity). Nevertheless, the accounts of how the respondents enrolled at Senior University are social in character in the sense that they got to know about the organisation through a social network. Indirectly, an individual's social network can be understood as representing social class, and statements about enrolling at Senior University because of family, friends, or former work-colleagues can be an indication that social class is a relevant factor to understand who enrols in education activities and why they do so. Previous studies have shown that a person's level of educational attainment can explain that person's participation in education later in life; the higher the level, the more probable it is that an individual will continue in education activities (Bjursell, et al., 2017). This discussion suggests that what, on the surface, may appear to be the result of an individual's motivation and choice may well be explained by social and contextual factors instead.

Conclusion

Education and learning have the potential to benefit a person later in life. When individuals participate in education activities, this does not only promote an increased sense of wellbeing at that moment in time; it also lays the foundation for the individual to develop themselves, in pace with the rest of society. 'To stay active' and 'to socialize' have been identified in the literature, as well as in the empirical studies included in the present study, as motives why people participate in education activities. However, the present study has also argued that it is necessary to unpack these broad concepts if one is to develop a richer understanding of why older adults engage in education activities. Furthermore, from practice, we know that it is crucial that older adults are able to control their own time and to choose the activities they wish to engage in. They are willing to do a great deal in this area, *if they can do it on their own terms*. We thus note that autonomy is an even more articulated need, as we age. Finally, the focus of this study has been on the motives why older adults participate in education activities, but in the discussion above, an additional question is raised about whether a person's propensity to participate in education is dependent on the person's social class instead of the person's individual motivation. Efforts to support participation and inclusion in education should take this into consideration.

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The role of empowerment and agency in the lives of older men living alone

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Abstract

Longevity and changes in family status are leading to a growing number of men living alone in later life. They are often considered an at risk group in terms of deprivation, suicide and mental health problems, a perspective that has informed community services. This paper reports on a study that set out to get a better understanding of this historically new group, particularly in light of significant structural and cultural changes to later life and ageing. The study used interviews with stakeholders and biographical interviews with older men living alone in Frankfurt/Main, a city with a particularly high rate of men over 65 in single occupancy households. The analysis suggests that service providers were interested in encouraging men to recognise and act on their needs, an approach informed by empowerment as well as active ageing strategies. The analysis from the biographical data shows that living alone was a learning process and involved the ability for men to care for themselves as well as others. Learning to live alone enabled them to maintain an identity as an independent individual.

Keywords: Agency; empowerment; Germany; living alone; masculinities; older men

Introduction

Older men living alone represent a rising and historically new social group that will significantly impact the future of ageing. Although later life in Germany as well as in many other countries is still characterised by higher numbers of women compared to men gender differences in life expectancy are gradually drawing closer as men's risk of mortality is decreasing and – more than 70 years after World War II – more men survive into old age. Similarly, living alone in later life is attributed to women but recent numbers tell a changing story: In Germany, where one-third of the over 65s live on their own, 20% are men (DeStatis, 2015), compared to 12% in 1991 (DeStatis, 1997). This increase is not only due to more men surviving into later life but to changes in the family status of ageing men as well. The past 20 years have witnessed an increase of never married (15.5% to 20.4%) and divorced men (13.1% to 29.5%) and a decrease of widowed men (71.5% to 50.1%) (ibid., 1997, 2017). The increase of single-occupancy households (here synonymously used for 'living alone') across all age groups and emerging singularity is a symptom of postmodern Western societies. Singularity implies the social position of being on your own, both in terms of reduced relationality with significant others (e.g., partner or spouse), but also in terms of increasing personal agency (e.g. having to make decisions for oneself). Thus, singularity in the sense of living alone is neither per se synonymous with loneliness nor with social isolation - it is a (voluntary or involuntary) lifestyle bearing risks and potentials that the study we report on here explored in more detail. More specifically, the paper will concentrate on concepts of masculinities and empowerment in understanding how older men come to terms with living alone.

Older men living alone: resources and vulnerabilities

A dominant view on older men living alone is that they are a small and at risk group. This is supported by research that has focused on higher mortality rates, poorer health outcomes (Manzoli, Villari, Prion & Boccia, 2007), signs of neglect, depression and suicide (Lindner & Fiedler, 2014; Wächtler 2014) as well as fragility of living arrangements (Haslbeck, McCorkle & Schaeffer, 2012). On the other hand, qualitative research on older men living alone has shown that older men living alone are a highly heterogeneous group with men being able to adapt to a new lifestyle after divorce or bereavement (Höpflinger, Spahni, & Perrig-Chiello, 2013; Lalive d'Epinay, Cavalli & Guillet, 2009; Moore & Stratton, 2003; Yetter, 2010). Such adaptations do not necessarily imply remarriage, with rates of remarriage being described as rare (Carr, 2004; Rothenbacher & Fertig, 2015. This is partly due to society wide shifts leading to the deinstitutionalisation of marriage since the mid-1980s and a trend to seeking a different kind of relationship after long co-habiting relationships that help men and women to maintain their independence (Bildtgard & Öberg, 2017). This would suggest that some older men can adapt to living alone despite having previously been looked after both emotionally, physically and in terms of housekeeping.

Looking beyond intimate relationships, social networks and meaningful relationships are often seen as missing or underdeveloped in the lives of older men living alone (Bachmann, 2014; Russell & Porter, 2003). Although this does not by definition mean that these men are lonely or isolated, they can be described as at risk of increasingly mistrusting others, especially when confronted with change (Höpflinger, Spahni & Perrig-Chiello, 2013). Visiting social, cultural or education groups has been recognised as an important first step to leading older people out of potential social isolation (Agahi,

Siverstein & Parker, 2011; Oswald & Konopik, 2015). However, older men (whether living alone or not) often do not participate in or are reluctant to join groups which may contribute to their social isolation and vulnerability (Kosberg, 2005; Milligan et al., 2016; Moore & Statton, 2003). This is partly due to the culture of services that try to address older men and in doing so appeal to stereotypical male traits, thereby potentially excluding men from other communities and cultures (Nurmi et al., 2018).

Men, masculinities and agency in later life

When theorising the experiences of men's ageing it is important to consider the power relationships in terms of gender and age. From a feminist perspective, Jeff Hearn (1988) describes the lives of old men as an absent presence, in which the ageing of men is protected by sexism but threatened by ageism. Compared to older women, older men have better financial resources and their (bodily) ageing is seen as less problematic (Sonntag, 1972). However, compared to younger men, older men's masculinities can appear to be threatened by decreasing economic, bodily and social powers. The experience of ageing and declining powers can be particularly poignant for men transitioning into retirement. Several studies have argued that older men will try to maintain a so called "ageless masculinity" (Thompson & Langendoerfer, 2016) even when the circumstances require them to engage with domestic (female) domains, such as health maintenance (Meadows & Davidson, 2006) caring (Calasanti & King, 2007), house-keeping and cooking (van den Hoonaard, 2013). However, these presentations and experiences of masculinity do not easily fit the new post-war cohorts of men who are transitioning into later life (Fooken, 2014). Their biographies are characterised by shifting relationships between men and women and most importantly changed ideas about what constitutes later life. Following the work of Gilleard and Higgs (2000, 2005), the post-war cohorts have taken such changes brought about by individualisation, mass consumerism, youth culture and identity-work into later life and continue to engage in practices that they developed in early stages of their life. Moreover, current cohorts of post-war baby boomers (cohorts 1955-65 in Germany) are bringing their own dispositions and aspirations into retirement and are not accepting the ascriptive passive status which previously defined the old (ibid.). Research on the changing nature of grandfatherhood (Mann, Tarrant & Leeson, 2016), older men caring for wives or partners (Jackson, 2016; Russell, 2007), as well as intimacy (Bildgard & Öberg, 2017) are an indication that later life might constitute an arena for a new generation of ageing men to engage in domestic and care work (Jackson 2016; Leontowitsch, 2017). Thus, men who engaged in predominately female connoted activities in young and middle adulthood take these experiences into later life. At the same time, bystanders to shifting patterns of reproductive work between men and women may see later life as a time in which they can safely experiment with such activities (Leontowitsch, 2017). As Mann and colleagues (2016) pointed out, these shifts in masculinity can be tentative, temporary and instable, but they show that the current cohorts of ageing men are different to the cohorts before and that these changes are driven by increased agency in later life.

Empowerment and active ageing in work with older people

The changes to later life and ageing have left their mark on geriatric community and social work services that have transformed from paternalistic (top down) and compassionate

welfare services to client-centred, empowering approaches. The idea of clients as active, vocal drivers of community services (regardless of age) emerged across many welfare state countries in the 1970s and was strongly influenced by social movements in the United States, such as the women's, disability and civil rights movements. As a result, the second half of the 1980s saw a rise in empowerment concepts in health, care and residential settings, most visible in advocacy groups of older people getting involved in national and regional networks and committees (Aner, 2017; Karl 2000). These developments coincided with the newly postulated active ageing paradigms that encouraged older people to stay healthy so as to live longer independent lives (Rowe & Kahn, 1997), and to embrace later life as a time and space for self-development and social engagement (Laslett, 1989). This was however, met with mixed reactions within some circles of German social work and geragogy that argued that community programmes for older people were becoming too geared towards groups of retirees who could relate to and afford consumerist forms of activities that had no wider social value (Aner, 2017). Parts of German social work with older people tried to forge an alternative route that on the one hand encouraged a productive later life in which previously untouched potential could surface, and on the other hand kept a clear focus on age and ageing as a time of increased social inequalities (ibid.). The relative stability in the principles of self-advocacy and autonomy were disrupted around the turn of the 20th century when neo-liberal measures aimed at shifting responsibility from the state to the individual level seemed to undermine these principles. Newer theoretical approaches to social work have tried to counteract this development by supporting clients as the primary drivers in developing services, and viewing their needs as outcomes of social contexts rather than private circumstances (Hammerschmidt, Aner & Weber, 2017). This resonates with Payne's (2012) work on 'citizen social work' that recognises older adults' rights to remain fully connected to society, to engage in meaningful relationships and to be protected against ageist mistreatment and disrespect. The focus on rights underlines governments' responsibilities towards older people at the same time as encouraging older people to actively claim their rights. It is within these historical, social and political developments that current empowering practices with older men living alone need to be understood (Kolland, Gallistl & Wanka, 2018). Thus, the aim of this paper is to examine how ideas of empowerment influence the work of professionals in the field of adult learning and how empowerment and shifting ideas of later life are expressed in the narratives of older men living alone.

The Frankfurt/Main context

Frankfurt/Main has a population of just under 730.000, making it one of the larger cities in Germany. Men and women aged 65 and over make up 15.9% of the population, which is less than the national average which stands at 20.8% (Destatis, 2015). The proportion of men and women over 65 are relatively equal, with a significant female majority only emerging from age 80 onwards (Stadt Frankfurt, 2017). Frankfurt/Main has long had a reputation for being a 'city of singles' with 54.9% of households across all age groups being single-occupancy (ibid.). This single-status is usually associated with younger, economically mobile age groups. However, in the age group 65-plus, 20.6% of households are single-occupancy, of which 32.1% are headed by men (ibid.), making Frankfurt/Main one of the cities in Germany with the largest group of older men living alone. Frankfurt/Main also has a large infrastructure of cultural, educational and social services for older people. It has one of Germany's largest Universities of the Third Age

as well as municipal and independent trusts providing care, housing and neighbourhood services for an increasingly heterogeneous ageing population. Given these contexts, it seemed particularly fruitful to investigate the lives of older men living alone in this city.

Methods

The study is based on the grounded theory methodology (Strauss & Corbin, 1997) using several methods of investigation: scoping review of services for older men living alone in Frankfurt/Main, semi-structured interviews with stake-holders in the field of service provision for older men, and biographical interviews with men aged 65+ living alone. This method and data triangulation allow the research team insight to the object of enquiry from different perspectives (Denzin, 1989). For the purpose of this paper, we will focus on the latter two methods.

For the stakeholder interviews, Miranda Leontowitsch and the research assistant working on the project selected key actors who either organised services that were aimed at older men living alone or who had insights into the needs of older men and particularly those living alone. Five interviews were conducted with stakeholders who were involved in offering a variety of services aimed at different groups of older men, including gay and migrant men. The interviews focused on the stakeholders' expertise as professionals/actors in the field of service provision for older men as well as their experiences of organising and overseeing programmes. In line with theoretical sampling preliminary findings from each interview informed the sampling of the next person to be interviewed. Miranda Leontowitsch conducted four of the interviews, the research assistant conducted the fifth.

Miranda Leontowitsch conducted biographical interviews with four men aged 69 to 88 years. They, too, were sampled purposively to achieve maximum variation within the sample in terms of age, educational attainment, employment, sexuality and ethnic background (see Table 2). The sampling process was facilitated through the outcome of the scoping review. Each participant was interviewed twice with four to six weeks between first and second interview. Interviewees were asked to tell the story of how they had come to live alone. A biographical approach was sought as the men's lives as well as the socio-cultural context in which events were embedded was seen as key to understanding their current situation (Gilleard & Higgs, 2015). In one instance, the participant had been interviewed as part of another research project in 2014. He was included as his precarious employment history made an important contribution to the sample and because it is difficult to recruit older men with low educational attainment. The biographical nature of the first interview lent itself for reanalysis and the participant agreed to be interviewed a second time.

Ethics and data handling

All interviewees were informed verbally and in writing about the purpose of the study and what taking part would involve. Informed consent was obtained in writing before starting the interview. The audio files were transcribed by the research assistant verbatim. One stakeholder interview had to be based on detailed notes taken during and after the interview, as the stakeholder in question did not agree to have the interview audio recorded. Transcripts were crosschecked by Miranda Leontowitsch and the analysis process was supported by the use of qualitative data analysis software (F4analyse).

During the analysis Miranda Leontowitsch repeatedly went back to the transcripts to ensure concepts were rooted in the data.

Analysis

The interpretation of the data sets was team based involving all project members. The analysis of the stakeholder interviews followed the process developed by Meuser and Nagel (2009). Miranda Leontowitsch wrote synopses on the topics that each stakeholder had talked about and developed thematic headings to which the synopses were attached (one synopsis could be attached to more than one heading). Having completed this for each interview, the authors conducted a thematic comparison across the synopses checking for similarities and differences. The transcripts from the biographical interviews were subjected to open coding, consisting of descriptive codes, in the initial stage of the analysis. This was followed by axial coding that involved the identification of themes, clustering of open codes, and recognising of relationships between axial codes. At a later stage of theory construction, the inductive, data-driven analysis was widened by using theories of masculinities and agency as heuristic devices. Empowerment emerged as a data-driven theme during the early analysis of the stakeholder interviews.

Introducing the interviewees

Table 1 below, and subsequently, Table 2 provide an overview of the stakeholders and older men interviewed and the following two subsections describe the people interviewed in some detail. This allows for a thick description (Geertz, 1973) of what was encountered and provides the necessary background to the emerging themes: empowerment and agency.

Table 1: Sample of stakeholders interviewed

Interview number	Position	Trust/organisation	Project(s)	Project duration
1	Director (retired)	Ecclesiastical, city-wide	Adult education Focus on men and ageing	ongoing
2	Four local volunteers (men aged 77 -81)	Ecclesiastical, parish-level	Neighbourhood help for older men living alone	8 years
3	Cross-cultural access manager	Independent, large national organisation	Centre for older migrants; Weekly older men's group	25 years 1 year

4	Social worker	Independent, city-wide	Peer-support visiting project for older gay men living alone	10 years
5	Gerontologist	Ecclesiastical, large national organisational	Peer-support visiting project for older migrant men and women living alone	10 years

Stakeholder interviews

The first interview, conducted with a retired director of an adult education organisation, provided insights into how the social changes of the 1970s brought men into the limelight of adult education. The interviewee had started his work with projects such as father and child weekends and later seminars on transitioning into retirement or reflecting the experiences of post-World War II childhoods in Germany. In his opinion, men's rationale for joining courses had changed over time: During the 1980s he saw a trend in men coming together as a result of the women's movement. Not primarily as a way of securing men's status, but as a safe place in which men could exchange experiences and discuss the increasing demands for change. More recently, the men in his seminars were motivated less by social change but more by seeking a space in which they could talk to other men about feelings, changes in their lives and significant others in a way that was not possible in other social settings.

The next interview was conducted with four local volunteers (aged 77 to 81) who ran a neighbourhood visiting project for older men who needed help with small chores, such as shopping, carrying items or requiring a lift to a doctor's appointment. The initiative had received much media coverage and won a community prize. The service was modelled on an existing one that was organised by older women in the parish and who thought that men would prefer to be visited/helped by other men rather than women. During the group interview the older male volunteers explained that they were not sure this was indeed the case. In their experience the demand for help by men had been very small and only one of the volunteers had been allowed to provide ongoing support for three older men who had lived alone. The other three volunteers had only had ad hoc requests, some of which they had deemed inappropriate (e.g. driving a younger man with mental health problems to appointments; tidying up jobs). The volunteers had no intention of closing down the service despite the low uptake.

The third interview was conducted with a cross-cultural access manager who described himself as belonging to the second generation of Turkish migrants in Germany and who organised support services for older migrant men and women. Recently, he started a weekly club for older men both as a social hub and as a place for learning as in his experience older divorced or widowed migrant men had problems in dealing with every-day life (household and admin). Ten to twelve men aged 55 to 75 from different ethnic backgrounds attend this group. Several of the men who came to the meetings were

described as actively looking for new partners, either during visits abroad, through friends or in public places.

The fourth interviewee organised regular social meetings and coordinated a volunteer home visiting programme for older gay men living alone. The volunteers in the home visit programme were usually gay men aged 35 to 75, who visited their clients once or twice a month for at least half a day, often over many years. He described the process of matching volunteer and client as a slow and careful one as both sides require a great deal of trust so that a long term friendship could evolve. The volunteers received regular team supervision in which they supported each other.

The final interview was conducted with a gerontologist who coordinated a programme of events and services for older migrant men and women. Having recognised the needs of isolated migrant men, she started a peer-support visiting project for older migrant men living alone. Here, too, the volunteers were men and the stakeholder ensured they were matched with older men from the same ethnic background. However, finding male volunteers as well as men who were willing to receive visits proved to be challenging. In her opinion there was a high threshold for older men living alone to acknowledge they needed help despite living in deprived circumstances or showing signs of severe neglect. The men who volunteered, however, benefited from supervisory sessions in which they reflected their own ageing.

Biographical interviews

Biographical interviews were conducted with four men aged 67 to 88 years. Table 2 provides a summary of the men's demographic details and socio-economic status. Despite the men's considerable differences, they also shared some commonalities: all four had been renting their current flat for over 40 years; three were living in a LAT (living apart together) relationship; they had all experienced health problems around the time of their retirement; and two identified as belonging to the '68-generation'.

Table 2: Sample characteristics of the interviewed men

Pseudonym	Mr Rost	Mr Ün	Mr Färber	Mr Willershäuser
Age, and year of birth	76, born 1941	69, born 1947	86, born 1931	88, born 1930
Family Status	Unmarried, living apart for 12 years	Divorced, instable living apart together	Widowed, living apart for 10 years	Unmarried, single since 1980
Relatives	No children, one brother with family	2 children, 1 grandchild, extended family in	4 children, 8 grandchildren, 2 great-grandchildren	No children, one sister, nephew and niece

		Turkey and Germany		
Education	Degree-level	Left school at 18, teacher training	Apprenticeship	Apprenticeship
Financial situation	Good	Previous debt problems	Precarious income, now good	Good
Social Network	Many friends for different activities	Many acquaintances, feels lonely	Large circle of friends and acquaintances (church, political party)	Acquaintances

Mr Rost can be described as a proud older man living alone. He decided in his early forties that he no longer wanted to co-habit as he felt that living together brought about a greyness and drabness that was not conducive to loving another person. He had a succession of relationships, many of which lasted about ten years or longer. Mr Rost explained that living alone required men to learn several skills: to cook, to furnish a home and to build and maintain a social network. In his opinion he had mastered all three. It is important to note that Mr Rost had a high educational attainment and good financial situation. Given his professional background, he was able to reflect his behaviour and circumstances with like-minded older men with whom he exchanged experiences and ideas in regular meetings. Mr Rost also had a considerable circle of friends with whom he engages in different leisure activities.

Mr Ün, by contrast, described himself as an unhappy older man living alone. He had immigrated to Germany from Turkey in his early 20s with his first wife. This marriage had ended in divorce with the separation being messy and prolonged. He returned to this theme repeatedly during both interviews drawing on this experience as a key to his current unhappiness. His two children, one from his marriage and one from a later relationship, both grew up with their mothers in different cities and meetings with him were irregular. Mr Ün has sought a close relationship with both his son and daughter, but as adults, both appear to have resisted this. His professional life and political work (both focused on cultural integration) have been an important source of meaning and belonging to him and involved a large network of acquaintances. However, he felt no close bond to anyone in particular. He described his current relationship as purely sexual, despite seeking companionship and co-habitation.

Mr Färber can be described as a pragmatic older man living alone. After a long marriage his wife died after a relatively short but aggressive illness. His family and long-standing social network through church and political work supported him in the transitions into widowhood. He began a new relationship with a woman he met through this network about a year after his bereavement but they decided not to move together. At the time of the second interview they had been together for about ten years. Over the

past one to two years, she developed dementia, but continued to live in her flat with her daughter's help. He visited her several times a week and every weekend taking on more and more of a caring role as her illness progressed. He also visited several people from his local community who lived in care homes. At the time of the second interview he was planning to move into a serviced flat as he no longer felt comfortable living alone.

The fourth participant, Mr Willershäuser, can be described as a self-sufficient older man living alone. He identified as homosexual at the start of the interview and explained that after the death of his long term partner he had not sought a new relationship and had gradually withdrawn from the gay-scene in Frankfurt. His carefully furnished flat was very important to him and was the place where he engaged in a variety of pursuits that had developed across his life, such as dressmaking and listening to music. His social network had become increasingly small and he no longer entertained friends at home. His day was structured by a succession of errands he ran for a fixed group of people, including his sister, cousin, landlady and neighbours. These tasks support his view that not he needed help but other people.

Empowerment and agency

Empowerment and agency emerged as central themes from both data sets and have been broken down into the following three sub-themes: (1) activating and empowering clients; (2) singularity leading to increased agency; (3) volunteering and shifting expectations.

Activating and empowering clients

This theme was particularly poignant in interviews with stakeholders who had a background in social work or education, with stakeholders in adult education, work with older migrant men and gay older men describing how they sought to empower clients. The stakeholder who organised the weekly older migrant men's group for instance, explained how the men wanted to have breakfast at their meetings, as they knew the older women's group did. However, none of them knew how to prepare breakfast, indeed they hoped somebody would provide it for them. The stakeholder explained that he took this as a starting point to engage the group members in a learning project. To begin with he gave the group money, showed them where and how to go shopping and how to use the kitchen facilities at the centre. Consequently, the men have been preparing their own breakfast every week since the project started over a year ago. The interviewee talked explicitly about wanting to support the men in recognising their needs and enabling them to develop solutions. In doing so he has established similar projects that have helped older men learn new skills (e.g., doing their laundry) as well as supporting activities they are familiar with (e.g., gardening). He was aware that his empowering approach might prevent some men from joining the group, as another older migrant men's group in Frankfurt attracted a larger group of men. However, he felt that is was his professional duty to support older migrant men in learning new skills rather than merely providing them with a space to drink tea and play cards.

Activating men was also a theme in adult education, where participants were encouraged to engage in reflexive exercises and learn new ways of thinking about their role in society. Courses were designed in a way that required participants to relinquish their passive role as listeners and engage in activities, for example by designing and conducting research projects on topics close to home such as the transition into retirement. Empowering approaches were resisted by some men who could not relinquish traditional

notions of masculinities. Described by the first stakeholder as the 'axiom of masculinity' several stakeholders talked about men's resistance to accepting help, expressing feelings, or learning new skills. This was also evident from the interview with Mr Ün, who had repeatedly sought professional help for his (self-diagnosed) depression and had asked for advice from friends on how to meet more people and potential new girlfriends. However, he had discarded advice when the onus was on him to change his habits or learn a new task (e.g. use email) as the following quotation illustrates:

Yes, I read the newspaper online, German and Turkish, but mostly Turkish as I don't have enough language [German].I haven't learnt to use the computer, many people say I have to learn, get electronic mail, I don't have one, I could find women that way. But no, I am bad at technical things and lazy and have little patience for finding out new things. No, can't do it. Can't be bothered or lazy, I'm not sure. (Mr Ün)

It is important to note, that Mr Ün's perceived lethargy and low self-esteem had been triggered by a succession on tragic personal events of which two stood out: the death of his girl-friend five years previously and the sudden death of this brother two years previously. As a result, he had withdrawn from many social networks and activities.

Singularity leading to increased agency

Stakeholders described how men had adapted to living alone in a pragmatic way, which involved the ability to identify needs and draw on their social environment as and when needed. These men had not been mobilized by any educational or community project but by the necessity of managing everyday life as a way of keeping their independence. The four neighbourhood volunteers described an over 80 year-old man living alone who was visually impaired and who only on occasion accepted their help (e.g. having a crate of beer carried into his house). Otherwise, they knew that he had a family member visit once a week and the mobile library stopped in front of his house so he could stock up on audio books. In their opinion, older men were resistant to extending social contacts or asking for or receiving help, but they were capable of learning to deal with their situation. Some of this perceived independence and resilience was related to the men's professional careers and wartime experiences.

This resonates with the life-story of Mr Färber, whose precarious line of work had forced him to change jobs repeatedly to stay employed and provide for his family of six. Having cared for his wife before she died and for his current partner required him to stay self-sufficient and flexible. He had also learnt to strike a balance between being there for others and caring for himself. In the process of transitioning into retirement, which he had anticipated to be a time in which he could increase his social participation through voluntary positions and activities, he had overloaded himself with responsibilities which had severely affected his mental and physical health. After being widowed he made use of his large social network and increased his voluntary work slightly but this time in moderation, now more motivated by being with other people than having a position. Organising his day around daily visits, meetings and a lunch club helped him to compensate for living alone, something that stood in stark contrast to his experience of living in large households with many people for the best part of his life: "Well, the children are there and they do look after me, but at home I am alone" (Mr Färber).

Mr Rost was the most vocal about having to learn to live alone and to meet one's own needs. In this view learning to cook, furnish and socialise also meant letting go of gendered understandings of what men and woman can and should do. He reflected on his

biography and the influence of his mother and grandmother as key people who prevented him from learning housekeeping skills.

> I always had to struggle against the message of my mother and my grandmother, who were of course housewives and who continuously implied that they could do that [cooking, cleaning], but I couldn't. (Mr Rost)

His professional life and his identification with the cultural rebellions associated with 1968 provided the backdrop against which he set and accomplished these female connoted tasks. However, this did not apply to all domestic work, as he employed a cleaner on a fortnightly basis. Mr Willershäuser also employed a cleaner although his division of labour was more strategic: he cleaned his flat whereas the cleaner mopped the stairways of the small block of flats he lived in as carrying a bucket of water had become too difficult for him.

> I do everything around the house here, but I have a cleaner but just for me, just for the communal stairways. Well, I find if quite difficult to walk down the stairs with a full bucket of water. So, I have had the cleaner for two years now. (Mr Willershäuser)

Cleaning the stairways is a task often required in housing estates in Germany and being able to fulfil this requirement was one of Mr Willershäuser's many displays of independence.

Volunteering and shifting expectations

The role of volunteers was central to many services mentioned in the stakeholder interviews and often involved men over 60. One of the neighbourhood volunteers who had visited several men over longer periods talked about how humbling the experience had been and how gratifying it had been to learn about the men's lives. He also explained how he had become active on a man's behalf whom he had visited at hospital:

> (…) you used to call that incapacitating patients on behalf of the hospital. I was totally dumbstruck and he didn't get it either. He suddenly received a visit by a judge who was supposed to assess, because one of the doctors was of the opinion he was not able to understand information and was being stubborn and things like that, whether he was in need of a legal guardian. I think I was able to intervene at this point and the judge decided a legal guardian was not necessary either. (Stakeholder interview no. 2)

This stakeholder explained that providing support and acting on (disempowered) men's behalf was a key component of 'successful' volunteering. His idea resonates with traditional notions of volunteering, where well-off people wish to reciprocate their good fortune by helping those who have been less fortunate or who have taken a bad turn of events. In line with somewhat Victorian ideals of charity (deserving poor), those in need should not have brought about their situation themselves (undeserving). However, the challenge for this volunteer and his group was that it proved difficult to find enough (deserving) disempowered people in need of help and willing to accept help. However, another trend in volunteering could be seen in the data that focussed on volunteering as a learning experience and bringing on a generational change. Although recruiting volunteers was difficult, once on board their engagement lasted many years. Middle-aged men who volunteered used the supervision sessions to talk about the need to extend social networks and learn domestic skills in preparation of their own later life. This reflexive

mood was in part associated with a change in generation, particularly among the gay volunteers:

> I think the generation ageing now, the ones aged 50 to 60 plus, they have different expectations of life, they want to live and age as openly as they have done. This is being taken into the services for older people. (Stakeholder interview no. 4)

Being part of a different generation and having different ideas about how to live later life was central to some of the men interviewed. Mr. Rost's narrative circled around being a member of the cultural changes brought about during the 1960s as did Mr Ün's. Both put an onus on gender equality, that Mr Rost lived in his relationships and Mr Ün had made a central component of this teaching work and political work after retirement. Despite being born in different countries and six years apart, the political and cultural contexts of their lives, had more influence on their sense of generational belonging than their chronological age or membership of a certain cohort. This is important when considering services aimed at older men and the involvement of volunteers.

Discussion

This paper set out to investigate how older men come to terms with living alone in a city such as Frankfurt/Main from the perspectives of experts in the field of cultural, voluntary and social services as well as from men themselves. The vulnerability of older men living alone was apparent across all five stakeholder interviews providing a dominant narrative against which to design and offer services. In doing so, stakeholders divided clients into those who were emotionally, cognitively and materially capable of looking after themselves and those who lacked resources to look after themselves. Stakeholders in professional positions used varying degrees of empowerment strategies as a way of engaging men to think about and voice their needs, whereas stakeholders in voluntary positions focussed on providing support. Both groups contended that getting vulnerable older men involved in services continued to be challenging. This was partly ascribed to traditional notions of masculinity (i.e. displaying independence and resistance to help) as well as to the residual space some men found themselves in due to ageing stereotypes and accumulated inequalities across their life course.

Resistance to the dominant narrative of the vulnerability of older men living alone was evident from three of the biographical interviews. In their self-descriptions as 'proud', 'pragmatic' and 'self-sufficient' older men living alone talked about how they had adapted to living alone despite not having role-models. In addition, the men's narratives included examples of treading new paths rather than solely holding on to familiar structures. Living in a LAT relationship that allowed them to share their lives with a significant other at the same time as managing their own domestic duties is an example in case. Moreover, initiating (Mr Rost) or agreeing to (Mr Färber, Mr Ün) such a kind of relationship signifies several things: that singularity in later life requires men to be agentic and that later life is recognised by some men as a (safe) space in which to experiment with new life styles and kinds of relationships. This was also evident from their attitudes to domestic work, such as cooking, cleaning, washing and shopping. Although mothers, grandmothers and partner/wives had taught them that this work was 'women's work', their first experiences with housework dated back to a time before they lived alone. Mr Rost had shared domestic duties in co-habitating relationships, Mr Willershäuser, having always lived alone, acquired these skills in his mid-twenties after

leaving home, and Mr Ün had cooked meals for his mother during the eight years she lived in his flat prior to her death. Only Mr Färber conceded that his wife had taken on all housework and that after her death he had sought ways of reducing the domestic chores, e.g. by going out for lunch and having his partner iron his shirts. These narratives can be read as 'counterstories' (Phoenix & Smith, 2011) to the dominant cultural narrative of untidy and unloved older men living alone. It is in their telling and living that people can become aware of new possibilities (Andrews, 2004) and are thus a clear sign of agency in the lives of the interviewed men.

Voluntary work was a dominant theme in both data sets. This is unsurprising as volunteering and neighbourhood involvement are a staple component of contemporary retirement. The work the men took on involved considerable efforts in terms of time, personal resources and emotional engagement. It also provided volunteers with the possibility of extending social networks, developing ideas and receiving public recognition. Thus, volunteering can be interpreted as a marker for third age agency, which can also act as a buffer against the looming fourth age characterised by dependency and lack of agency (Formosa, 2019; Gilleard & Higgs, 2005). From a gender perspective, social engagement has been viewed as a way for men to counteract loss of social recognition and productivity brought about by retirement (Böhnisch, 2004). However, there is another way of looking at older men's engagement: The data here has shown that volunteering and caring for others helped the men to reflect their own bodily decline and proximity to possible independence and care-needs. Getting involved in projects aimed at helping older men, or visiting friends and acquaintances in care homes may have been born from a 'third age' ideal of getting involved and *caring for* others at a practical level, but the men's prolonged engagement with these tasks and their emotional involvement provide evidence that the men learnt to *care about* others thus integrating values of interdependence and relationality into their masculine identities (Elliott, 2016).

The possibility of change is both important at the individual level for men who are coming to terms with living alone and at a collective level in recognising the potential of older men and providing services that contribute to this development without ignoring the social, cultural and political factors that enable this process. Thus, men who lack the health and socio-economic related resources need support in gaining access to income, information and health at the same time as encouraging them to claim their rights (Payne, 2012). At the same time, a 'new' generation of older men with shifting ideas of perceived and lived masculinities are living with relatively high levels of agency in later life, and are changing the way society views the ageing of men.

Conclusion

This paper has drawn attention to the growing number of older men living alone and the ways in which they live their singularity. The findings contribute to the small literature on older men living alone that has highlighted the heterogeneity of this sub-group within the ageing population and their ability to adapt to life changes. The findings from this study suggest that older men's capacity to learn through empowerment are constructed in different ways across services, men's biographies and in light of contemporary social changes. Moreover, agency in their daily lives, was both a result of living alone and was a driver in helping the men manage their daily lives. By being able to take care of themselves and others the men maintained an identity as an independent individual. Learning to live alone was integrated into the lived and embodied masculinities of the men in this study, thereby appearing to strengthen the argument that independence is key

to traditional (taken for granted and ageless) masculinities at the same time as pointing to shifting (reflexive and ageing) masculinities.

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Education and socialisation in later life: The case of a University of Third Age in Portugal

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Abstract

In recent years, researchers have become increasingly interested in studying various dimensions of ageing and learning based on various disciplinary approaches. Nevertheless, insufficient research attention has been paid to education and learning among older adults (over 65 years old). Similarly, researchers have placed insufficient focus on the impacts of older adults' learning and the benefits to their wellbeing. In this paper, we will present the results of a case study on a University of Third Age (U3A) in Portugal. We adopted an exploratory position, and our approach included documentary analysis, naturalistic observation, and semi-structured interviews. Our case study results revealed that this U3A is a non-formal learning space in which older adults are able to engage in different activities that stem from educative practices and socialisation between adults. In some cases, the U3A represents an opportunity to participate in an activity that individuals were unable to do earlier in their lives. However, without a space in which to socialise, such as a bar, it seems not difficult for new social networks to be generated and maintained. Such networks help to counteract older adults' isolation and loneliness. This fact gives us some important clues concerning the relationships between individuals' education, socialisation (social relations), and wellbeing.

Keywords: Older adults' education, socialisation, university of third age, wellbeing

Older adults' education and lifelong learning: A general overview

In recent decades, significant international organisations such as United Nations Educational, Scientific and Cultural Organization [UNESCO] have emphasised the need for continuous learning, and the boundaries of lifelong learning have continued to expand. The Delors' Report (1997) to UNESCO emphasised that in the face of 21ˢᵗ Century challenges, education plays an essential role:

> Education is at the heart of both personal and community development; its mission is to enable each of us, without exception, to develop all our talents to the full and to realize our creative potential, including responsibility for our own lives and achievement of our personal aims. (Delors, 1997, p.19)

This is the intuition on which the famous four pillars of education - learning to know, learning to do, learning to live together, and learning to be - are based. Furthermore, these items are fundamental to communication and the dissemination of information in our society, and they are so widely applicable that they include all people from children to older adults. Furthermore, permanent education can be understood as a process that occurs throughout the life of the individual, it interconnects the personal and social dimensions of education, and it is based on a humanistic system of collective values (Lengrand, 1970). Permanent education integrates the personal, social, and political dimensions of the individual and focuses on maintaining equality and the right to learn for all individuals throughout their lives. In this sense, education is seen as a basic social and human right (Lima, 2007; Pavan, 2008), which is based on the United Nations' *Universal Declaration of Human Rights* (1948 - Article 21). The growth of social complexity has led to an increase in the demand for knowledge throughout life. The most recent UNESCO documents highlight this evolution by underlining the need to move from an *information society* to a *knowledge society*. A passage in one UNESCO document deserves particular attention: 'A knowledge society should be able to integrate all its members and to promote new forms of solidarity involving both present and future generations'. In a knowledge society, an important role for young people exists; however, the document refers explicitly to older adults as well, because 'they possess the experience required to offset the relative superficiality of "real-time" communication and remind us that knowledge is but a road to wisdom' (UNESCO, 2005, p. 18).

Education, including adult education, can address a wide range of issues and elicit at a wide range of responses. This diversity has led to Canário's (2000) typology, which describes a set of four interactive poles: literacy (or an educational second-chance offer), vocational training, local development, and sociocultural animation. The same author highlights the relationship between adult education and the life-course experience, and he considers education as 'a continuum that integrates and articulates different levels of formalization' (Canário, 2000, p. 80). This can be reflected in different activities that are developed in formal, non-formal, or informal contexts (Findsen, 2005; Porcarelli, 2009). Non-formal educational contexts are interesting because learning is often marked by its flexibility and the manner in which it adapts to different contexts, situations, and groups (Canário, 2000; Coombs, 1989). Non-formal learning is also the result of a creative auto-didactic activity, which is, in turn, often associated with non-hierarchical and equal relationships (Commissione delle Comunità Europee, 2000; Porcarelli, 2012). Sometimes it is also lived as a praxis of a group and can be individual as well as collective (Gohn, 1998). With regard to older adults, the issue of learning, is not solely about reflections on lifelong learning but also about what

the UN has devoted to the broader theme of a *society for all ages*. The first World Assembly on Aging, held in Vienna in 1982, approved an *International Plan of Action on Aging* (United Nations, 1983), which represents a milestone that is also related to subsequent documents, starting with the proclamation of the year of older persons in 1999 and the second World Assembly on Aging (ibid., 2002). In all of these documents, a great deal of attention is paid to possible actions concerning the education of older adults, emphasising objectives such as self-realisation and participation in social life. The fourth area of attention of the Madrid International Plan of Action on Aging is dedicated to accessing knowledge, education, and training. This issue highlights as a specific objective the 'full utilization of the potential and expertise of persons of all ages' (ibid., p. 16).

In recent years, different theories and approaches have been discussed by researchers regarding older adults' education and learning. Some fields, such as sociology and gerontology, approach this discussion from the standpoints of the functionalist approach and critical educational gerontology (Formosa, 2014; Veloso & Guimarães, 2014). In this sense, we move away from activity theory (i.e. finding new roles in later life to avoid mental or social decline) and towards the fact that for older adults, education can be an opportunity to promote social participation and active citizenship (Ripamonti, 2005). This follows the educational philosophy of Freire (2005), who supports social change within the framework of a *liberating education*. Some sociologists, such as Withnall (2002), have promoted the value of educational gerontology and the role of the Universities of the Third Age (U3As), arguing that learning and socialisation provide opportunities for older people to reinforce their social networks and strengthen their social capital (Veloso, 2011). Some researchers also studied the role of state and nongovernmental organisations in the promotion of education for seniors (Veloso, 2007; Zemaitaityté, 2014).

The ecological perspective within psycho-gerontology has considered a number of interrelated issues, including the implications of ageing for wider changes in behaviour, the importance of social networks for ageing, loneliness, and disability (Gasperi, 2016; Paúl, 2006; Ribeiro & Paúl, 2012). In the field of psychology, learning trajectories in later life were studied, and it was argued that learning has positive influences and effects on wellbeing (physical, psychological, social, emotional, and mental), self-esteem, and self-confidence (Machado & Medina, 2012; Pocinho, 2014). Studies in the pedagogical field tend to focus on topics such as frailty, active ageing, and intergenerational education and learning (Formosa, 2014; Gasperi, 2016; Tramma, 2017) but also on the proposal of a pedagogical approach that is based on the overall consideration of the course of life, which continuously redesigns its own pathways up to old age (Deluigi, 2008). Regarding education in later life, we can also find the wisdom of older adults (Jarvis, 2012) and the significance of older people's educational experiences (Gregianin, 2011), especially if they are configured as peer education experiences (Ellerani, 2010), in which the reciprocal gift of one's memories becomes an occasion for the co-construction of the older adult's evolving identity (Dozza, 2010). Starting precisely with these pedagogical reflections, we can identify the focus of our research, which is the educational practices used in the U3A, especially the most dynamic and interactive ones.

Learning and U3As in Portugal

According to the Adult Education Survey (Instituto Nacional de Estatística, 2013) in Portugal, non-participation in education, training, and learning was particularly high among older age groups (40.1% for ages 55 to 64 years, compared to 7.2% for ages 18 to 24 years) and less qualified persons (63.5% for those with no education level, compared to 5.2% for those with a tertiary education). Regarding the old age group, more than 65 years old, there seem to be two principal obstacles to participation—the priority of educational policies (which appear to be directed primarily towards vocational training and the labour market) and the fact that older adults do not assign a meaning to education and learning policies that follow European Union ideas. Consequently, in recent decades, reinforced by the increasing of the ageing, older adults' education has appeared to be an important field of practice and intervention. Nongovernmental organisations and the third sector, in Portugal, have developed projects based on non-formal activities to respond to the educational and social needs of older adults. According to Gohn (2006), these organisations have their own *know how* regarding methodologies, strategies, and programmes of action; they are supported by volunteer work and focus on the valorisation of local cultures. In this sense, the author views nongovernmental organisations as having played a central role in recent years (Gohn, 2006).

In Portugal, as in other countries, U3As have been assuming an important role when it comes to older adults' learning and education (Fragoso, 2014). Soon after the creation of the first university in France (1973) and supported by national self-organised movements and civic initiatives, the first U3A was established in Portugal in 1976 (Guimarães & Antunes, 2016) to address the lack of educational opportunities for older adults (Jacob, 2005). In recent decades, in Portugal but also in worldwide level, there has been a proliferation of these educational institutions. U3As have become one 'of the most successful institutions engaged in late-life learning' across the five continents' (Formosa, 2014, p. 42). Nowadays, the involvement of older adults in social and educational dynamics is visible. Furthermore, these U3As are locations in which individuals are able to spend their free time and avoid problems such as social isolation and marginalisation. Similarly, these contexts allow for the maintenance of participation in political, social, economic, and cultural activities (Zemaitaityté, 2014). Consequently, older adults can live and take part in a world that is constantly changing and are able to do so not only as spectators but also as active and intervening subjects (Formosa, 2011, 2019). The U3A emerged as a response for our days and as an opportunity for older adults (in the field of education and learning, as well as in regard to social relations). It gives them opportunities to get together, find groups, and help each other by teaching and learning new things. The most important premise in these contexts is freedom. These older adults participate because they want to, and they do what they want when they want. They also have opportunities to improve their expertise in different areas of interest and willingness to live better they life (Zemaitaityté, 2014).

Older adults' education and wellbeing

In recent years, researchers have shown an increased interest in studying the wellbeing of individuals and specifically of adults in later life. The intention of these studies was to understand the relationship between learning in later life and life satisfaction (DeNeve, Diener, Tay, & Xuereb, 2013; Formosa, 2014). The results of these studies

reveal that older adults can find meaning and satisfaction in their lives through learning and learning contexts (Field, 2009).

Well-being can be discussed from different perspectives. Some authors (e.g. Simões et al., 2003) refer to wellbeing as related to the notion of quality of life, which includes the conditions of life and life experience. The World Health Organization (2012) proposed a definition of wellbeing that constitutes two dimensions: objective and subjective. It includes factors such as life experience and life circumstances, which entail social norms and values: 'Subjective wellbeing comprises all the various evaluations, positive and negative, that people make on their lives and the affective reactions of people to their experiences' (Organisation for Economic Co-operation and Development, 2012, p. 8). Well-being and health, which are correlated, are also subjected to other determinants, such as social systems and life circumstances (i.e. education, work, social relationships, and environments). All of these circumstances can influence wellbeing, psychological functioning, and the affective state (World Health Organization, 2012). Subjective wellbeing can have a constructive effect on health and longevity, the quality of social relationships, and work outcomes (DeNeve et al., 2013). It is positively associated with health, high levels of social and civic engagement, and greater resilience when facing external crises (Field, 2009). Some research and recent practices for adults have shown that education and learning in later life has enormous potential for participants' lives (Field, 2009). People, regardless of age, need to be in constant contact with learning activities This not only contributes at the individual level, directly influencing the attitudes and behaviours that affect mental wellbeing (Field, 2009), but also facilitates the development of the community. Learning can help to increase older adults' abilities to do things for themselves and can improve their levels of social and personal transformation (Formosa, 2014).

Older adults should not be seen nor see themselves as a separate group from society, 'but instead should be integrated in the community whilst, of course, ensuring that their specific needs and interests are met' (Formosa, 2014, p. 16). Learning processes can build networks, trust, reciprocity, and social connections. This means that older adults can go further in their life opportunities if they participate in society, cooperating each other, with the younger groups or social institutions. For older adults' inclusion is a central aspect (ibid.). Nevertheless, learning in later life can bring new possibilities, mainly in regard to the family (e.g. relationships with grandchildren), the neighbourhood (close community), and peers (social group). The participation of older adults in U3A activities seems to increase their physical, intellectual, and social outcomes (Formosa, 2014) and, consequently, their quality of life (Jacob, 2012). In this sense, participation promotes social integration and the development of productive, meaningful lives while enhancing older adults' knowledge and cultures (Zemaitaityté, 2014).

The research context and methodology

This study, which is part of an ongoing body of research titled *Educative Practices in Universities of the Third Age: A Comparative Study between Portugal and Italy* which aims to analyse the educative practices and dynamics of socialisation between different U3As. Our first objective in regard to methods was to obtain a database of the national U3As (November 2015 to February 2016). To achieve this aim, we established contact with networks and associations operating at the national level in Portugal and Italy, and we requested collaboration. After some months and more than 600 requests for

cooperation, we built a database of approximately 200 institutions. Hence, to obtain preliminary information on the reality of the U3A in Portugal, some informal conversations were had, and a national survey was created and sent to each contact of our database (Ghiglione & Matalon, 1997). This survey was about the aims, organisation, and educative work of U3As. We then defined some criteria, such as educational aims and type of activities, and we selected a few U3As to enable us to conduct an-depth case study.

   This paper reports on a case study that was developed at one U3A in Portugal. This U3A is situated in the Lisbon region in one of the six most populated cities in Portugal. Our primary aim was to understand the case (Stake, 1994) - that is, to determine (a) whether older adults merely follow what has been predetermined by others or actively participate in the planning and development of such activities, and (b) whether relationships exist between participants' learning, socialisation, and wellbeing. We had informal conversations with different U3A participants to gain deeper insight into empirical practices. This was fundamental to establish an informal relationship and to enable natural observation of the U3A. Observation (Bell, 1997; Yin, 2002) of the U3A was conducted at various times and during different lessons. We performed two weeks of naturalistic observation involving more than 28 courses. During our observations, we attempted to determine the type of activity, the space in which it was conducted, the methodology used, and the participants (who were the adults in the courses and the relationships among them). Our approach also included 20 semi-structured interviews with different participants: those with direct responsibilities for or experience of the evolution of this U3A, adults that perform educators or learners in different activities, and learners. This led to important documentary analysis. Besides the institutional documents (member files, calendar of lessons, regulations, etc.), this university has a monthly journal, which started in the first month of its existence.

Findings

Our observations and interviews provided elements of four central themes - namely, the nature of the institution, the type of work that the U3A carries out, the participants involved in the U3A, and most interestingly the dynamics of socialisation and learning - that is, how they are developed in this U3A and the relationship between them.

D. Sancho I University: A brief description

This U3A, which is located in the city of Almada, was founded in 2013 by a group of nine friends. Initially, they were enrolled at other universities in the city, but for reasons related to the organisation and the way in which it functions – 'It was like a service, and we were just clients' (Coordinator, female, 67) - they decided to create a new one that could respond to their personal beliefs. The main idea was to create an alternative for the older people in the region: 'a U3A that could be open to all, autonomous and self-sustainable' (President, male, 69). After the initial idea, a snowball effect started, as people's friends and neighbours were called. This U3A started to preparing and organisational work in May and opened in September 2013 with a total of 500 enrolments and 40 different disciplines. By the end of that same year, the participants totalled 1,000. The resource issues were easily resolved, as once they found a space, items started to arrive: 'We went to look for furniture, and we got it…One of the

collaborators was working at a bank, and he got them to give us the first desks, the first computers, [and] the first chairs. We had all that!' (coordinator, female, 67).

The main aims described in the internal regulation (Regulamento Interno da TKM, 2016) are as follows: to offer a space that is adaptable and that can enable socialisation; to give participants the opportunity to enrol in courses in which they can share their experiences, be valorised, and improve their knowledge; to develop activities with and for learners; to create meeting spaces within the community; and to explore and preserve the history, culture, traditions, and values of the city. Moreover, it is important to focus on the awareness of the identity of this U3A. The adults in the several courses created a logo, a flag, and a hymn to identify the university and to be used in different situations such as cultural visits or events. An important reason for their success seems to be related to the fact that participants feel as if they belong to a wider group:

> [It] is the feeling of belonging…to feel that we are the D. Sancho. To be proud to be…to be D. Sancho!...When we go on our field visits [and] big trips, we always bring our symbols…our flag! We bring name tags! We go all identified, because to be D. Sancho is something different…and that is why it is special. (Coordinator, female, 67)

The U3A is autonomous, and the financial support that it receives is based on the enrolment fees that are paid by the participants, which change, depending on the number of disciplines they pursue. The fact that the U3A receives no money from outside sources gives it the privilege of being free to admit all participants, regardless of their religion, political affiliation, and so forth. In fact, this freedom allows the U3A to do the work that it wants to, participate in the activities that it wants to, and make its own decisions without having to face external pressure.

Currently, this U3A is one of the biggest in the country, and has received several rewards from inter universities competitions and a recognition of merit from a national association. When comparing it with other similar contexts, we find two particularities that seem to contribute to this U3A's success. First, besides the 'normal parties,' such as national festivities, this U3A organise the end of year party in the 31 December. This started as an activity for the old adults that were alone that night, and now, it always has more followers, which is becoming problematic for the organisation. The directive organises a shared dinner, to which each attendee brings something as a meal or some drinks, and they spend hours together in a pleasant environment. Second, the university never closes its doors. During the months that the place is closed (i.e. there are no 'normal' classes), there is the possibility of participating in leisure and cultural activities (in July and August): 'This year, we will have three big trips: to Russia, Norway, and Croatia'. (coordinator, female, 67)

The participants in the U3A

During the 2017/2018 academic year, there were approximately 1,300 participants, aged between 31 and more than 80 years old. The group with members aged 61 to 80 had the most members. Most of the participants (70%) are female, although for some courses (as naval Art or Golf), the majority of the participants are male. The participants have diverse educational backgrounds: most completed secondary school, some never attended school, and others hold master's degrees or PhDs. This U3A also relies on a group of 65 volunteer educators of diverse ages (26 to 80 years), genders (60% female and 40% male), and educational backgrounds (from basic school to PhD level). Some are unemployed or retired, but most are still active in the workforce.

The coordinator of the U3A distinguishes between two types of participants (learners): those who 'come, sit, hear what they have to hear, and then go away' and those who come to participate and learn: "They bring the things home, study, make up questions, and want to have debates and discussions on the lesson with their colleagues and the professor' (Coordinator, female, 67). Regarding the motivation to participate in the U3A, the main one that is common to all participants is that occupying one's free time is helpful at this stage of life and keeps the 'mind working': 'To distract myself…I had a really communicative job. I dealt with people and companies, and then staying home was not an option…Now, I'm addicted (laughs). I came here to talk, speak…' (Learner, female, 74). According to another participant,

> The people maintain some kind of activity, and then we can also develop something that stays a little…It helps us…helps us to live!...Also, [it lifts] our spirit. I, for example, look for myself, and I say that…I don't think I feel the age that I am. (Learner, female, 71)

In some cases, doctors recommend that their patients attend a U3A: 'They (the doctors) come here, ask for the curricula for all the courses, and send their patients to the disciplines they consider good for them! They prefer to prescribe the U3A instead of medicines' (laughs) (Coordinator, female, 67). In these cases, we can refer to the work developed by the U3A as a way to fight ageism and social exclusion (Formosa, 2014) and prevent some psychological diseases (Pocinho, 2014). Considering the various reasons for participation noted in the interviews, the adults can be divided into different groups:

- Those who seek to engage in a similar activity to what they used to do in their jobs - for example, Portuguese teachers seeking creative-writing courses;

- Those who seek something that differs as much as possible from their past jobs - for example, ex-healthcare workers (such as nurses) seeking manual activities, such as seamwork or embroidery;

- Those who seek opportunities they missed due to economic or political/historical factors, for example, an individual who has always loved singing can now pursue his or her passion (and even win some friendly competitions): 'I didn't fight for that [to be a singer]. The truth is that I've never done what I've liked…until now' (learner, male, 68); or it could be someone who has always wanted to play a musical instrument but could not because of gender issues: 'At the time, little girls didn't have the opportunity to learn music…and I couldn't learn music (crying)…I cried so much, so much, so much. I wanted to leave my city' (learner, female, 71); and

- Those who never went to school and the non-Portuguese-speaking immigrants taking courses such as Learning Portuguese and Portuguese for Foreigners.

These last two groups of participants embody the fact that the U3A is a way to realise dreams that were previously out of reach for various reasons. It seems to be a valuable answer, as in addition to being a rich context for knowledge acquisition and retention, it seems to create opportunities for individuals to fulfil goals that they were unable to achieve earlier in their lives. This U3A also reveals the importance of not only a basic service but also, in some cases, an answer for the community.

The U3A as a space for adult education and learning

This U3A describes itself as having an educative project that is flexible (not defined a priori), concerns a non-formal perspective, uses a horizontal work methodology and grants opportunities to participate in recreational activities (U3A Survey). Based on the responses to the survey and the interview with the coordinator, it can also be concluded that the main aims of this U3A are to develop affection between adults participating, fight a sedentary lifestyle, and facilitate lifelong learning. The educative approaches present in this U3A seem to differ, depending on the activity, field, and educator.

The activities of this U3A are separated into two major categories: courses and cultural activities. In the first category, courses, we can find diverse fields. These are as follows: (a) the performing arts (theatre, dance, poetry, etc.), (b) the artistic strand (painting, ceramics, drawing, etc.), and (c) cognitive development (languages, history, sociology, psychology, etc.). These categories total 70 different activities and courses. Concerning the second category—cultural activities—there are one-off conferences, lunches, field visits, trips (national and international), theme parties, expositions, and festivities. The members are free to participate in the activities and to choose where they want to go and what they would like to do: 'The choice is so wide that all the people can fit here' (learner, female, 67). Additionally, they have a major responsibility, as they are involved in the dynamisation of a significant portion of the activities. Interestingly, a substantial number of the educators (among those who are retired or unemployed) are learners. While they deliver their lessons as educators, they are also members of the U3A themselves, attending other courses as learners. Further to this educator–learner dynamic, it is interesting that a significant portion of U3A participants are simultaneously educators and learners as they share their professional and personal experiences and contribute to the activities: 'They learn together from each other!' (Educator, male, 71). Below some examples of an educator who seems to give total freedom for participation in his class:

> My idea is not to exhaust the issues…[it] is to raise the issues…then, the ones who want to (because all are free in my lessons) can debate with me or individually conduct research at home. (educator, male, 71)

I had a programme in my class that was [called] '3 Minutes of Fame,' and each person had to present a theme with a beginning, middle, and end. Really nice thing…how to make glass…how to fix the alternator of a car…and a lady said, 'I can't, Professor. I don't know anything!' 'You don't know anything? So, what have you done until now?' 'Ah, I was a dressmaker…'So, that's what you are going to do - teach the class how to make a dress.' Look, it was a success in terms of the way that I asked her to write it, and then it was published. (educator, male, 71)

In some cases, the younger participants (30-40 years old) are unemployed or have jobs that require them to be stationary for some months (e.g. airplane hostesses). This type of participant seeks the U3A to enable him or her to update or acquire knowledge. This U3A is not a closed institution. It is open to all and can be seen as a service for the community. This U3A accepts everyone who is interested in its activities; it listens to participants; it is open to learners' expectations and opinions about the activities, some of which are in place merely because the participants suggested them; and it offers a wide variety of choices (more than 70 courses). Additionally, 'If someone is not happy, they can always change' (coordinator, female, 67), as liberty is a key concept of the U3A.

The U3A as a space for meeting and socialising

If we consider that one aim of the regulations governing this U3A is 'to offer a space [that is] adapted and which could potentiate the socialisation' (U3A Regulation 2016, p.1), one thought-provoking point regarding socialisation is the lack of a space, such as a bar or meeting room. Initially, the fact that participants have nowhere to drink a coffee, sit, and talk might seem contradictory or problematic. However, the richness of the activities and courses that are offered seems to counterbalance this issue. Furthermore, this is the perfect reason for participants to meet outside of the U3A structure. Participants find spaces to be together even when lessons are done: 'We go for a snack or drink together, and occasionally, we meet up to have lunch' (learner, male, 68). This U3A's educational offerings are diverse, and it is a meeting and socialisation point for older adults: 'For me, the senior university represents a way to keep [my] free time busy, as we are retired. Here, we aim to keep active cognitively [and to maintain] social relations' (educator and learner, male, 71). In this context, older adults can make friends among participants who might have similar tastes and mindsets. They can also find participants with different ideas and with whom they can engage in healthy debates. Interestingly, they have a common aim: 'to belong to this family' (Coordinator, female, 67). In some cases, they are enrolled in the same courses for several years, and they form solid groups whose members participate in activities together: 'We are known as the troika' (learner, female, 71).

Participation benefits and wellbeing in the U3A

Based on the interviews, participation in the learning and cultural activities seems to be positive for the adults, contributing for their wellbeing: 'It's really special to me in the sense of escaping from the routine and getting out of the house, then people are nice' (learner, female, 74); 'I think the majority of the people like being here. We are always more people' (learner, male, 70); and '[The U3A is a place] where they want to look for knowledge, social contact, physical activity, and leisure. So, people can look for this place' (educator, male, 71). Friendships, family, and social relationships also seem to be of the utmost importance for the wellbeing of participants in this U3A: 'This story [event] of the creation of the U3As was eventually one of the most beneficial things for the older adults. The older adults are able to spend their time living and ageing with quality' [maintaining a good quality of life] (educator, male, 71). Additionally, this U3A reveals the possibility of the share between grandparents and grandchildren—for example, when a grandmother can debate with her grandchild about history or geography while doing homework. The older adults seem to be motivated to learn. Learning seems to give them the possibility of finding new roles, as well as new possibilities in regard to both family and peers: 'I have one aim in my day: at eleven o'clock, I have to go to the dance lesson, and then, at five o'clock, I have my theatre lesson! This is my motivation for the day' (Learner, female, 74); or another example:

> The U3A makes me manage my time better…I have obligations, duties, and responsibilities. I have things to do…Consequently, I have to manage my time. It helps me and makes me more organised inclusively [and] on a personal level, and that's great! (learner, female, 71)

Upon analysing the interviews, we also saw examples that relate to participation in the U3A and how it affects the wellbeing of the individuals on several levels such as:

- Tending to one's health: 'Personally, I occupy my time, and, for example, when I'm here in the lessons, I'm not smoking, and that is, for sure, beneficial for me';
- Discovering new skills: 'The U3A helped me to discover things that I didn't know I was able to do. And that is good [and] fun' (learner, female, 65);
- Feeling valorised by learning with others: 'Culturally, it is really enriching, because we deal daily with people who have more culture than us (. . .) and that makes me feel valorised' (learner, female, 74);
- Fighting against prejudices and fears: 'This give me the possibility to open my mind, to learn new things, and to see the things from a different perspective' (Learner, female, 65) and 'I'm feeling more active [and] more self-confident! For example, I always hated to drive and go around by car, but now, to come here, I need to drive, right? (laughs) And that's it. I think it was really positive for me' (Educator and learner, female, 64).

Another benefit of participation in the U3A seems to be the connection that individuals create with the community; for example, one lady is learning Mandarin at the U3A because she wants to speak it with the owner of the supermarket that she goes to daily. This interviewee refers to it as a personal challenge not only regarding the language and culture but also her capacity to learn and to increase ties with her own community. Furthermore, the U3A participants seem to enhance the social environment: they constitute a small community and establish important ties with the larger community. Besides all the activities (e.g. conferences, travels, expositions, and lunches) that are open to the family members and the entire community, other indicators point to this. First, partnerships with other institutions (e.g. agreements with golf and theatre associations and with different schools) make some of the activities possible. Second, U3A participants provide assistance to the city's social institutions. For example, older adults work as volunteers at several institutions and participate in municipal initiatives; they perform with the choir or theatre at care centres (visiting the elderly), hospitals, and so on, and they collaborate with law enforcement officers and firemen in the city as they conduct their activities. Based on the interviews, older adults seem to evaluate their U3A experience positively, declaring that it is improving their health, lifestyle, and social and civic engagement (Field, 2009). Finally, the U3A also has an agreement with a SPA in the city, which offers different benefits and various services and spaces (pool, massages, treatments, etc.), providing yet another method of maintaining individuals' wellbeing.

Final Considerations

Some obstacles and limitations exist regarding older adults' participation in lifelong learning and education. These relate primarily to the prioritisation of educational policies and processes that do not concern adults' nor older adults' education and the fact that few field studies have been conducted on older adults' education and learning. Besides the documents and literature that have been available in recent years, it is impossible to find a political proposal or a practical response regarding older adults' education and learning (Veloso, 2011). In keeping with the concept of development and social cohesion, which, in our case study, is supported by the U3A regulations we can say that U3As have a strong responsibility to establish conditions that facilitate the participation of everyone. This institution offers a suitable environment, access for all,

and resources for such participation. Moreover, it gives the adults the freedom to engage in depth with each activity phase, from its conception to its realisation. Our case study revealed some interesting points concerning learning, socialisation, and wellbeing. Participation in this U3A has socialisation and learning as its main points that bring members together, and the result seems to be the wellbeing of individuals on a global level.

Participants are encouraged to volunteer within the U3A and in city activities, and they seem highly motivated to do so. It is important to recognise the empowering benefits of coordinating and participating in educational activities that connect older adults with people of all ages, including their peers, and of coordinating educational initiatives that increase cooperation, integration, and exchange among different generations (Formosa 2014, p. 18), as these older adults have a direct and constant relationship with the community. This is possible because the U3A seems to have specific characteristics. First, it is not elitist and is, in fact, quite the contrary. It is an open space with a flexible structure and is based, in terms of the activities on offer, on the adults' needs and ideas: They listen to the older adults and work as a team to find solutions to their problems. Additionally, the horizontal relationship between learners and educators makes participants feel good and enjoy attending the U3A. The closeness and equal relationships that exist among all the U3A members - management, educators, and learners - seem to contribute to the university's success. Individuals can participate in several ways - by offering suggestions, planning and designing activities, and participating in their enactment. They propose new partnerships with clubs and associations of the city and create their own projects to present. The U3A allows them to find new roles in their daily lives, and in some cases, it leads to greater participation and more active citizenship (Formosa, 2014). The feeling of belonging, the sharing of personal experiences, and the development of meaningful friendships seem to contribute significantly to the participants' wellbeing. Older adults feel that the U3A is their own space in which they are able to learn from each other.

In considering this U3A, we think that older adults' educational contexts can play a crucial role in the social and participatory challenge by including everybody and promoting opportunities to interact, engage in dialogue, and share experiences. The U3A also represents a space for socialisation, which is quite important for individuals' wellbeing. This U3A's activities are fundamental to promoting education and fighting isolation among older adults (Pocinho, 2014), as well as creating strong friendships, enabling social participation through activities, and reinforcing social networks (Veloso, 2011). According our data (that is, observation and interviews), the primary importance of the U3A is for older adults to meet and create social groups. Being together in a social network enables higher levels of personal and social wellbeing. Finally, the adults feel good in this context and seem to work together towards a common aim - that is, their wellbeing. The benefits of participation relate to health, social networks, and learning. The success of this U3A seems to be the result of the dynamics created between the learning, socialisation, and wellbeing of the participants.

Endnote

[1]The paper represents the work of both authors, although Part 1 (Older Adults' Education and Lifelong Learning: A General Overview) was written primarily by Andrea Porcarelli. All other parts of the article were written by Rute Ricardo

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Focussing on tutoring skills instead of learners' disadvantages in teenaged tutors' training for intergenerational learning programmes

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Abstract

In the twenty-first century non-professional tutors, including teenagers, have an important role to play in the development of contemporary skills among the older population. Scholars in the field of older-age learning share a common belief that age-specific knowledge should be introduced and implemented when instructing older people. At the same time, psychologists warn that only perceived similarities between members of an in-group and out-group can reduce the age stereotypes they may hold. Therefore, focussing on age-specific knowledge in preparing teenaged tutors for instructing older individuals in the acquisition of e-skills would not support age-stereotype dilution in intergenerational programmes. An alternative idea is introduced by analysing the connections between geragogical principles and the nature of scaffolding assistance. It is proposed to focus on tutors' scaffolding skills instead of older learners' peculiarities when preparing teenaged tutors. The theoretically grounded idea will need to be validated by future empirical studies.

Keywords: Acquisition of e-skills; age-specific knowledge; intergenerational learning; scaffolding; tutoring

Introduction

Despite numerous studies that demonstrate the positive impact of learning and social inclusion in later life on both the individual and society, purposeful social activity and older-age learning can also have negative side effects. The profile of the participants as well as the principles underlying the learning process may have an undesirable effect on older-age learning.

For example, if an older individual's learning and social participation only involves activities in a day centre, which is a widespread form of older-age learning in many countries (Findsen & Formosa, 2016), the learning occurs in a rather age-segregated group. At the same time we know that older individuals, especially those with lower self-awareness (Chen, Pethtel & Ma, 2010), who have little interaction with young people tend to assign highly stereotyped scores to themselves (Hernandez & Gonzalez, 2008), e.g., older individuals tend to agree with the stereotype that they are less competent (Kite, Stockdale, Whitley & Johnson, 2005). Paradoxically, the segregation of older people has been perceived as a benefit, as opposed to the segregation of younger people, which is viewed as a social problem that can have negative behavioural consequences (Hagestad & Uhlenberg, 2005). Studies on older individuals' participation in learning are often lacking in a deeper examination of the details, i.e., the studies are likely to 'focus[ing] on the individual more than the organization and treat[ing] involvement in one group roughly equivalent to that of another, despite a wide variation in their goals, functions, and membership' (Barrett, Pai & Redmond, 2012, p. 527). Such an approach is characteristic of the The Survey of Health, Ageing and Retirement in Europe (SHARE) survey, which only queries respondents on their participation, on the basis of which conclusions have been drawn and recommendations formulated (Golinowska, Sowa, Degg, Socci, Principi, Rodrigues, Ilinca, & Galenkamp, 2016; Litwin & Stoeckel, 2016; Potočnik & Sonnentag, 2013). In addition to the attributes of the parties involved, there are aspects of the learning process that are crucial to preventing negative effects on older individuals' learning. Reciprocity is one of the key principles of older-age learning (Formosa, 2012) as it is an important component of the theory of intergenerational learning (Thomas, 2012). Therefore, in a tutoring interaction in which a more knowledgeable person instructs one who is less knowledgeable, some particular aspects need to be taken into account in order to avoid negative effects. For example, it has been demonstrated that a *dominating style* of tutoring by a more competent party tends to produce submissive behaviour on the part of the learner, which is not conducive to the cognitive development of the less competent party (Arcidiacono, Baucal, & Buđevac, 2011). On the other hand, *uncertainty, confusion or doubt* expressed by the competent party may also not support the cognitive development of the learner, i.e., the desired acquisition of skills may not occur (Tudge, 1990, in Arcidiacono et al., 2011). Furthermore, *hesitant and illogical* tutoring-learning interactions may have a negative impact on the cognitive development of even the more competent party (Ibid.).

Many articles about tutoring strategies and techniques for instructing older learners provide a valuable basis for identifying pedagogical practices that should be avoided when creating learning environments for older people. For example, in the survey conducted by Eppinger, Schuck, Nystrom and Cohen (2013) it was shown that positive and negative feedback seemed to have a similar impact on older individuals' learning; later, however, older learners were better able to recall from memory content that had received positive feedback. Bozoki, Radovanovic, Winn, Heeter and Anthony (2013) demonstrated in a study of computer games designed to improve older individuals' cognitive abilities that the expected learning outcomes would not be achieved if the task failed to consider the existing knowledge and experience of the older learner, i.e., the tasks were too simple. Czaja, Charness, Fisk, Hertzog, Nair, Rogers and Sharit (2006) emphasised the importance of perceived success on the part of older learners in every instance and interaction when introducing an unfamiliar technology, or they might not have the courage to experiment, which increases the likelihood of their abandoning technological learning. De Guerrero and Villamil (2000) caution that an authoritarian and

descriptive style of tutoring hampers the effectiveness of older individuals' learning process.

Scholars in the field of older-age learning share a common belief that age-specific knowledge (Cohen, 2006; Deary, Corley, Gow, Harris, Houlihan, Marioni, Penke, Rafnsson & Starr, 2009) should be introduced when instructing older people. Lemieux and Martinez (2000, p. 485) have stated that the success and value of educational intervention would be hampered without the critical contribution of gerontology and its theories concerning the personal and social reality of older people. This notion is derived from the fact that differences in learning abilities and preferences for study methods are related to older age (Findsen & Formosa, 2011; John, 1981; Nussbaum & Coupland, 2008; Pincas, 2007; Requejo-Osorio, 2008). Despite the fact that the group of "old age learners" comprises individuals from different cohorts and different generations which is a relational term (Ropes, 2013) in current paper we consider an old age learners as one whole referring to the third and fourth age in Laslett's (1996) theory of four ages, Older people form a non-homogeneous group in which strictly defined age groups do not express age specific differences between individuals and their learning abilities. Therefore the Laslett's approach on old age is applicable as it derives from two terms that have an effect on person's learning motivation and ability: personal duties and person's dependence.

The objective changes affecting the ability to learn may be related to reduced speed of cognitive processes, concerns about worsening short-term memory, impaired fluid intelligence or decreased sensory-perceptive functions (e.g., vision) (e.g., Baringer, Kundrat & Nussbaum, 2008; Cohen, 2006). It is commonly held that the cognitive load must be reduced for older learners (Cohen, 2006; Echt, Morrell, & Park, 1998; Morrell, Park, Mayhorn & Kelley, 2000), and that situations in which learners must divide their attention between computer keyboard and textbook must be minimised (Tambaum, 2015), which have implications for organising learning, to give some examples. Reference has also been made to age-related social changes that may have an impact on learning in the third or fourth age (Laslett, 1996) (e.g. Battersby, 1985; Lodge, Carnell & Comelan, 2016) such as diminished external duties and responsibilities which may result in taking less personal responsibility for one's achievement in an unsuccessful training session (Formosa, 2002).

Various authors have formulated tutoring principles to meet the needs resulting from age-related cognitive and social changes in individual ageing. A comprehensive description of 13 of these principles is provided in an article by Tambaum (2015) based on the results of studies by Meyer (1977), John (1981), Xie (2007), Echt, Morrell, and Park (1998) and Cody, Dunn, Hoppin and Wendt (1999). These authors emphasize that the tutor must incorporate flexibility and enjoyability into the learning-tutoring process. Learners need to be provided with the opportunity to be an active learner, and to have a chance to act independently and autonomously. The tutor must consider the learners' diversity; their sense of security must be supported as well as their feeling of success. All aspects and components of learning organisation should respect the principles of sustainability, quality and comfort. These principles highlighted by the authors are applicable to both the development of skills and the acquisition of general knowledge.

The concept of intergenerational learning

In the twenty-first century, questions about effective tutoring principles and age-specific knowledge are not only relevant to professional trainers. UNESCO's Future Perspectives on Lifelong Learning includes community learning, one of the aims of which is the provision of support for older learners (UIL, 2015). Bruner (1996) sees community learning as an integral part of the education system. According to this framework non-professional tutors have an important role to play in the older population's acquisition of contemporary skills, especially digital skills, as the share of adults who lack basic e-skills is notably high – 2/5 of those aged 16–74, most of whom are in the older groups (European Commission, 2017). Strom and Strom (2011, 2012) consider youth as a segment of society that not only supports but also shoulders responsibility for teaching new technology.

Learning that involves different generations is called intergenerational learning (IGL), and its programmes have been defined as 'vehicles for the purposeful and ongoing exchange of resources and learning among older and younger generations' (Hutton Yeo & Osako, 2000, p. 6). Such programmes aim to bring people together in purposeful, mutually beneficial activities, which promote greater understanding and respect between generations and may contribute to building more cohesive communities (FIM-NewLearning, 2008). One of the aims of IGL programmes is to maintain the relationships that emerge during the activities (Buffel, De Backer, Peeters, Phillipson, Reina, Kindekens, De Donder & Lombaerts, 2014). As with older-age learning, also IGL based on false criteria is not just a waste of time but can even have damaging consequences, and if the relationship between the older and younger individuals perpetuates or exacerbates negative stereotypes, then it is preferable to do nothing (Freedman, 1992). MacCallum, Palmer, Wright, Cumming-Potvin, Brooker and Tero (2010), in their analysis of the efficiency of intergenerational practice, have identified the key features of successful programmes. One aspect that has an impact on the benefit participants receive from intergenerational learning is the consideration of the specific needs of the participants, including those related to age. MacCallum and colleagues (2010) also referred to the specific need arising from second important characteristic – gender. But in the context of e-skills acquisition in the form of individual tutoring, there are few arguments to differentiate older learners on the base of sex. As Chiu and Liu (2017) have pointed, there exist differences between older men and women when it applies to Internet withdrawal, but they are not different in Internet adoption, that means when acquiring e-skills.

Traditionally, the direction of the flow of knowledge between individuals in IGL has been from the older generation to the younger. Nevertheless, scholars have examined *reverse mentoring* relationships, in which the direction of the flow is reversed from younger to older (Gerpott, Lehmann-Willenbrock & Voelpel, 2017; Ropes, 2013), such as in teaching how to use new technologies (Ropes, 2013). The basic premise of the *unidirectional* approach is that a more knowledgeable person transfers information to a less experienced individual (Gerpott et al., 2017). Despite the fact that programmes of intergenerational *reverse mentoring* have become common practice in communities, especially in the field of new technology (e.g., cyber-seniors.ca/get-involved/become-a-cs-mentor; genyes.org/resources; www.geengee.eu/geengee/; www.intergenerational-ictskills.eu/cms/) and that a tutor plays a key role in ensuring the success of older-age learning (Duay & Bryan, 2008), relatively little is known about the tutoring behaviour of young non-professional instructors.

It has been shown that in an IGL framework in which teenagers serve as naturalistic tutors (Chi, Siler, Jeong, Yamauchi & Hausmann, 2001; Graesser, Person & Magliano, 1995) facilitating the acquisition of older individuals' e-skills, young tutors tend not to consider age-specific needs (Tambaum, 2017; Tambaum & Normak, 2014). Without preparation for the session they tend to use a rather authoritarian and prescriptive style (Tambaum & Normak, 2018), which can disempower the learner (Tambaum & Normak, 2014) and should be avoided due to age-related cognitive and social changes. An unaddressed need for extra time was observed during steps that required older learners to divide their attention (Tambaum, 2017). The pace of tutoring tended to be brisk, especially when the tutor was following a predefined programme or manual (Tambaum & Normak, 2014). Even without a manual, the tutor was inclined to be somewhat hurried, as seen in Example 1 (Tambaum, 2017).

Example 1
The following interaction between a teenaged tutor and older learner took place within two seconds:
> *Tutor: Now delete.*
> *Tutor: Do you remember how to delete?*
> *Tutor: This (points to the key).*

The need for preparatory training for teenaged tutors has been mentioned by several authors (Strom & Strom, 2012; Tambaum, 2017; Tambaum & Normak, 2018). Teater (2018) in her qualitative research found that young people who were not prepared for intergenerational practice did not know what to expect from the interaction with older people and were concerned about what they should say. Therefore, the need for preparation would also seem reasonable from the young tutors' perspective.

It has been proposed that a preparatory programme for teenaged e-skill tutors should include the ability to accompany their technical instructions with explanations about the purpose of and reasons for the learning tasks as well as cause-and-effect relationships (Tambaum & Normak, 2014). Young tutors should learn about the function of learners' mistakes in the instructing process, and they should be trained to avoid intervening in some circumstances (Tambaum, 2017). There is also a need to introduce interactive tutoring techniques to teenagers and to increase their awareness of the hazards associated with sharing tacit knowledge (Tambaum & Normak, 2018).

Despite our suggestions in previous papers that it is necessary to provide explicit age-specific knowledge about older learners (e.g., reduced cognitive speed, difficulty dividing attention the need to eliminate external irritators, decreased short-term memory) when preparing young tutors for IGL, in this paper we raise the question of whether it is justified.

It has been shown that children and teenagers can possess rather negative stereotypes about older people (Meshel & McGlynn, 2004). One must also be mindful that according to the capitalist paradigm age-specific differences may be viewed as disadvantages (Fenwick, 2012). Young people enter the interaction with pre-existing views of older people, which makes them more liable to focus on the differences between themselves and older adults, to distinguish themselves in terms of age, and to describe their thoughts, feelings and beliefs about older adults in more negative terms (Teater, 2018). Meshel and McGlynn (2004) conducted a survey in which young people (aged 11–13 years) participated in 'a variety of educational activities designed to increase their knowledge and sensitivities regarding older persons and the aging process'. They found that such targeted preparation had no effect on the negative stereotypes held by young people, nor

did the information presented to them augment their positive beliefs about older people (Ibid.).

One possible explanation is that once formed, stereotypes are resistant to change (Stangor & Lange, 1994 in Meshel & McGlynn, 2004). In fact, casual contact with the target group often reinforces pre-existing stereotypes (Ibid.). However, one of the few possible means of "stereotypic dilution" (Hilton & Fein, 1989) is to make out-group and in-group representations more similar (Devine, 1989 in Meshel & McGlynn, 2004). In other words, the young person must be given the opportunity to interact with the older person, and the type of activity must be designed to reveal the similarities between them. The age-specific knowledge provided to teenaged tutors prior to contact with older learners would have the opposite effect.

Furthermore, might not this approach to preparation for learning sessions produce a 'stereotype threat effect' with regard to older learners (Abrams, Eller, & Bryant, 2006) that could affect their performance? Jordano and Touron (2017) have shown that stereotype threat is associated with significantly increased distraction and decreased memory function among older learners. Providing young tutors with age-specific knowledge might also have adverse consequences because older people are not a homogeneous group: older learners would not all have the same needs.

Some surveys indicate that there are exceptions to teenaged tutors' inability to consider older learners' special needs in a tutoring interaction. We have ascertained that teenaged tutors never hurried learners when they were typing on the keyboard (Tambaum, 2017). It can therefore be deduced that young tutors are able to take the slower cognitive processes of older learners into consideration, not because of their knowledge of such age differences but because they believe that older learners *are able* to perform the particular task without help. In another instance (Ibid.) we saw that young tutors curtailed their interruptions only when they were confident in the learner's ability to fulfill the particular task, that is to say, after several repetitions of the task. This indicates that young tutors needed to be convinced of the learner's ability to complete the task in order to let them perform at their own pace. In other words, the young tutor was focussing on the learner's existing skills, and not on an age-related reduction in ability, while nevertheless responding appropriately to that condition.

How it would be possible to ensure that teenaged natural tutors take the needs of older learners into account in a reversed IGL framework without being informed about those needs during preparatory training?

An alternative idea based on the following theoretical analysis will be introduced in this article, by demonstrating that young tutors' ability to implement scaffolding as one of the major interactive tutoring techniques indicates that they are able to apply most of the principles of older-age learning without paying undue attention to them. First, the concept of scaffolding will be briefly described.

The concept of scaffolding

The scaffolding technique was first introduced by Wood, Bruner, and Ross (1976) as 'one form of help that more knowledgeable others can provide to the learner'. Scaffolding is a type of assistance provided by a tutor in order to direct the learner's activity within a "Zone of Proximal Development" framework (Vygotsky, 1997). While the descriptions of scaffolding vary to a certain extent, all authors agree that the distinguishing feature of the technique is fading (e.g., Goldman, 2009; Wood et al., 1976), which is a gradual decrease in direct instruction (performing the task with or without commenting on own

activities, examining and/or reading the screen content, demonstrating, commanding, describing, explaining, giving feedback) and an increase in observation in a non-interventional way by hinting, prompting or giving other indirect advice. In other words, scaffolding could be called the 'art of non-teaching' (Vygotsky, 1997), in which the tutor allows the learner to act as independently as possible.

The earlier discussion about scaffolding metaphor has referred to its limits to be a practical tool for researcher being just a general discourse (Stone, 1998). For example Berk and Winsler (1995) have described scaffolding as an artful "dance". However, Chi and her colleagues (2001) have formulated 15 tactics of direct scaffolding, and the author in her previous study (Tambaum, 2017) introduced the concept of indirect scaffolding as the avoidance of any technique, including direct scaffolding. Thereby, practitioners are now able to use scaffolding and its use can be measured more precisely.

According to Chi and colleagues (2001), direct scaffolding tactics include hinting, pumping, redirecting the learner, decomposing the task, maintaining goal orientation or reminding the learner of some aspect of the task, describing the problem in order to orient the learner to the important features, making fill-in-the-blank kinds of requests, initiating the reasoning step, asking a leading question, highlighting critical features, comparing the current problem with a previously solved problem, providing an example, providing physical props, completing the learner's reasoning step or 'splicing in' the correct answer, and executing parts of the task. The above list shows that the main function of scaffolding is to assist the learner to make a correct decision or to discover the next step.

The dialogue presented in Example 2 illustrates the use of scaffolding tactics formulated by Chi and colleagues (2001). In this example the teenaged tutor instructs the older learner in the use of E-Ticket Office.

Example 2
  Tutor: Right, right, and let us go and see the play 'Window to the sun' instead.
  Learner: Yes.
  Tutor: When you are certain of the tickets. Now, down there is the button 'Continue'.
  Learner: (Scrutinises the screen) Eee Ticket Office. Wait. Button 'Continue'.
  Tutor: Yes.
  Learner: (Searches the screen) Mhmh.
  Tutor: That´s it. You do not want the ticket, do you. You do not want to register, do you. Then
  Learner: I … (scrutinises the screen)
  Tutor: … on the left (pause 4 sec)
  Learner: Left? (Scrutinises the screen) Oh, the button 'Continue'!
  Tutor: Right, 'Continue'. You always have to read what is on the screen.

This is an example of appropriate tutoring, in which the tutor does not demonstrate, point out or refer in advance to text and features on the screen that lead to the next step but supports the learner to find them by himself. In this example the following scaffolding tactics are used by the tutor: (Line 3) decomposing the task, (Line 5) pumping, (Line 7) maintaining goal orientation, and (Line 9) hinting.

Indirect scaffolding describes an interaction in which the tutor is available to the learner, but only observes the learner acting independently and does not interfere even when the learner faces a problem, is thinking, or tries to make or makes a wrong move. Indirect scaffolding has been identified as a distinct technique particularly applicable to

teenagers' naturalistic tutoring since young tutors tend to offer help before that help is requested (Tambaum, 2017).

It has been shown that adult learners prefer instructional support based on scaffolding rather than direct instruction or a combination of instructional approaches (Wood, Lanuza, Baciu, MacKenzie & Nosko, 2010). In addition to this preference, scaffolding reduces the risk of a more knowledgeable person's adopting a dominating style, which may have a negative impact on the less competent party, as shown by Arcidiacono and colleagues (2011), and lessens the possibility of ignoring the existing knowledge of the learner (Bozoki et al., 2013). Chi and colleagues (2001) have described the scaffolding technique in relatively clear and specific terms, which facilitates training in scaffolding skills. For example, it would be more complicated for the young naturalistic tutor to understand the idea of learners being active and independent rather than giving them hints or decomposing their task. It should be noted that scaffolding techniques are particularly useful in e-skills tutoring, as usability based on an intuitively comprehensible navigational structure is a basic characteristic of websites today. The tutor could ask the learner where he or she thinks an object is on the screen rather than demonstrating or explaining. These arguments support the use of scaffolding by teenaged tutors who are facilitating older-age e-skills learning.

As described above, tutoring principles such as flexibility, consideration of diversity, support for the learner's sense of security, etc. can be applied in order to meet the needs of older learners. The links between these principles and the concept of scaffolding, which have been identified through theoretical analysis, are presented and discussed in the following section.

Application of older-age learning principles through implementation of the scaffolding technique

The tutoring principle of *flexibility*, including the appropriate pace of learning, is supported by the nature of scaffolding, which is based on what the learner is prepared and able to do at each step of the tutoring process.

As described above, young tutors following their natural style of instruction do not always adopt the pace that the learner requires. In previous research we observed that most of the techniques that young people used were non-interactive: explanations and commands predominated (Tambaum & Normak, 2018). The pace of the most frequently employed techniques was determined by the tutor. Most of the tactics used in scaffolding allow time for the learner to respond. In other words, the learner dictates the pace of instruction.

The principle of *security* is intrinsic to the practice of scaffolding. The scaffolds embodied by the instructor provide learners with readily available assistance. The scaffolding tutor is advised to create an atmosphere in which the learner is not afraid of making mistakes. It is nevertheless important to distinguish steps to prevent mistakes from those that create a secure environment within which mistakes may be made.

Manuals and predefined programmes in which the recommendations are not based on scaffolding theory describe the tutor's role in providing a sense of security as follows: 'They [an older students] just need a little help and guidance, plus the reassurance of having a safety net as they explore this new technology, and you can give them that just by being there' (https://www.telstra.com.au/content/dam/tcom/seniors/pdf/new-guides/presenters-guide-new-accessible.pdf, p. 1). In our studies, this passive presence

has been given a distinct name – indirect scaffolding (Tambaum, 2017; Tambaum & Normak, 2018).

In order to incorporate the principles of *diversity and interconnectivity*, the tutor must be able to create links between new material and the learner's existing knowledge. Scaffolding achieves this by means of two possible tactics: 'providing examples' and 'comparing the current problem with one that was solved previously'. Fading – a distinguishing features of the scaffolding technique – generally provides the opportunity to discover the learners' individual characteristics, as fewer direct instructions on the part of the tutor, such as explaining or demonstrating, provide more opportunities for learners to present and explain the associations and relationships of the new material to their existing knowledge.

A sense of success is achieved when the learner is able to apply the acquired skills and knowledge. During the learning process, learners need to be given the opportunity to practice new skills until they succeed. Fading also assists in accomplishing this goal. One scaffolding tactic recommends dividing the task into smaller components (decomposing), thus decreasing the likelihood of failure.

The principle of *independence and activity* requires the tutor to play a supportive role and the learner to acquire new knowledge and skills through active participation. Learners take responsibility for their own progress. Educational gerontology emphasises that learners should be encouraged to do as much as possible themselves, no matter how much time it takes or how often they 'stumble'. This approach is an innate characteristic of scaffolding.

This principle also has another significant aspect. The learner must be consciously directed towards independent learning not only at that moment but also in the future. The principle of *sustainability* is also relevant – the method of instruction must safeguard the volition of older learners and provide the skills to continue their self-development. These future-oriented requirements are pertinent to the organisational aspects of older-age learning, and extend beyond the practice of scaffolding. The principle of sustainability in facilitating older-age learning needs to be emphasised in the preparation of young tutors for IGL (Buffel et al., 2014).

Enjoyability and *comfort* are principles that do not directly relate to scaffolding. Scaffolding can actually be quite uncomfortable for the learner because the tutor's aim is not to provide correct answers and avoid errors, but to intervene only in the event of false responses and irresolvable problems. However, if support is given correctly, it should be possible for the older learner to acquire new skills in an enjoyable manner, especially if the role of the tutor is explained to the learner at the outset.

The principle of *usefulness* refers to the learners' ability to apply new skills and knowledge in their future activities. This principle is respected when the tutor is familiar with the learner's interests. Tambaum and Normak (2014) have concluded that a questionnaire or other tool or method of identifying the interests, habits and everyday routines of the older learner should be developed and provided to the young tutor during the IGL preparatory phase. Such preparation would support the creation of trust between the tutor and learner, which seems to be crucial to implementing direct and indirect scaffolding techniques.

The principles of *modernity* and quality of the content are essential to older-age learning. Scaffolding in itself obviously does not guarantee that the content is up-to-date; nevertheless, scaffolding as an interactive style of instruction should increase the likelihood that the older learner would be motivated to remain interested in learning new things.

The older-age learning environment should also support *competitiveness*, i.e., the ability to resist the subtle pressures of ageism. While this is not directly related to the scaffolding style of tutoring, ensuring that preparation for IGP encourages tutors to focus on an appropriate style of instruction instead of on age specificities would provide a good basis for broader discussions on the ways in which stereotyping and discrimination can be counteracted.

Scaffolding is one way to realise the principle of the *quality of the tutoring process*, as we know that adult learners prefer instructional support based on scaffolding rather than direct instruction or a combination of instructional approaches (Wood et al., 2010).

Discussion

As mentioned above, participation in learning activities does not automatically guarantee a positive outcome for older individuals. This is important, as we know that tutoring now represents a much wider field of activity than in the past, when it was principally regarded as a formal occupation (Bruner, 1996; Strom & Strom, 2011, 2012; UIL, 2015).

According to Graesser and colleagues (1995), non-professional, or 'natural' tutors, require preparation for their task in order to avoid a negative impact and risk of failure in older-age learning (Strom & Strom, 2012). Scholars in the field of older-age learning and IGL share the belief that age-specific knowledge, such as reduced cognitive speed or decreased short-term memory, should be introduced prior to instructing older people (Formosa, 2012; Thomas, 2012). Few surveys of teenaged natural tutors who are facilitating older learners' e-skills support this belief (Tambaum, 2017; Tambaum & Normak, 2018), yet the principles of communication pertaining to the special needs of older-age learners are often printed in manuals for young tutors undertaking intergenerational e-skill learning projects (e.g., cyber-seniors.ca/get-involved/become-a-cs-mentor; genyes.org/resources; www.geengee.eu/geengee/; www.intergenerational-ictskills.eu/cms/).

As age-related changes are interpreted as disadvantages in the capitalist world (Fenwick, 2012), an implicit focus on learners' reduced abilities would diminish the opportunity for 'stereotype dilution' among the younger generation, as the similarities between the young tutor and older learner would be much more difficult to discover in the course of IGL (Hilton & Fein, 1989).

It has been shown in the literature that older learners' specific needs can be met through the implementation of geragogical principles (Tambaum, 2015). These principles are somewhat complex, and it is likely assumed that they would be applied by professional tutors. However, within the context of community learning, in which teenagers play the role of tutors, their preparation would probably not reach a professional level.

A more plausible solution to preparatory sessions for natural teenaged tutors has been proposed, based on a theoretical comparison of the scaffolding technique (Chi et al, 2001; Goldman, 2009; Wood et al., 1976) on the one hand, with tutoring principles derived from research on older-age learning on the other (Tambaum, 2015).

It has been shown that the tutor who is able to provide learning support through scaffolding tactics can be flexible and adopt the pace that learners require when thinking, executing new skills, dividing their attention between objects, etc. Scaffolding helps to reduce the cognitive load on the learner by reducing the number of demonstrations, commands and other non-interactive techniques that the learner would be required to imitate and remember. The trust established through scaffolding gives older learners a

sense of security. Fading, which is a distinguishing feature of the scaffolding technique, provides the opportunity for the learner to be as independent and active as possible, and to form connections between new and previous knowledge.

Nevertheless, scaffolding and implementing other interactive techniques may not address all the principles of older-age learning that help to meet their specific needs. For example, a scaffolded learning process may be quite uncomfortable for older learners, as the tutor has not provided an easy way for them to perform learning tasks. The principle of usefulness in the sense of time saving might also be perceived as lacking. As the learners will probably make many more mistakes and encounter more difficulties with a scaffolding process as compared with an approach based on commands and demonstration, which mainly requires imitation, their confidence in their ability could conceivably be undermined. Therefore, older learners should be informed about the nature of the tutors' preparation and if necessary, scaffolding and other interactive techniques should be introduced to them. This would also neutralise a possible 'stereotype threat' (Abrams et al., 2006) to older learners.

In previous research we introduced the idea that in a reciprocal learning model the older learner could also receive preparatory training in interactive tutoring techniques in order to serve as a resource person for the young tutor (Tambaum & Normak, 2018). The hypothesis was advanced that in IGL projects in which older learners are given the opportunity to reflect on the tutoring techniques that will be used by their young tutor in the process of learning Internet skills there would be a much greater usage of interactive techniques, including scaffolding, compared with similar IGL projects in which learners are not provided with such preparation.

Whether young tutors acquire knowledge of how to support older learners via special preparatory training or whether they can expect advice about tutoring techniques from the learner during the session, natural tutors' uncertainty, which would not support the learner's cognitive development, (Tudge, 1990, in Arcidiacono et al., 2011) will be decreased.

Conclusion

In this article the author proposes training young tutors in interactive tutoring skills rather than in the age-specific needs of older learners when preparing them for facilitating older individuals' e-skills. The reason for avoiding focusing on the differences between older and younger learners is derived from the fact that only perceived similarities between members of in- and out-groups can diminish the stereotypes that each group holds about the other. The connections between the principles that apply to older-age learning and the techniques of scaffolding show that if a young tutor is trained in the latter, the older learner is more likely to be instructed in a way that takes the characteristics of old age into account without directly focussing on them.

The analysis presented in this paper summarises and combines the results of recent research; its theories and conclusions will require validation from empirical studies.

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Education matters: cumulative advantages and disadvantages amongst Portuguese older men

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Abstract

Our paper sought to analyse the influence of the educational background over various dimensions of the lives of Portuguese older men (age 60+) across the life course. Drawing on the theory of cumulative advantages and disadvantages we used biographical research, namely narrative interviews with men from different educational background: men with a very low educational background and men with a medium/high educational background. Our results show the influence of educational background in the life course, and how it can contribute to accumulation of advantages/disadvantages that explain their biographies and the very different situations in which they live today.

Keywords: Cumulative advantages/disadvantages; education; life course; transition

Introduction

Increased life expectancy along with the decline in fertility rates have changed the demographic structure of western societies, which are now marked by a decreasing share of children and an increasing share of the older population. In Portugal, the ageing index

has raised from 98,8, in 2000, to 153,2 in 2017, being one of the highest of the EU (European Commission, 2018), and it is expected to increase in the next decades (European Commission, 2015). Projections of the elderly population established in 2015 predict that in 2060 34,6% of the Portuguese population will be aged 65 or more years, with almost half of the elderly (46,5%) aged 80 years or more (European Commission – Doctorate-General for Economic and Financial Affairs, 2015). This scenario has led to an increasing concern with the significant challenges posed by population ageing. Older adults became a source of concern and are frequently depicted not only as a homogeneous group, but also as a problematic one (Chean, Sek, Moon, & Merrian, 2008; Mauritti, 2004; Stephens, Breheny, & Mansvelt, 2015).

In fact, processes of ageism that carry specific stereotypes (Phelan, 2011; Martinson & Berridge, 2015; Tarrant, 2013) partially maintain the homogeneous and negative images of ageing. The research community should contribute to tackle those images, namely highlighting the diversity among the older adults and stressing the impact of individual, structural and societal factors throughout the life course, and more specifically in the old age. Gender was a factor that caught our attention due to its influence in the participation in adult education and learning. Statistical data from the Eurostat demonstrate the influence of gender in participation in adult education, showing that in the EU28, in average, women participation is bigger than male participation. There are only four countries in which men participate in learning slightly more than women (Germany, Croatia, Switzerland and Turkey). It seems, therefore, that men are becoming minority participants in some spaces and sectors of learning (Golding, Mark, & Foley, 2014), despite how diverse might be the factors that explain this fact in a national level.

Previous research in Australia (Golding, 2011, 2012) indicated that fostering learning among older men, especially those with high levels of illiteracy, could make a difference in various dimensions of their lives, affecting positively their well-being. Moreover, informal learning taking place informally in the community generated in Australia a huge social movement (the men's shed movement). The Australian research inspired us to look at older men's learning from a European perspective. Exploratory research conducted in Slovenia (Jelenc Krašovec, Radovan, Močilnikar, & Šegula, 2014), Estonia (Tambaum & Kuusk, 2014), Malta (Galea & Farrugia-Bonello, 2014) and Portugal (Ricardo, Tavares, Coelho, Lopes, & Fragoso, 2014), revealed some promising results. In these countries, various non-structured activities developed in community spaces had an influence on older adult's well-being. It also became clear that women prefer structured, traditional learning activities, while men tend to engage in hands-on activities, problem-oriented in some cases, and those characterised by competition. This community-based learning contrasted deeply from formal and vocational learning and 'the informal learning style preferred by men is also deeply embedded in their own past and present experience, independent of the source of such experiential knowledge (stemming from work and working life, or roughly coming from leisure)' (Fragoso & Formosa, 2014, p. 103).

Those exploratory studies were the base of the Old Guys project[1] that focus on the learning of men with 60 years or more. As a part of this study, we interviewed in southern Portugal around 90 men between 60-93 years old in various situations (more details in the methods section) and in urban and rural environments. The emergent analysis of this data proved to be a very complex problem, as it was very hard to uncover patterns that had a meaning. However, when we used the simple criteria of academic background (complemented with urban/ rural environment), patterns begin to appear across the life course of the men from our sample. We were able to define three different groups of men and analyse the patterns coming within these groups. At this point, the aims of our article

emerged: to analyse the influence of the educational background over various dimensions of the lives of men over 60 across the life course; and to understand the evolution of men's life context, bearing in mind the constant tensions between structure and agency, trying to reach a complex explanation of their present situation.

Theory of Cumulative Advantages and Disadvantages

Older adults are far from being a homogeneous group. Their life courses are shaped by health, financial capital or educational attainment, among other variables, differences which led to inequalities across the life course (Dannefer, 2003; Halpern-Manners, Warren, Raymo, & Nicholson, 2015; Mazzonna, 2014). If it is true that globally socioeconomic inequality is increasing (Piketty, 2014), Portugal has, among the European countries, one of the highest levels of income inequality (OECD, 2018) and some of the poorest regions of EU (European Commission, 2018). This is the result, according to Petmesidou and Papatheodorou (2006), of 'the weak distributional impact of social transfers, which in turn reflects the weakness and imbalance of their respective social security systems' (p. 15).

The susceptibility of older people to inequality has been gaining attention (e.g. Dannefer & Huang, 2017; Grundy & Sloggett, 2003; Heap & Fors, 2015; Heap, Fors, & Lennartsson, 2017; Milbourne & Doheny, 2012; Ponomarenko, 2016; Wildman, Moffatt, & Pearce, 2018). The existing evidence suggests that old age is a period of life of significant socioeconomic inequalities. More, these inequalities are increasing (Crystal, Shea, & Reyes, 2017; Scherger, Nazroo, & Highs, 2011): 'At ages 65+, the least well-off 40% shared only 14% of total adjusted income by 2010, suggesting that the 'two worlds of ageing' phenomenon (Crystal, 1982) persists, with even greater disparities between prosperous and penurious elderly' (Crystal et al., 2017, p. 915). Those disparities are visible in several domains of life like, for instance, health status and wealth, and can be better understood from a life course perspective.

One of the main causes of income disparities in Portugal is educational attainment. As Papatheodorou and Petmedisou (2006) have shown in their analysis of poverty profiles in the European southern countries, Portugal is characterized by the existence of a strong relationship between educational level and income:

> Portugal has the sharpest differences in average income and poverty rates between educational groups. The average income of households in which the head has a third-level of education is three times higher than that of households in which the level of education of the head is less than the second stage of secondary education. The poverty rates in these two subgroups are 1.4% and 24.6% respectively (ibid., p. 76).

Portugal has been characterized by low literacy rates and school enrolment. At the beginning of the 20th century 75% of the population (aged 7+) was illiterate, in 1940 it dropped to 50% and in 1970 to 25%, one of the highest illiteracy rates of the European countries (Candeias, 2010). Compulsory schooling was reduced from 5 to 3 years, in 1930, during the dictatorial regime, and only extended to 4 years, in 1954 for the boys and in 1960 for girls. Secondary and higher education was intended for a minority of the Portuguese population, mainly for the rural and urban elites. Moreover, it was only after the implementation of the democratic regime, in 1974, that social programmes, like the development of a national health care system or public systems of social protection began to be developed (Valadas, 2017). Until then, and under the dictatorial regime, the dominant ideology was the *familialism*, 'supported by the rural condition of a large part

of the population which permitted the maintenance of social support based on family and community solidarity' (Portugal, 1999, p. 236) and also low expectations of social mobility.

So, it is not surprising that the majority of Portuguese older people (65+) has no more than four years of schooling (73,7%) and only 12,3% has secondary, post-secondary or tertiary education and, consequently, due to the relationship between education level and income, poverty and inequality in old age are a reality.

The theory of cumulative advantages/disadvantages has been used to explain inequalities in old age (e.g. Crystal et al., 2017; Heap & Fors, 2015; Ponomarenko, 2016; Read, Grundy, & Foverskov, 2016) and suggests that these are a result of exposure to social and personal advantages/disadvantages in different domains throughout the life course, resulting from a long-term social process. Crystal, Shea, and Reyes (2017) state that

> increases in inequality observed among members of each cohort as it has aged, and persistently high inequality in late life, speak to the continuing pattern by which early advantages and disadvantages have effects that persist, and indeed are magnified, over the life course (ibid., p. 917).

In fact, inequality can be amplified, maintained or attenuated by structural factors (e.g. pension schemes, social benefits, access to healthcare) or by personal choices. We should also note that throughout the life course disadvantages can be reinforced through *timing*, that is, through disadvantage at a crucial moment in life (e.g. health problems that lead to early retirement) or through long term exposition to social disadvantage, that is, *duration* (Ponomarenko, 2016).

One issue that emerges in the studies about cumulative advantages/disadvantages is, therefore, the dialectics of social structure and human agency. Although the role played by agency in how people respond to life events and construct their life experiences is recognized, studies of processes of accumulation of advantages/disadvantages during the life course have shown that individuals 'have agency *to a certain extent* and this agency is limited *to a certain extent*' (Duncan, 2015, p. 42). According to Dannefer and Huang (2017) agency, defined as 'the human constant of formulating intentions and externalizing them into human activity' (p. 6), is not only constrained, but also shaped by social structure like, for instance, access to education and learning in young age or in adulthood.

Even though processes of accumulation of disadvantage can be modifiable by human agency, this is far from being an easy process, especially in old age (Heap & Fors, 2015; Walsh, Scharf, & Keating, 2017). Older adults have fewer opportunities to improve their financial situation, in case of material deprivation, or to overcome physical and mental health problems. In addition, the accumulation of disadvantages could be amplified by old age vulnerabilities (Walsh et al., 2017). Several studies have revealed that older adults are more vulnerable than younger adults to disadvantage in several life domains, like material privation or health problems (Heap & Fors, 2015; Heap et al., 2017; Walsh et al., 2017).

Research studies carried out on health inequalities later in life have shown that there is a relationship between socioeconomic status and health (e.g. Grundy & Sloggett, 2003; Hoebel, Rommel, Schröder, Fuchs, Nowossodeck, & Lampert, 2017; Matthews, Jagger, & Hancock, 2006; Mirowsky & Ross, 2005; Read et al., 2016; Zimmer, Hanson, & Smith, 2016), with those in the most socio-economically disadvantaged group suffering the greatest health disadvantage (Grundy & Sloggett, 2003). This well-established relationship suggests, as Dannefer (2003) claims, the need to consider cumulative advantages/disadvantages process in the study of health and ageing. Research has

indicated that economic poverty during the life course increases the probabilities of health problems in old age (Grundy & Sloggett, 2003; Kahn & Pearlin, 2006), like, for instance, frailty (Poli et al., 2017); the perception of greater barriers in access to health care services (Hoebel et al., 2017); and subjective health and well-being of older people (Read et al., 2016). Furthermore, wealthier individuals not only have a lower risk of suffering from health problems (Mirowsky & Ross, 2005), due to the adoption of healthier lifestyles and facilitate access to appropriate health care during their life course, but also have financial resources that may function as a partial buffer to some of those issues (e.g. home adaptation in cases of reduced mobility; home care).

Research on cumulative advantages/disadvantages processes has also found considerable evidence that financial capital in later life is determined by the previous employment history and, therefore, influenced by educational level and occupational status (Milbourne & Doheny, 2012; Möhring, 2015; Myles, 2002; Scherger et al., 2011). The existing evidence suggests that the amount of pensions benefit depends on the individual employment history (e.g. regular or atypical employment; frequency of employment interruptions), and the chance to save for retirement or to enroll in a private pension saving depends on the level of income during working life (Milbourne & Doheny, 2012). However, this relationship between individual employment history and financial capital in old age can be attenuated or amplified by specific pension schemes (Möhring, 2015). We can therefore state that earlier inequalities in educational attainment and in labour market position can lead to economic inequalities in old age; those inequalities may, nonetheless, be altered by structural factors. More specifically, it can be attenuated if an enough pension income is guaranteed or, on the contrary, amplified if the pension income is related to the amount and number of contribution years.

In countries, like Portugal, characterized by an employment-linked social insurance, and in which the family has an important role in managing risk and social responsibilities, having a stable, lifelong employment functions as a protection against social exclusion and inequality, namely in the old age. Therefore, those with an employment history characterized by periods of unemployment or non-qualified jobs face a higher risk of disadvantage in old age (Esping-Andersen, 2002).

Disadvantages in one life domain create a vulnerability to disadvantage in other life domains (Heap & Fors, 2015; Walsh et al., 2017). Accordingly, financial capital may limit the scope of leisure activities in which old people can engage (Scherger et al., 2011); the involvement in political activities (Milbourne & Doheny, 2012) and civic participation; influence the social network dimension (Cabral, Ferreira, Silva, Jerónimo, & Marques, 2013), and the quality of life (Blane, Netuveli & Bartley, 2007). Halpern-Manners, Warren, Raymon and Nicholson (2015) also claim that well-being in later life is influenced by previous work and family experiences.

All those studies have in common, besides stressing the persistence of social inequality through individual's life courses, the highlight of the crucial role that education plays in the cumulative advantages/disadvantages process throughout the life course. Education influences, for example, the choice of occupation (Van Kippersluis, O'Donnel, Van Doorslaer, & Van Ourti, 2010), life expectancy (Rogers, Hummer, & Everett, 2013), financial planning (Tamborini & Kim, 2017) or cultural participation (Scherger et al., 2011). Educational attainment not only plays an important role in health and income inequalities, but also in attenuating or aggravating income and health effects on individuals' life trajectories. Mirowsky and Ross (2005) state that 'education transforms the person, putting the individual's life in a different track. Education acts as structural element of the individual's life' (p. 28). In other words, educational attainment sets the course of one's live and, consequently, of well-being and life quality in old age.

Given the central role played by educational attainment in setting individuals life course and, consequently, in the process of cumulative advantages/disadvantages, the main aim of the current research was to provide a better understanding of the life course of Portuguese older men (+60) with different educational backgrounds, focusing in a number of life dimensions like, for instance, professional trajectories, social network or involvement in learning and leisure activities. Since *timing*, that is the occurrence of disadvantage in crucial moments of life, can reinforce life course disadvantages (Ponomarenko, 2016), as mentioned earlier, we were especially attentive to transitions triggered by events such as divorces, deaths of companions, health accidents. Our intention was to understand how the participants coped with these transitions and the impact they had, from the individual's point of view, in their present situation.

Method

When theorising the experiences of men's ageing it is important to consider the power Because cumulative advantages and disadvantages can only be understood in a life course perspective, we used biographical research in our investigation. According to Schafer, Ferraro and Mustillo (2011), disadvantages through the life course are 'rooted in concrete social conditions and meaningfully incorporated in human narrative' (p. 1082), that is through *biographical structuration*. Biographical research seeks to understand the changing experiences and viewpoints of individuals in their daily lives, what they see as important, and how to provide interpretations of the accounts they give of their past, present and future (Roberts, 2002). They also 'offer rich insights into the dynamic interplay of individuals and history, inner and outer words, self and other' (Merrill & West, 2009, p. 1), so this strategy seemed the most appropriate and useful approach. Moreover, we believe that individual stories have meaning within a certain historical and social context (Merrill, 2015). Although biographies always begin with the individual story, they go beyond this and bring forward the collective, allowing us to understand how groups are affected by structural conditions such as class, gender and race. We are thus talking about the interplay between structure and agency, history and the present (Plummer, 2001).

We interviewed 90 men aged between 60 and 93 years old, living in rural and urban areas of the Algarve (Faro and Olhão are urban areas; São Brás is a rural area). We tried to have the maximum diversity regarding the following criteria: situation before work (retired, active, unemployed), educational background, income, geographical distribution, and level of activity in civil society organizations. We did *not* interview institutionalized men (in residential homes, for example), since we choose to include in our sample only men who can lead an independent life. For the same reason, men who attended day-care centres or similar, but were independent, were considered in the study.

To collect data, we used narrative interviews, so that it was possible to capture different dimensions of the participant's life course, generate rich descriptions of people's lives (Merrill, 2015) and highlight transitions and change in the life course (Biesta, Field, Hodkinson, Macleod, & Goodson, 2011; Hallqvist, Ellstrom, & Hydén, 2012). Riemann (2003) argues that narrative interviews involve: (1) a relationship of trust between interviewee and interviewer before and during the interview; (2) a generative question which elicits a narrative of the interviewee's involvement in a constellation of experiences and events that are relevant to the interviewee; (3) a series of questions and answers, that are based on the narrative and questions. The narrative interview included information

concerning childhood (family background, schooling), working life, transition to retirement and actual life (health status, financial situation, family and social networks).

Through content analysis, we examined data in order to understand what they mean to people (Krippendorff, 2013). We did not use pre-established categories. Instead, we used an inductive procedure to try to uncover emergent patterns of meaning (Kondracki, Wellman, & Amundson, 2002) that could guide us to build our categories. Our first attempts were unsuccessful due to the huge diversity of the information – which was indeed a reflection of the diversity of older adults. We then tried to separate men in three different groups using as criteria the educational level and rural or urban context of life. Group 1 included men from urban areas with a very low level of educational background (four years of schooling or less); group 2 included men from rural areas with a low/medium educational background (most with nine years of schooling, but some with secondary level); group 3 included men from urban areas with a medium/high educational background (some with nine to 12 years of schooling, some with a tertiary educational degree). In respect to group 3, we must say that due to the low levels of schooling, particularly, as mentioned earlier, in old adults (+65), men with nine years of schooling, like those in our sample, had an easy access to qualified jobs (e.g. bank manager, specialized techniques professions) and, therefore, to a financial and cultural capital similar to the older men who had a tertiary educational degree. For that reason, it seemed logic to group them together.

This grouping produced very interesting results: not only we discovered similar patterns within each one of the groups, but also patterns were different between groups. In this article, and considering our aims and theoretical framework, we present the results from groups 1 and 3.

Men with a very low educational background

This group includes men with four years or less of schooling and some of them are illiterates. As expected, given the relationship between educational attainment and professional trajectories, they have a working history as non-qualified or manual workers: working in civil construction, waiters in restaurants or coffee shops, fishermen, dockers, shoemakers, etc. Although we find some men who had a more or less continuous occupation, most of them had a history of changing from a non-qualified job to the next one, therefore with high levels of professional instability. A significant number of these men had worked in the informal economy at least for parts of their lives and this has consequences on decreasing even further their pensions, calculated in the basis of the numbers of years and amount of contributions to the tax system.

Having a low income is also something common to these men. The goods they possess can be seen as an indicator of their level of financial capital: it is very rare that we find someone in this group possessing a driver's license and none has a car – bicycles are more common though. Only a few have TV. None has used computers or other digital devices apart from the mobile phone. Still, not all possess a mobile phone and the ones who do make a basic use of it. Some of them are still working because they need it to survive: for example, Manuel earns a pension of 180€, in a country where the minimum wage is about 580€ and renting a very small flat in a peripheral area will cost at least 300€/month. We found some men in this group who did not had a place to stay, or were dependent on friends who lend them small precarious 'rooms' in the back of some courtyard. Most of these men, therefore, live in very precarious conditions or even in poverty. Some of them do not have enough not even to eat: they are dependent from the assistance of day-care centres, or similar institutions, to get two meals a day.

If men in this group have serious health problems, this triggers a biographical turning point. Health problems can be the cause of a forced earlier retirement, or cause a deficiency. The former and the later further deepens their poverty. In addition, these health problems can also reduce dramatically their mobility and constraint their ability to socialise. The fact that in most public spaces there are still important obstacles to mobility does not help. Just to give an extreme example, we interviewed a man who did not left his own small apartment for about two years because he was in a wheel chair and could not get-out without the help of someone.

These men's transitions to retirement (when happened) were generally problematic, due to multiple causes. First, basic financial problems due to a professional life of low salaries with no possibilities to accumulate even a small amount of money or the loss of income after retirement. Furthermore, only a minority of these men have financial support from their families. Their reduced financial capacity, as seems natural, has a negative effect in a number of life dimensions. To give an extreme example, it is frequent that these men meet in neighbourhood coffee shops or in the marketplace. But some have so deep financial problems that even cannot afford to buy a coffee (around 70 cents in Portugal) and give up socialising due to social shame (hence the importance of public spaces, like parks). Second, among these men social networks tend to be small in dimension and very unsatisfying. Some are alone, some have some family, and some others have family but do not meet family members regularly. João, for example, does not even know where his two nephews live and the only contact with his sister happens when she takes him to the medical centre – when he really needs transportation. Contacts with neighbours tend to be 'civilised' but not deep and friends are in the decrease. Loneliness is a problem:

> I go to the doctor or go to Faro in an ambulance, but I go and come back alone, it's a sadness… not too long ago I asked to a grandson of mine 'come with me to visit your grandmother at the home' and he told me 'I don't have time'. Well, if he doesn't have the time he doesn't, it is a sadness (…). I watch TV and seat by the front porch for some hours waiting for the time to go by, I see it go by.

Third, a considerable number of men are widowers. For a small number of men, the death of their wives was a traumatic event that left psychological marks (depression or even suicidal thoughts). Fourth, the majority of these men have mobility problems: in some cases, this only means that they are confined to the area of their neighbourhoods; others have health problems that really constraint their mobility with negative effects in their socialisation. The conjunction of all these factors leads to a terrible situation after retirement, marked by poverty. In these conditions, it is not strange that, generally speaking, these men's expectations towards life itself are very low. In the words of António and Ricardo:

> There is only motivation when there's a job so that we feel good; one needs a goal in life. I still have some objectives, but the rest is lacking, work is lacking, a house to live is lacking (…) Tell me, what strengths you think people like me have left to live, the way things are today?

> Now I feel I'm like a dog and sometimes I say this because I'm wishing to die so I don't suffer anymore. Why don't I die? I would lay down now and not awake anymore, because I'm alone.

Nevertheless, not all the men we interviewed have travelled difficult transitions to retirement and not all men live a terrible situation. A minority of men seem to have successful subjective transitions to retirement. Some keep a professional activity (even if this shows a simple financial need) and this is central in their lives. This is very common among fishermen, for example. After a life of work in boats of all kinds, they are still payed for doing some activities in the docks (taking care of fishing nets, for example). Even if their lives are not particularly comfortable by our standards, they do not complain. Also, they use public spaces for socialisation purposes and play some games with their friends (cards, dominos, etc.). In some cases, we can see that support coming from social networks does make a difference, not only in the way these men subjectively perceive retirement, but also in their objective situation (friends, family, and ex-employers made a difference in some cases).

The patterns of activity of the men in this group include little intellectual activity and no participation at all in structured learning; no physical activity except if their occupations require it. Socialising, usually in neighbourhood coffee shops, or public spaces in the community, is the more noticeable activity they keep. They also have a very low level of participation in associations of some kind, even if some had such experiences in the past. It is natural that even when asked for, most men are not able to identify activities they would like to participate in. A minority claim that the community lacks public spaces where activities of some kind would take place.

Men with a medium/high educational background

This group includes older men that spent a minimum of nine to twelve years in school and some of them have a higher education degree. It is important to note that, as explained earlier, nine years of schooling, in Portugal, 40-50 years ago, when these men began their working life, was not a low educational level; quite the contrary, this was more than enough to give an easy access to employment (not so affected, then, by credentialism). It is therefore natural that the men of this group have a wide range of professions, most of them marked by high salaries and even high social status (engineers, teachers, bankers, specialised technical professions, executives, higher education lecturers, etc.). Their professional trajectories are marked by significant financial capital and a higher social, cultural and symbolic capital. These types of capital were crucial during the professional trajectories of these men, as facilitators of employment, changing or progressing in the career, and to easy the access to political functions in local administration.

Most of the men in this group possess a car and drive frequently (the ones who do not, simply have attained an age in which driving is not safe and do not have a driver's license anymore). The great majority has computers and use social networks, email and internet (in some cases, daily). All of them have mobile phones and use a considerable number of applications. We can summarise by saying they have a comfortable life, in respect to financial issues and have no serious problems with mobility.

The men of this group generally navigated successful transitions to retirement. This does not mean there were no obstacles at all during the transition. Most of these men had a very active life in professional terms and preparation to transition was mostly absent and for that reason some of them talked about difficulties in coping with the process, but also of a set of factors that helped them to navigate the transitions and achieve a better situation, overcoming, therefore, the initial difficulties. First, a considerable financial capital is of outmost importance and has a positive effect in various dimensions of life (access to several goods and services, a more comfortable life in material terms, a buffer against unpredictable events, ability to travel to other countries, etc.). Second, social

networks tend to be bigger and more satisfying, with increased opportunities both to give and to receive social support. To all of them family is fundamental and they gather frequently with sisters and brothers, daughters and sons; some of them provide financial help to other members of the family (mainly their children). and the majority has an active role in socialising or helping in the education of grandsons and granddaughters. Globally they maintain friends from their professional *milieus* and arrange frequent meeting with them either daily in coffee shops, or a weekly lunch, for example. The majority of these men are very active in local associations, sport clubs, amateur's theatre groups, cultural associations, or similar, some of them as leaders. Those are, in most of the cases, long-lasting activities that were once fundamental to the cultural life of the cities of Faro and Olhão; and a source of rich and deep socialisation that men use as an important resource after retirement. These men are active members in the community; they contribute daily to the community life in various roles. Third, men in this group have enough financial capital to be able to react adequately if a serious health problem occurs, attenuating their negative impact, and to provide help to their families in similar situations. Fourth, they maintain, after retirement, a very interesting pattern of activities, in diverse dimensions: they are physically active, walking was the most popular form of activity. They also have a wide range of cultural interests: reading, cinema, theatre (some belong to theatre groups), singing, learning in universities of the third age, or cultural performances of different natures. A significant part has hobbies of some kind. Some are volunteers (for example, two teach in third age universities). In addition, the majority not only had the habit of travelling but also keep that habit after retirement. To summarise, most men were able to maintain their activities after retirement and a significant number were able to pursuit new interests.

When asked about the most common problems that affect older adults, the men answer as if they were not talking about themselves, but about the others, which is meaningful. Most of them pointed common problems, such as loneliness, apathy, mobility and physical obstacles to mobility, etc. Interestingly, men think that there is a wide range of available educational, physical and cultural activities that older adults could benefit from. The problem is not, thus, the lack of offers, but instead the lack of interest in participating in these activities. They also point that the contact with younger people is crucial and defend enthusiastically inter-generational learning.

Discussion

The past and, partially, the present situation of the men belonging to group 1 can be better understood if we situate them within history. As mentioned above, these men grew up in the context of a dictatorial regime, in a time when we had 3/4 years of compulsory schooling and social protection measures in areas like health care or unemployment protection were almost inexistent. They lived their childhood, and some of them, part of their adult life, in a rural and unindustrialized country, in which only the elites and, since the 1950s, a growing urban middle class, had access to secondary and higher education. The men we interviewed lived most of their productive lives as the typical working class within the dictatorship regime and represent, maybe, a very specific generational group. While the ones who were able to educate themselves higher than the average escaped a poverty-type life – even if belonging to the working class – the ones that spent four years or less in school had a complete different fate. It seems that there is, in Portugal, an impoverished generation which has consequences in the quality of life in old age. Elements from other studies seem to support this idea. For example, a recent

investigation, focusing the active ageing of the Portuguese population (Cabral et al, 2013), concluded that only a minority of the population aged 65+ adopted practices associated with an active ageing (30%). However, more than 50% of the population aged 50-64 adopted practices associated with active ageing and these were five times higher than the ones of the population aged 75+. Again, there seems to be a big difference between the generation of those who are now older, and the generation next to them.

Echoing the results of previous research (e.g. Grundy & Sloggett, 2003; Mirowsky & Ross, 2005; Schreger, Nazroo & Higgs, 2011; Wildman et al., 2018) our study shows that, in both cases, educational background seems central to quality of life in adulthood and, more specifically, at old age. Men with very low levels of schooling had only access to occupations that granted them only the enough to survive. Although some of them changed jobs repeatedly, they were never able to escape the low salaries typical of non-qualified professions. We also have to stress that the great majority of labour rights was only possible in Portugal after the revolution of 1974. Basic things as the minimum wage, unemployment subsidies or the national health system were only possible after the dictatorship regime under which these men lived has ended. The very low pensions most of them have today mirror that historical reality. There are, in short, little common points between life as we see it today, and the more of 40 years of productive and social life that marked the life course of these men. Social protection came too late for this generation and clearly was not sufficient to prevent them to fall into a deep poverty. Throughout the life course, the participants literally accumulated a set of disadvantages that begun with a low education and were accentuated by the inexistence of a welfare system: low financial capital, limited labour rights, limited social protection, deficient health care, no access to culture consumption.

To some of these men, a number of biographical events functioned as transitions, in this case as transitions marked by a *worst* life quality: health accidents, traumatic divorces, family changes that reduced their social support, or the death of their spouses. Their transition to retirement was in most cases the last one of these hard transitions, understandably complicated and precipitating a new step into poverty and loneliness. This means that inequalities were amplified through disadvantages at a crucial moment in life (for example, the events that triggered non-predictable transitions), that is through *timing*, or through long-term exposition to social disadvantage, that is to say through *duration* (Ponomarenko, 2016). We can say, in summary, that the men today's situation is a product of this set of accumulated disadvantages throughout the life course. Consistent with the existing research on cumulative advantages and disadvantages in old age (e.g. Crystal et al., 2017; Dannefer & Huang, 2017; Pomarenko, 2016; Schafer et al., 2011), our study shows that for the great majority of old men, social structure was much stronger than individual agency.

Nevertheless, we have to point-out that some of the men with poor educational background were able to be agentic in the sense of overcoming the constraints of structural conditions. As pointed by Duncan (2015) individuals have agency to a certain extent. In our results, we stated that some men use socialisation, gaming, and social support from their networks to experience a situation they do not complain off, even if by our standards their life quality is relatively low. Agency can depend on small details and be an individual subjective experience.

The experiences of the majority of men with a medium/high educational background literally reverse our discourse. It shows how education can be a crucial departure point to open-up the horizons of people. The majority of men biographies when analysed throughout the life course show the cumulative effects of advantages. In their cases, education was a key-factor to access a much better profession and higher financial capital.

Some of these occupations carry extended social networks and an increased social capital, fundamental for widening their choices, progress in the career, entering the world of local and regional politics, etc. Financial capital was fundamental in their ability to access, enjoy and produce culture, to travel to different countries and maintain much more satisfying social networks of friends – which by its turn brings also more possibilities to receive and give social support.

It is important to note that also in this group we are able to identify the tensions between agency and structure, especially during transitions. Many of these men had lived traumatic events that triggered difficult transitions, similarly to men from the first group. Some were devastated by the death of their spouses; others lived severe illnesses of sons, daughters or companions; others had problems during the transition to retirement, namely to adapt to a less intense life, while still others migrated and experience troubles adjusting. Their problems, traumatic events, and challenges posed by various transitions were real. However, these men were capable to overcome these challenges with much more success. Analysing our results, we are claiming that the ability to make successful transitions has two major determinants: the first is the amount of resources these men can mobilise to navigate these periods of transition and the diverse nature of such resources – the diverse capitals, the extended social networks, etc. We should stress that the educational background is, of course, fundamental for the men to have opportunities to build these capitals. Second, there are individual learning processes within transitions (cf. Alheit, 1995). This biographical learning is, apparently, much more common and effective among the more educated men.

Conclusion

According to the theory of cumulative advantages/disadvantages inequality in old age results from a social process than begins in very early ages and continues throughout the life course (Crystal et al., 2017; Heap & Fors, 2015). We should also note that the analysis of the process of accumulation of advantages/disadvantages, in a life course perspective, demonstrated the persistence of social inequality, highlighting the central role played by education in that process (Rogers et al., 2013; Scherger et al., 2011; Tamborini & Kim, 2017; Van Kippersluis et al., 2010).

In our study, we examined the life course of Portuguese older men (+60) with different levels of schooling: Group 1 – Men with a very low educational background, and Group 2 – Men with a medium/high educational background. As our results revealed, to these men, the access to education, in childhood, marked their life course. Men with low levels of schooling had a more difficult life, characterized by financial hardship or even, in some cases, poverty, than those with higher levels of schooling that had better jobs and a comfortable life. We should also note that the fact that most of these men lived their lives under a dictatorial regime, adverse to the development of a welfare state, in which social support was based on family and community solidarity, has affected negatively those with low levels of educational, social or financial capital.

To conclude, we think that cumulative advantages and disadvantages gives an important contribute to the explanation of the current situation of the men who participated in the study. It is a fact that we have not used all our results, but only the ones from the extreme groups. The extreme situations are, in this case, helpful to understand how advantages and disadvantages correspond to processes that exist in a significant period. Their accumulation can produce very different results and has a visible effect in

the quality of life of people, despite the permanent and complex dynamics between structure and agency.

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Notes

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The potential of statistical matching for the analysis of wider benefits of learning in later life

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Abstract

It is challenging to investigate wider benefits of adult learning, especially in later life, due to limited data on educational activities and non-monetary returns in large, longitudinal surveys. Statistical matching provides an approach to exploit the potential of existing data by combining data sources with complementary features based on shared information. The paper describes the matching of two data sources (German Ageing Survey and Study of Educational Attainment and Interests of Older People) in order to examine the effects of educational participation on well-being in later life. We emphasize the matching procedure and how to identify the best-matched dataset. Based on matched data, effects of educational activities on life satisfaction are examined in later life. The

discussion focuses on future demands on data and methods for investigating wider benefits of adult learning in quantitative research.

Keywords: Educational activities; lifelong learning; non-monetary returns; statistical matching; well-being

Introduction

Education and lifelong learning are one of the keystones of modern life and societies. Benefits of adult learning beyond social status, employability, and monetary returns, intertwine our lives as for example our health and our happiness are affected by our biographical educational background and current educational activities (e.g., Field, 2012; Schuller, 2017). However, it is challenging to support the increasing awareness for wider benefits of adult learning with profound empirical evidence (Field, 2011).

How can empirical research contribute to a better understanding of the wider benefits of lifelong learning? In general, qualitative approaches can facilitate valuable insight into the effects of individual learning experiences and their social and biographical context (e.g., Manninen et al., 2014; Sloane-Seale & Kops, 2008; Tam, 2013). However, other research objectives call for quantification of causal statements on the wider benefits of learning on the population level. In order to link learning or educational participation to a specific outcome, large samples, good measures, and longitudinal data are needed to assess positive (and negative) effects of adult learning. Whereas most of the large open access panel surveys (e.g. British Household Study, German Socioeconomic Panel, US Health and Retirement Study) provide sufficient data for causal analysis, they do not assess in-depth information about adults' educational activities over and above formal education. Additionally, samples often do not represent individuals in old age adequately. Therefore, researchers have limited access to representative, longitudinal data on participation in educational activities, motives or barriers of participation, or else up to old age.

Are there alternatives to funding cost-intensive large-scale studies on wider benefits of learning and waiting for exploitable results a considerable period of time? We think there are. In this paper, we want to propose the method of statistical matching (other terms used are data fusion or matching), which makes use of available data despite its shortcomings. Following a short illustration of the dependencies of survey data and research on non-monetary returns of learning in later life, statistical matching, and its underlying rationale are introduced. To illustrate the theoretical argumentation, an example of a successful statistical matching of two data sources, with the goal to examine wider benefits of learning, is elaborated. To conclude the paper, the results and quality of the matched data are discussed with regard to the challenges of future research on wider benefits of learning in later life. This paper aims at giving an idea of what statistical matching can do and how it might be useful rather than providing the methodological and technical background for it. For those who are interested, the work by Rässler (2012) and D'Orazio, Di Zio, & Scanu (2006) provide excellent methodological overviews.

Research with secondary data on non-monetary returns of education (in later life)

With qualitative methods traditionally dominating the field of adult education research, calls for methodological plurality encourage quantitative or mixed method approaches (Boeren, 2018; Fejes & Nylander, 2015). So far, the literature featuring quantitative studies on wider benefits of adult learning is modest but increasing and is accompanied by a constructive discussion on the underlying theoretical framework, (secondary) data, and analysis techniques in this field (Field, 2011; Rüber, Rees & Schmidt-Hertha, 2018). Studies frequently find (mostly) positive associations between adult learning and outcomes such as physical and mental health, employment, social and civic engagement (for an overview see Field, 2012; Schuller, 2017), mostly based on cross-sectional analysis, but progressively based on advanced statistical modelling techniques, such as randomized, quasi-experimental or longitudinal designs. The former show positive correlations (e.g. adult learners are happier *than* adult non-learners), whereas the latter enable conclusions about the causal links between adult learning and respective outcomes (e.g. adults are happier *because* of learning). Even if the number of studies with a quasi-experimental or longitudinal design is still small, their findings validate benefits of adult learning for a range of non-monetary outcomes and consolidate the evidence from cross-sectional analyses.

However, only a small number of studies so far has investigated benefits of lifelong learning in later life and old age. These studies are also quite heterogeneous with regard to age ranges, nations, definitions of learning and outcomes. Previous research indicates positive effects but likewise no straightforward relationship (e.g. Mestheneos & Whitnall, 2016). Studies on older adults in non-formal general interest programmes find that engagement in learning facilitates knowledge-related, psychological, and social resources that foster the well-being of participants, even or especially for vulnerable groups (Åberg, 2016; Hammond, 2004). High vulnerability, which is more likely in old age, might be compensated by continuously engaging in lifelong learning (Leung & Liu, 2011; Narushima, Liu & Diestelkamp, 2018).

Studies on representative samples can take into account systematic differences between learners and non-learners in older age and cover a broad range of learning activities. For example, Yamashita, Bardo, Liu and Yoo (2019) found in cross-sectional analysis that organised learning activities in later life mediate the effect of formal education on self-rated health. Longitudinal studies have looked at changes in well-being or health over time in relation to participation or non-participation in organised learning activities. Work by Jenkins and Mostafa found that benefits of learning, depending on the type and subject of courses and the educational background of the participants (Jenkins, 2011; Jenkins & Mostafa, 2015). The literature shows that the investigation of benefits of learning in later life requires differentiating between learning formats, learning contexts, learners and non-learners as well as between outcomes. However, data sources for quantitative analyses are extremely limited and progress on research evidence on the benefits of learning in later life relies on the utilisation of data (Jenkins, 2011; Jenkins & Mostafa, 2015).

As there is no "one size fits all" survey, secondary analysis quite naturally comes with strings attached. Where we find those strings, depends on the specific research question, but some features of secondary data are rather typical for research on the wider benefits of adult learning (in later life). Some aspects relate to *sample characteristics*: Surveys vary in their target populations and sample sizes. Especially for research on older adults a common bias is the focus on the employment age (e.g. the major international adult learning monitoring studies Adult Education Survey (AES) and Programme for the

International Assessment of Adults Competencies (PIAAC) do not sample respondents over 65 years). Also, institutionalized adults are virtually not covered. If older respondents are included, a low number of cases restricts analyses, as the subsample of older people is rather small. Whilst estimates on an overall impact of adult education are informative, often we are interested in benefits for specific (vulnerable) groups (e.g. people at risk of poverty in old age). These specific subsamples may have insufficient case numbers for sound analysis. Other aspects relate to the *scope of the survey*. As a prerequisite, there should be at least some information on participation in adult education and on the outcome of interest. Huge panel studies often have an interdisciplinary background and feature a framework from psychology, economics, and/ or sociology. Educational sciences, let alone adult education, however is rarely involved. You may find adults learning activities totally neglected, you may find questions on job-related training, only. If there is information on adult education in any form, *measurement quality* always is an issue (Felstead, Green & Mayhew, 1999). Depending on the theoretical framework and research question, specific characteristics of adults learning are necessary to assess, e.g. is a learning activity rather job- or leisure related, is it formal, non-formal or informal, who provided it, how time-intensive was it. Similar requirements apply to information on the outcome, of course. Given the limitations of existing data, research on non-monetary returns of learning benefits from the utilisation of different data sources.

Statistical Matching

Statistical matching combines existing data from different data sources based on shared and unique information for new analysis. Typically, the combination of data sources (one being the donor of information, one being the recipient of information) supplements information relevant to a research objective, with both data sources having some mutual information. In educational sciences, statistical matching is not common, yet. Since more and more data is available from national statistics, research institutes, and commercial enterprises, statistical matching opens new possibilities for an efficient, resourceful use of existing information originating from different data sources.

In the following, the basic idea of statistical matching is illustrated. A new dataset on participation in non-formal education and its effect on well-being can be matched based on shared information (*matching variables*) which are associated with well-being and educational activities and are included both in the dataset 1 (*donor*) containing the data on educational activities and in the dataset 2 (*recipient*) providing data on subjective well-being. The key requirement is that both datasets describe the same target population. Therefore, the goal is to replicate the distribution of the recipient data in the new matched data by matching the information from the donor dataset using the matching variables. The quality of matching depends highly on several factors: (1) an accurate definition of the target population, (2) harmonization of data (e.g., adjustment of answer formats or classifications of categorical variables if identical information is differently assessed in the data sources), (3) selection of matching variables, and (4) selection of a suitable matching method. The amount and quality of shared variables as well as how strongly predicted variables depend on the shared variables (e.g., correlation of shared variables with well-being and educational activities) are crucial for a high-quality matching.

The most important step before matching is the harmonization of data sources (D'Orazio et al., 2006; Van der Laan, 2000). In real world applications of statistical matching, data sources differ on various aspects (e.g., reference periods, populations, variables, etc.). To apply statistical matching, the data sources need to be as similar as

possible concerning specific characteristics of the target population and measures of shared information. Therefore, it may be necessary, for example, to exclude some individuals in one data source to have the same target population in both data sources. Or variables need to be harmonized before considering any matching as they measure the same construct on different scales or use different classifications.

All shared variables between data sources may be used as a matching variable (D'Orazio et al., 2006). Yet, the selection of suitable matching variables should primarily be driven by theoretical assumption about the relation of underlying constructs as well as by statistical aspects such as sufficient correlation between potential matching variables and the variables of interest that are only included either in the donor or the recipient dataset. However, computational complexity of the matching increases with the number of matching variables. Additionally, the selection of matching variables also depends on the method of matching (for an overview, see D'Orazio et al., 2006). Again, the method of matching should be chosen depending on the data sources, the research questions, and the follow-up analysis. In our example, we used a *nearest neighbour method.* Further, it is advisable to include so-called slicing variables to refine statistical matching (D'Orazio et al., 2006). Slicing variables are mostly nominal scaled variables (e.g., gender, employment status) which exactly match in the data sources. Using a set of slicing variables, it is possible to conduct statistical matching within each of a stratified subsample with a specific characteristic. For example, for a highly educated woman who is employed and has children in dataset 1, potential donors will be selected from the subsample of women with the same features in dataset 2. Thus, including a number of slicing variables can improve the quality of matching results by reducing the likelihood of a random assignment, as the number of potential donors gets smaller.

Example: Matching of EdAge and DEAS

Our project aim was to investigate effects of educational activities on subjective well-being in the second half of life (40 years and older). Our objective requires continuous long-time observation of a representative sample and is beyond the scope of a typical research project limited in time and finances. Available data sources were limited either with regard to the population (e.g., only individuals in midlife are questioned), instruments (e.g., educational activities are measured too broad) or study design (e.g., cross-sectional). Those challenges led to the search for alternative solutions such as statistical matching. Two data sources were identified as limited on their own but suitable for data matching (see Figure 1): the German Aging Survey (DEAS) providing longitudinal data for individuals 40 years and older on various topics and questions. However, educational activities are measured too broadly to allow estimating the effect of educational activities on well-being ideally. The data collected within the 'Educational Attainment and Interests of Older People (EdAge)' project provides excellent data on educational activities in later life – but the data is cross-sectional only. In the following, we describe both datasets, why they are a good match and how matching enables the analysis of our research question (see section *scope of the matching*).

Figure 1: Statistical matching of DEAS 2008 and EdAge and follow-up analysis based on DEAS 2011 and DEAS 2014
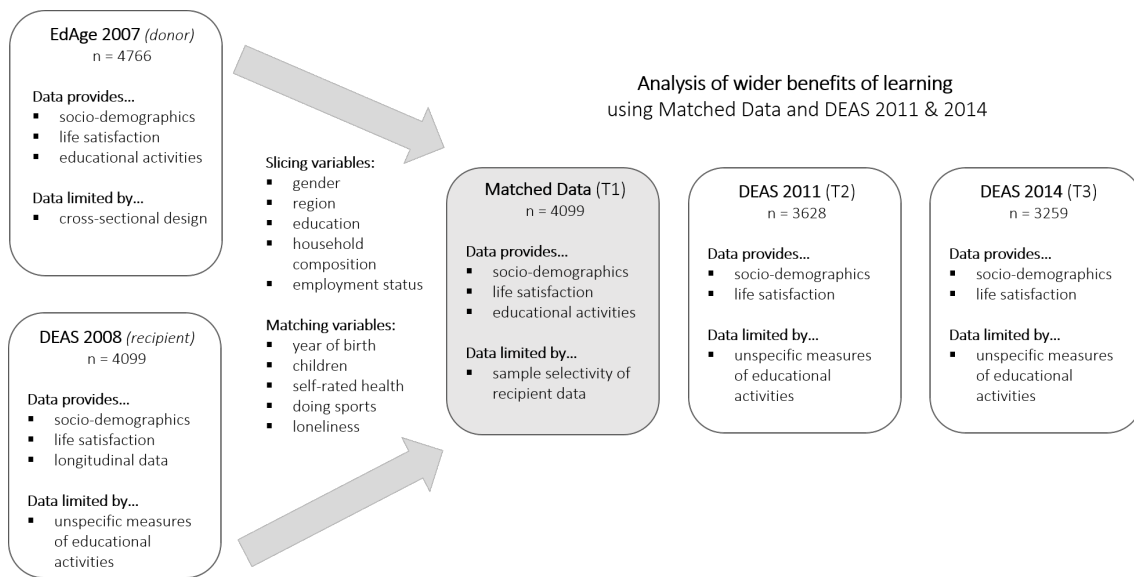
Description of DEAS (Recipient)

Data of the DEAS (Klaus, Engstler, Mahne, Wolff, Simonson, Wurm & Tesch-Römer, 2017) is used as the longitudinal data source. The DEAS is an ongoing nation-wide representative survey of German community-dwelling adults aged 40 years and older, which started in 1996. Every six years a new baseline sample stratified by age, gender, and place of residence (Eastern or Western Germany) is drawn. Since 2011, panel participants are not only interviewed with every new wave but also every third year. Participation in the survey comprises a computer-assisted personal interview as well as an additional self-administered questionnaire. The DEAS has a complex data structure with multiple longitudinal data points for panel participants. Further, the survey provides a wide range of information for social reporting and captures various topics (e.g. well-being). However, educational attainment is addressed only marginally. Employed participants are asked to report non-formal education by "How many courses or programs for occupational training or retraining have you attended in the past 6 years?" (giving the number in total) and everyone is asked "How often do you take classes or go to lectures, for example, for education and further training?" (on a scale ranging from daily to never). Thus, the DEAS does not differentiate between non-formal education and informal learning activities and applies an ambiguous scaling. The data is available to the scientific community. The DEAS was chosen as the recipient because of its longitudinal data structure. Statistical matching has already been done with this survey data. Simonson, Gordo and Kelle (2012) matched the DEAS with pension insurance data collected by public administration with the aim to analyse the employment and family biographies of the baby boomers and their general financial situation and attitudes.

Description of EdAge (Donor)

Table 1: Descriptives of DEAS, EdAge, matched dataset and analysis dataset

		EdAge (donor)	DEAS (recipient)	Matched dataset	Analysis dataset*
n		4766	4099	4099	1920
Year of birth		1946.21 (9.80)	1946.89 (9.39)	1944.88 (9.39)	1945.10 (8.95)
Gender	Female	52	49	49	51
Region	West	67	66	67	63
Formal education	Low	18	8	8	6
	Medium	55	51	51	50
	High	28	41	41	44
Employment status	Employed	42	36	36	36
	Retired	44	52	52	52
	Unemployed	7	3	3	4
	Other	7	8	8	8
Children	One or more	86	89	89	89
Household composition	Two persons and more	72	82	82	84
Doing sports	At least once a week	25	52	52	56
	At least once a month	6	7	7	8
	Less often	15	12	12	12
	Never	53	28	28	24
Loneliness[1]		1.61 (0.85)	1.16 (0.50)	1.14 (0.48)	1.13 (0.46)
Self-rated health[1]		3.68 (1.02)	3.57 (0.81)	3.57 (0.81)	3.61 (0.79)
Non-formal education	At least one reported	28	-	33	34
Informal learning	At least one reported	48	-	58	59
Life satisfaction[2]		4.15 (0.67)	3.94 (0.71)	3.94 (0.71)	3.96 (0.70)

Notes: Mean (SD) or percentage reported; * Analysis dataset = Matched dataset (T1), DEAS 2011 (T2) and DEAS 2014 (T3) without missing in life satisfaction at T1, T2 or T3; [1] Range:1-4; [2] Range 1-5 (see also Table 2)

The dataset providing in-depth information on educational activities and learning was collected in the project "EdAge – Bildungsverhalten und -interessen Älterer [Educational Attainment and Interests of Older People]" (Tippelt, Schmidt, Schnurr, Sinner, & Theisen, 2009). This project was a one-time add-on study to the recurring AES, which covers adults' participation (aged 25 to 64) in education and training and is one of the main data sources for EU lifelong learning statistics. The EdAge study has the same broad scope of adult learning as the AES, but it is a representative cross-sectional study of German community-dwelling adults aged 45 to 80. Computer-assisted personal interviews were carried out in 2007 (Schmidt, 2009). With our research question in mind, we focus on two types of educational activities within the wide range of adult learning in the EdAge. Non-formal education (NFE) is assessed by asking if participants did any kind of seminar, course, class or private lessons in the past 12 months. For the analysis, we use NFE as a dichotomous indicator (0 = no participation in NFE, 1 = at least one participation in NFE is reported). Supported by a list of different informal learning activities (INF), participants report if they have learned something in the past 12 months. The list covers: (A) reading of books and magazines, B) using the computer or the internet, C) using television, radio, or media, D) tours in museums, historical places, natural monuments, or industrial plants, E) visiting libraries or learning center, and F) learning through family members, friends or colleagues. For the analysis, INF is used as a dichotomous indicator (0 = no INF activity is reported, 1 = at least one INF activity is reported). Unfortunately, this dataset is not available to the public. The EdAge dataset was chosen as the donor because its cross-sectional data provides in-depth information on educational activities that are missing in the DEAS.

Scope of the matching

Matching of the DEAS and EdAge data looked promising for our research scope as educational activities and well-being are measured in both data sources (see Figure 1), but with different degrees of differentiation (EdAge: various measures of educational activities, life satisfaction measured; DEAS: life satisfaction measured, educational activities measured very broad, on an imprecise scale). In addition, the cohort-sequential design of the DEAS provides a rich longitudinal data structure. The aim of the matching was to combine the data to analyse the effect of participation in non-formal and informal education on life satisfaction in later life. Missing data on educational activities in the DEAS dataset (recipient) is matched from the EdAge dataset (donor) using a set of matching and slicing variables assessed in both datasets. Furthermore, the population, as well as the time of assessment, is highly comparable. Both surveys were assessed in sequential years (EdAge in 2007; third wave of the DEAS in 2008) and study overlapping birth cohorts (EdAge: born between 1926-1961; DEAS born between 1911-1974). Thus, for the statistical matching, data of all survey participants were included if they: (a) were born between 1926 and 1961, (b) had German citizenship, and, additionally for DEAS, (c) were interviewed in 2008 and 2011 or 2008 and 2014, this ensures that at least two data points are available for each participant (this is important for the follow-up analysis). The samples represent the same target population (see Table 1). However, the datasets differ with regard to the proportion of individuals with a low education (lower in DEAS), the proportion of retired individuals (higher in DEAS), and the proportion of individuals reporting being regular physically active (higher in DEAS).

Table 2: Overview of variable harmonization between data sources

Variable	EdAge (donor)	DEAS (recipient)	Harmonization
Doing sports	How often do you do each of the following activities: Active sport	How often do you do sports such as hiking, soccer, gymnastics, or swimming?	Recoding of the scale in the DEAS was necessary (value 1 includes value 1, 2, and 3 of scale used in DEAS):
	1 = Weekly	1 = Daily	
	2 = Monthly	2 = Several times a week	
	3 = Less often	3 = Once a week	1 = At least once a week
	4 = Never	4 = 1-3 times per month	2 = At least once a month
		5 = Less often	3 = Less often
		6 = Never	4 = Never
			A low value represents a high level of doing sports
Loneliness	I often feel lonely	How often you have felt this way during the past week: I felt lonely	The scales in both datasets differ; recording of values in EdAge was necessary:
	1 = Strongly agree		
	2 = Agree	1 = Rarely or none of the time	
	3 = Disagree	2 = Some or a little bit of the time	1= Rarely
	4 = Strongly disagree	3 = Occasionally or a moderate amount of time	2= A little
			3= Occasionally
		4 = Most or all of the time	4= Most of the time
			A low value represents a low level of loneliness

Table 2. (Continued)

Variable	EdAge (donor)	DEAS (recipient)	Harmonization
Self-rated health	How satisfied are you with your present state of health? Are you… 1 = Very satisfied 2 = Satisfied 3 = Depends 4 = Unsatisfied 5 = Very unsatisfied	How would you rate your present state of health? 1 = Very good 2 = Good 3 = Average 4 = Bad 5 = Very bad	The scales in both datasets differ; scale of DEAS was used, data was recoded: 5 = Very good 4 = Good 3 = Average 2 = Bad 1 = Very bad A high value represents a better self-rated health
Life satisfaction	▪ In most ways my life is close to my ideal ▪ I am satisfied with my life ▪ So far, I have gotten the important things I want in life 1 = Strongly Agree 2 = Agree 3 = Disagree 4 = Strongly disagree	▪ In most ways my life is close to my ideal ▪ I am satisfied with my life ▪ So far, I have gotten the important things I want in life 1 = Strongly agree 2 = Agree 3 = Neither agree nor disagree 4 = Disagree 5 = Strongly disagree	Transforming of the answer format in EdAge dataset into a 5-point rating scale was done; individual scale means were calculated in both datasets: 5 = Strongly agree … 1 = Strongly disagree A high value represents a high level of life satisfaction; Items are from the Satisfaction with Life Scale (Pavot & Diener, 1993)

Notes: All other variables used as matching or slicing variables were assessed identically in the both datasets.

Harmonization of data and selection of matching variables

In the next step, we had to identify the best combination of matching variables. Matching variables could be selected from the following set of shared variables in DEAS and EdAge: socio-demographic variables (year of birth, gender, region, employment status, level of formal education, household size, having children) and other variables (doing sport, loneliness, self-rated health, life satisfaction).

The carried-out harmonization can be found in Table 2. Due to a high amount of missing values in the DEAS data, life satisfaction could not be used as a matching variable but is suitable as an external criterion for validating the quality of matching[1]. To identify possible matching variables, we calculated pairwise correlation and association values to identify which potential matching variables predict both educational activities and life satisfaction best. As a result, we identify that level of formal education, employment status, and year of birth are most predictive of both life satisfaction and educational activities, and suitable matching variables. Level of formal education and employment status were included as slicing variables, since those are among the strongest predictors of educational activities. This approach impeded that e.g. employed individuals are matched with unemployed individuals. We further included additional slicing variables (gender, household size, region). Because we were sceptical about a parsimonious statistical matching model including only year of birth as a matching variable, we tested additional models that included more matching variables. However, these additional matching variables, except having children, were weakly associated with both life satisfaction and educational activities. All matching models are present in Table 3.

Table 3: Overview of different combination of matching and slicing variables

#	Matching variables	Slicing variables
1	year of birth	employment status, education
2	year of birth	employment status, education, gender
3	year of birth	employment status, education, gender, household composition
4	year of birth	employment status, education, gender, household composition, region
5	year of birth, children	employment status, education, gender, household composition, region
6	year of birth, children, self-rated health	employment status, education, gender, household composition, region
7	year of birth, children, self-rated health, doing sports	employment status, education, gender, household composition, region
8	year of birth, children, self-rated health, doing sports, loneliness	employment status, education, gender, household composition, region

Notes: # Combination number

Matching procedure and results

We used the nearest neighbour method, because the matching was based on several differently scaled matching variables (e.g., year of birth and loneliness). The method aims to match each record in the recipient to the closest record in the donor, according to a distance measure computed using the matching variables. There are different distance measures (e.g., Mahalanobis distance, Euclidean distance, etc.). As we use differently scaled matching variables, it is recommended to use the Gower distance (D'Orazio et al., 2006)[2]. This distance measure considers differences between categorical and metric variables and computes an average of distances for each variable. Data preparation and data harmonization were done using R (R Core Team 2018), the matching was done using the package StatMatch (Version 1.2.5; D'Orazio, 2017).

Statistical matching is a complex procedure, therefore evaluating the quality of the matching is indispensable (cf. Van Hattum & Hoijtink, 2008). We identified the best matching by considering the following aspects (see Table 4). First, the mean and the standard deviation of absolute distances within matching variables, a good matching is indicated by smaller values. All eight matching models indicated low distance values. Note that with increasing numbers of matching variables, the values inevitably increase. Therefore, these indices can only be compared directly within the same combination of matching variables. Second, we looked at the number of potential donors within a stratified subsample. Again, a smaller number is aspired, as it indicates a lower likelihood of a random assignment of identified donors to a particular case in the recipient dataset. Here, the average number of donors is the lowest for the combination 8 (on average 1.50 donors) compared with the other combinations (range: 39.84 to 1.72). In addition, we considered dissimilarity in the distribution of variables (here non-formal education, informal learning, and life satisfaction) using the total variation in distance. This indicates whether a particular variable is identically distributed in both the original and matched datasets. A small value means a small discrepancy. We can see that dissimilarity for educational activities and life satisfaction is generally low for all matching models. Due to a larger number of matching variables, it is slightly larger for combination 8 (0.11). Finally, we looked at life satisfaction[3] as an external criterion. The indices based on absolute differences in an external evaluation criterion between the original and matched datasets are central to evaluate the quality of the matching. We found that with an increasing number of considered matching variables, the differences in life satisfaction between the original and the matched data decreases. The combination 8 had the lowest mean absolute difference (0.69) and the lowest root mean square error representing the sample standard deviation of differences (0.89) compared to the other combinations. To sum up, we decided to use the matched data based on the matching variables: year of

birth, having children, self-rated health, doing sports, and loneliness and the slicing variables: employment status, level of formal education, gender, household composition, and region.

Table 4: Results of matching using the Gower distance for different combinations of matching variables

#	Mean.abs.dist (SD)	Mean.donors (SD)	TVD.NFE	TVD.INF	TVD.LS	LS.Mean.abs.diff	LS.RMSE
1	0.00 (0.02)	39.84 (24.62)	0.01	0.04	0.02	0.80	1.01
2	0.00 (0.02)	20.77 (12.75)	0.02	0.04	0.03	0.82	1.04
3	0.00 (0.03)	14.71 (10.77)	0.02	0.05	0.06	0.79	1.00
4	0.01 (0.05)	8.52 (7.16)	0.01	0.05	0.05	0.80	1.00
5	0.01 (0.04)	7.22 (6.59)	0.01	0.05	0.05	0.77	0.98
6	0.02 (0.07)	2.95 (2.83)	0.01	0.03	0.05	0.73	0.94
7	0.05 (0.09)	1.72 (1.24)	0.06	0.09	0.08	0.71	0.92
8	0.06 (0.10)	1.50 (0.96)	0.05	0.10	0.11	0.69	0.89

Notes: # = Matching model with a specific set of matching and slicing variables (see Table 3); Mean.abs.dist = mean absolute distance in matching variables; SD = standard deviation; Mean.donors = the mean number of potential donors within slicing variables; TVD = total variation distance in non-formal education (NFE), informal education (INF), and life satisfaction (LS); LS.Mean.abs.diff = mean absolute difference in individuals' means in life satisfaction originated from the DEAS dataset and the EdAge dataset; LS.RMSE = the root mean square error for individuals' means in life satisfaction.

In Table 1, the descriptive statistics for the recipient, the donor, and the matched dataset are shown. As mentioned, the matched data aims at reflecting the distribution of the recipient dataset (DEAS). This was mainly accomplished. Given the good quality of the matching, we used the matched data for examining our research question by predicting life satisfaction three (T2), respectively, six years later (T3) by participation in educational activities at T1. Here, original longitudinal data of the DEAS (T2, T3) is used with the matched data (T1).

Analysis of matched data: Example

Using matched data and the two sequential waves from 2011 and 2014 of the DEAS, we examined wider benefits of learning in later life. The effect of educational activities on life satisfaction was investigated by generalized linear models using R. Four separate models were analysed as participation in non-formal education (NFE) and informal learning (INF) at T1 were differentiated as well as life satisfaction three years (T2) and six years (T3) later. The sample in the analysis is smaller due to missing data on life satisfaction at T1, T2 or T3 (n = 1920, $M_{age\ T1}$ = 62.5 (SD = 8.95), 49% female, 43.9% high educated, see Table 1). All analyses were controlled for age, gender, region, level of formal education, employment status, having children, household composition, self-rated health, doing sports, loneliness and life satisfaction at T1. Participating in NFE was associated with higher life satisfaction three years later (B = 0.06, SE = 0.03, p = .02, CI95 [0.01, 0.12]). However, NFE did not predict life satisfaction at T3. For INF, there was no significant association with life satisfaction neither at T2 nor at T3. Life satisfaction at T2 was significantly predicted by life satisfaction at T1, self-rated health and household composition (see Table 5). Life satisfaction at T3 was significantly predicted only by life satisfaction at T1 and T2 and self-rated health (see Table 5). Participants who did any kind of course, seminar, class or private lesson at T1 reported a higher life satisfaction three years later[4]. Since the analyses are based on matched data, they only provide an estimate of the effect within the sample population.

Table 5: Results of regression analysis predicting life satisfaction at T2 and T3 using DEAS data of 2011 and 2014 by educational activities at T1 based on matched data

Predictor	NFE → life satisfaction		INF → life satisfaction	
	at T2	at T3	at T2	at T3
NFE/INF at T1	**0.06**	0.00	0.02	-0.02
Year of birth	-0.00	0.00	-0.00	0.00
Gender	-0.01	0.03	-0.01	0.03
Region	0.02	0.04	0.02	0.04
Formal education[1]	0.01	0.00	0.01	0.01
Employment status[2]	-0.02	0.02	-0.00	0.02
Children	-0.01	0.04	-0.01	0.04
Household composition	**0.09**	-0.06	**0.09**	-0.06
Doing sports[3]	-0.01	0.00	-0.01	0.00
Loneliness	-0.01	0.02	-0.01	0.02
Self-rated health	**0.05**	**0.03**	**0.05**	**0.03**
Life satisfaction at T1	**0.60**	**0.33**	**0.60**	**0.33**
Life satisfaction at T2	-	**0.44**	-	**0.44**

Note: Significant coefficients are printed bold (p <.05); $n_{analysis\ dataset}$ = 1920; reference categories for predictors are displayed in Table 1; [1]used as 1 = high education, 0 = medium and low education; [2]used as 1 = employed, 0 = retired or otherwise not employed; [3]used as a continuous predictor

Discussion

Introducing statistical matching, we aimed at giving an insight into the not yet disseminated method in educational sciences, which allows to utilize secondary data. Since adult education is rarely within the scope of interdisciplinary, long-running panel studies and learning activities are consequently most often measured inadequately or not at all, quantitative research on wider benefits of adult learning needs to find new ways to push the field forward. Statistical matching enabled us to utilise existing datasets and examine the effect of participation in different learning activities on life satisfaction three, respectively, six years later in a sample covering a broad age range. Within the original data, this analysis would not have been possible.

Analysis of the wider benefits of adult learning with secondary data brings the advantage of affordable access to data that would blow up the budget and time of any medium-sized project. From an ethical and legal point of view, it accounts for data minimization and the sustainable use of personal data. However, given the multi-purpose design of large-scale assessments, research with secondary data risks a data-driven approach. Research conducted in this manner can only ever produce findings on the benefits of learning (in later life) that are already embedded in the data source (Field, 2011). Secondary data has several restrictions. First, most likely, the data collected will always deviate from primary data a researcher would collect in his or her own study. Second, provision of these kind of data sources will vary. Large panel studies, for example, typically conglomerate in western countries with a well-funded science infrastructure. Third, results will always relate to some unique features of the data base (e.g. cohort, reference time, type of adult learning), therefore, generalisability of evidence on the benefits of adult learning will always be limited to some extent (Rüber et al., 2018). Thus, it is essential to balance trade-offs between the research interest and the data basis and to critically reflect findings against this backdrop. Statistical matching does not offer a solution to all of these restrictions, it does though provide technical means to overcome limitations, especially with regard to scarce information. In our example, we were able to utilise a cross-sectional special interest survey with a good measurement quality of educational activities in combination with data of a multi-purpose panel survey that provided the desired sample characteristics and design to analyse wider benefits of

learning in later life. Looking ahead, this type of utilisation could be maximized if prospective cross-sectional surveys were already designed with potential matching data sources in mind.

Given that we often have to make concessions within secondary data analysis in terms of sample populations, assessed information, or study design, this approach allows to some extent to deal with those restrictions. Statistical matching can also guideline which indicators or populations might be worthwhile to study in-depth and therefore enable researchers to efficiently invest resources (e.g. focus on specific populations, focus on specific indicators and outcomes). With regard to the competitive nature of funding this is an advantage, but also from an ethical and legal point of view this ensures data minimization and the sustainable use of personal data.

Some limitations need to be addressed specifically to the matching of the DEAS and EdAge data. In general, an *in-depth checking of the data*, especially working with secondary data, is necessary before any matching. In the distribution of education in both data sources, we see a mismatch in low-educated individuals (see Table 1). A rather typical selective pattern of attrition in longitudinal surveys leads to an overrepresentation of older individuals with high formal qualification in the panel data of the DEAS in comparison to the EdAge data. We used data from all DEAS individuals interviewed in 2008 to ensure a sufficient sample size. However, in 2008, not only a new representative sample of people aged 40 to 85 years was drawn, but also participants from the first wave in 1996 and second wave in 2002 were re-interviewed, therefore highly educated individuals were overrepresented in the recipient data. It is crucial to keep the sample specifics in mind for follow-up analysis of the matched data as the distribution characteristics of the recipient data source are replicated in the matched data. Further, *identifying matching variables* is critical, considering all shared information on the other hand, is not recommended. Matching the EdAge data to the DEAS data was a challenge and a conservative treatment of considered matching variables led to an unsatisfying result (cf. Table 4), therefore additional variables were checked and self-rated health, doing sports, and loneliness were included which improved the matching. Given that the complexity of the matching increases with each additional matching variable, the process of including more matching variables needs to be done carefully. It is also challenging that evaluation indices may not agree with each other and support different matchings. Therefore, it is advisable to consider different indices for deciding what matching yield the best result.

Our analysis is in line with previous findings on the positive effect of educational activities on well-being in later life (Jenkins, 2011, Jenkins & Mostafa, 2015), even though we covered a greater age range and had a longer period between T1 and T2. So far, no other study has been using longitudinal data from older participants in Germany to examine wider benefits of learning. However, the positive effect is limited to participating in non-formal education only and to life satisfaction three years later only. Within our analysis, life satisfaction six years later was not related to non-formal education, this supports the notion that direct effects of educational activities are not translated over a long period and rather affect individual's well-being within shorter time frames (Hoffmann, Wiest, Widany, & Kaufmann-Kuchta, in press). Unfortunately, we were not able to differentiate between job- or leisure-related educational activities, nor to include how time-intense those were. The results show no contribution of informal learning activities to life satisfaction. Many of the listed activities feature learning formats embedded in the everyday life of participants. An analysis that refers to distinctive characteristics of these activities might provide a different picture on the impact of informal learning. It would be interesting to differentiate, for example, between more

social activities (e.g. learning from friends and family) and more cultural activities (e.g. visiting a museum). An important limitation of our analyses is the sample. Although a broad age range is included (46-82 years at T1), the sample is highly educated and thus an above average educational participation can be assumed as well as an overall better life situation (better health, better financial resources), which may result in less interindividual differences in life satisfaction.

Remarks on statistical matching in general

Statistical matching in general has its limitations. Among others, as stressed before, the quality of matching highly depends on the quality and scope of the data sources. If crucial information is lacking, no data harmonization is able to fill this gap. Second, all matching procedures do have their strengths and weaknesses. The nearest neighbour approach used to match data of the DEAS and the EdAge is more heuristic than statistical in nature. This means there are no pre-defined measures to evaluate the predicted values. However, using multiple imputation some of the uncertainty of the prediction can be quantified (D'Orazio et al., 2006). Yet it should be kept in mind that any prediction error committed during the matching also carries over into follow-up analysis. Third, as for all statistical methods a profound knowledge is needed to understand and interpret findings of different matching procedures.

Conclusion

A real-world application of statistical matching does come with its challenges, but at the same time, it allows us to deal with restricted secondary data in an efficient, inventive, and resourceful way. With regard to benefits of learning in later life, statistical matching can guideline investment in future research by estimating effects of educational attainment on well-being in specific underrepresented populations such as old age and contribute to an informed debate on public spending in education. Most surveys that cover adults learning more comprehensive (AES, PIAAC), are cross-sectional in design and therefore limited to findings on associations. Statistical matching with panel studies significantly improves their analytic potential. Minor changes in measurements can significantly improve the fit of matching variables and therefore the overall quality of the statistical matching. Therefore, we propose cross-sectional studies keep potential recipient panel-studies in mind.

Acknowledgements

Endnotes

[1] In a perfect scenario, a third variable/construct is available in both datasets to evaluate the quality of the matching. Unfortunately, this is not the case in this matching scenario due to limited shared information in both datasets. Thus life satisfaction serves as the outcome we are investigating in the follow-up analysis as well as the variable to assess the quality of the matching process between recipient and donor data.

[2] For comparisons, we also matched the two datasets using the Manhatten distance, Mahalanobis distance and Euclidean distance with different combinations of matching and slicing variables. None of these measures yielded better matching results than using the recommended Gower distance.

[3] It is important to note that life satisfaction was assessed using different scales in the datasets (see Table 2), therefore a perfect match was only possible for the scores 1, 2.33, 3.66, and 5 as these are the transformed values of the 4-point scale of the EdAge data (1 = 1, 2 = 2.33, 3 = 3.66, 4 = 5).

[4] The same pattern of results are found when checking for different subsamples. NFE participation is related to higher life satisfaction at T2 only in analysis including a) people 65 years and older (n = 872, M_{age} = 70.83, SD = 4.33, 99% retired), b) retired individuals (n = 988, M_{age} = 69.19, SD = 5.57), and c) individuals reporting a low self-rated health (n = 782, M_{age} = 63.16, SD = 8.94, 31% employed, 57% retired, 12% otherwise not employed). We did not find any other significant association between educational activities and life satisfaction at T2 or T3 when analysing these subsamples.

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Measurement of media pedagogical competences of adult educators

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Abstract

Media pedagogical competence is critical for the modern-day adult educator. In the process of adult learning, both the use of digital media in the classroom and the transfer of knowledge in dealing with media are the basis for social participation and individual development that must be provided by teachers. However, at present little or no research has been conducted that assess media pedagogical competence of adult educators. Moreover, an instrument to measure media pedagogical competence was lacking. In order to redress these concerns, in the present paper an instrument for objectively measuring media pedagogical competence is designed and piloted with adult educators (n=622). The study provides the first results concerning objective measurement of adult educator media pedagogical competence.

Keywords: adult educators; digital media; media competence; test

Media pedagogical professionalization of adult educators

The importance of adult education for media literacy development

The European Commission (2015) has identified the use of new technologies as a key challenge for adult education is not only about fostering media competence, but also about media didactics: Media pedagogical competence of trainers is of particular importance. However, it must be noted that there is hardly any research on this topic. While in the contexts of schools and universities there is an intensive debate on the demands on teachers in the context of the digital transformation, this important debate has largely been ignored in adult education.

In this regard, there are a number of unanswered questions: Which media pedagogical competencies must adult educators have? How do these competencies differ from teachers in other areas of education? Are there also different requirements within adult education (e.g. between vocational and political education)? What media pedagogical competencies do teachers in adult education have? And, How do adult educators learn media pedagogical competencies? Only by answering these questions is it possible to develop guidelines for media pedagogical competence standards and quality assurance in this field.

Within this article, we will first examine the question of what media pedagogical competencies must adult educators have. Following, the results of a self-assessment by adult educators is presented. The results provide initial indications of how media pedagogical competences could be developed among adult educators.

Professionalisation of adult educators

Professionalisation of adult educators varies greatly from country to country (Egetenmeyer, Schmidt-Lauff, & Boffo, 2017). Moreover, there are hardly any quality standards in this area. Therefore, a number of projects have been initiated for several years at national and international level to develop common qualification standards for professionals in adult education (Strauch, Radtke, & Lupou, 2010). However, the anchoring of media-related competencies in these standards is rather marginal (see chapter 2).

This poses a problem because standards for media-related competencies are of great importance for quality assurance since there are no formal qualification standards in the heterogeneous field of adult education. Competence profiles for adult educators can provide an important orientation both for the recruitment of staff and for the design of initial and continuing training for adult educators.

Accordingly, it can be assumed that the teachers will acquire media-related competencies essentially in a self-directed and informal manner (Strauch, et al., 2010). Therefore, it is hardly possible to make statements about media pedagogical competencies of adult educators on the basis of qualification standards or study courses. In addition, surveys or assessments to evaluate media pedagogical competence of adult educators are lacking.

Instruments for the assessment of adult educators' competence

There are different examples of tools for measuring adult educator competencies. For example, in the USA the framework of PRO-NET 2000 was developed to record competencies for teachers and managers in adult education (Sherman, Dobbins, Crocker,

& Tibbetts, 2002). Furthermore, the project VINEPAC, which developed and tested a "Validpack" for self-evaluation and external evaluation to accredit prior experiential learning (APEL) in the field of adult education (Sava & Lupou, 2009) and the Flexi-path project, which developed a toolkit for recording the competences of adult educators on the basis of a competence profile (Strauch et al., 2010). Moreover, in Austria the Austrian Academy for Continuing Education (WBA) introduced a procedure to support the professionalization of the adult education sector (Prokopp & Luomi-Messerer, 2010) and in Switzerland an official certificate and official confirmation that trainers in adult education are able to prepare, conduct and evaluate courses is in use (Kraus, Schmid, Thyroff, 2015). Recently, the development of a process for validating competences of adult educators is being driven forward in Germany (Lencer & Strauch, 2016).

As a rule, these procedures are also open in order to record media pedagogical competencies. The extent to which media-related competencies are recorded depends on the extent to which they are contributed by the participants themselves or requested by the instruments. Marx, Goeze, and Schrader (2014) explain,

> However, with the rating scales asking teachers and or their peers or supervisors to estimate and mutually validate the degree of knowledge and competence of a teacher, these capabilities are more ascribed then tested by concrete demands. Thus, an objective, reliable, valid and empirically evident test is not available yet that can assess adult teachers' knowledge and competence in term of individual diagnostic in reaction to challenging (knowledge) tasks that can be failed (as in reality) (Marx, Goeze & Scrader, 2014, p. 172).

Starting points for the development of tests for adult educator skills can be found in the area of teacher training in schools; where there is a deeper and broader debate on knowledge and competence tests, especially in the USA, but also in Europe. But, instruments vary widely, thus comparison between study findings is compromised. Importantly, differential literacies are measured by these instruments, such as computer literacy, digital literacy, media literacy, IT, or ICT literacy, computer competence, digital competence, media competence, and/or IT or ICT competence (c-f. Ferrari, 2012). Moreover, different constructs (competence, knowledge, attitudes) are measured and different methods are used (Taddeo, Cigognini, Parigi, & Blamire, 2016).

In the context of the present study we use the term media competence. In contrast to knowledge, the concept of competence also includes a practical application of what has been learned. Rychen and Salganik (2003) define competence 'as the ability to successfully meet complex demands on a particular context through the mobilization of psychosocial prerequisites (including both cognitive and noncognitive aspects).' (p. 43). Media pedagogical competence is understood here as the willingness and ability to use digital media responsibly in teaching and learning contexts.

In the following chapter we will examine which models for describing media pedagogical competence already exist and whether they comprehensively describe the requirements for the use of digital media by adult educators.

A competence model of media pedagogical competence of adult educators

Competence Models in Adult Education

Policy makers (in particular the European Union) and different research institutions worldwide have endeavoured to foster professionalization in adult education by developing competence frameworks for adult educators. Some quite well-known models with an impact on professionalization in the field can be analysed for the way they address

media competence and media pedagogical competence of adult educators as a relevant part of professional skills in this field.

For instance, in the US, the Maryland Department of Labour Licensing and Regulation (2015), together with a group of practitioners, developed standards for trainers in the field of adult education. One of the six general standards applied in the model directly points to the implementation of media in adult education programs and therefore documents seven key competences for adult educators:

Understanding of technology concepts and effectively utilizing a variety of technologies;

- Exploring, evaluating and using technology resources;
- Using technology to communicate information;
- Applying knowledge of legal, social, ethical, and safety issues related to technology;
- Integrating technology into instruction;
- Applying knowledge of the use of assistive technology; and,
- Participating in activities and using resources to support ongoing professional growth.

All skills mentioned here are described more in depth with different sub-skills. Using technology and digital media are understood as an independent and important part of an adult educator's professional competence.

Moreover, a European team of researchers, headed by Researcher voor Beleid, developed a model of key competences for adult learning professionals based on the analysis of job advertisements, train-the-trainer programs, and research literature that adresses the skills of adult educators (Buiskool, Broek, van Lakerveld, Zarifis, & Osborne, 2010). In this study, media-related skills are addressed – among others – within the general competences:

> Competence in making use of different learning methods, styles and techniques including new media and being aware of new possibilities and e-skills and assessing them critically: being able to deploy different learning methods, styles and techniques in working with adults. (Buiskool, et al., 2010, p. 50).

Knowledge about learning technologies, the ability to apply these technologies and being open to develop one's own media use further are seen here as central components of the competence area. Furthermore, the authors formulated special competences to design digital learning environments and to support learners and trainers in using these environments under the title "ICT-facilitator". In general, it can be stated that digital media and in particular designing learning environments are highly relevant within this set of competences.

Furthermore, the European Union promoted the development of a media pedagogical competence model for teachers (Redecker, 2017) – the DigiCompEdu framework – that was developed on the basis of discussions and consultations between experts and practitioners, as well as literary research and analysis of existing instruments. The competence model aims to address teachers in all educational sectors and is therefore not specialised in the field of adult education.
The model consists of 22 facets of media pedagogical competences within six areas: professional engagement, digital resources, assessment, teaching and learning, empowering learners and facilitating learners' digital competence.

Based on this, six competence levels are formulated (A1 Newcomer; A2 Explorer; B1 Integrator; B2 Expert; C1 Leader; C2 Pioneer). The descriptions of which may serve as a basis for reflection in regards to teachers' digital competencies.

In sum, these exemplary competence concepts refer to (digital) media as a relevant tool for adult educators and claim for skills to apply these tools for designing learning environments and enriching teaching practice. At the same time, they focus only on the role of digital media in the process of knowledge dissemination mostly without taking into account the possibilities to facilitate the preparation or evaluation of learning arrangements or the communication and counselling of adult learners. Nevertheless, they provide an important resource for the description of media pedagogical requirements for adult educators.

Models of media competence and media pedagogical competence

There are different models and conceptualizations of media competence (cf. Ramirez-Garcia & González-Fernández, 2016) or media literacy (c.f. Nagle, 2018; Wade et al., 2017). While literacy concepts traditionally focus on the ability to make use of (digital) media, media competence includes also a critical reflexive component and a broader knowledge about media and technology (c.f. Schmidt-Hertha & Rott, 2014). One of the oldest and most prominent concepts was developed by Dieter Baacke in Germany in the early 1970s based on the linguistic theory of Noam Chomsky and the communication theory of Jürgen Habermas. When developing his idea of media competence further, Baacke (1996) differentiates four dimensions, media critique, media science, media use, and media design. This model was used by other researchers (e.g., Treumann, Baacke, Haacke, Hugger, & Vollbrecht, 2002) to develop empirical tests to examine media competence of different target groups.

Furthermore, Blömeke (2000) developed a model for media pedagogical competence for trainee teachers. She distinguished four components which have been developed further by different researchers (c.f. Tulodziecki & Grafe, 2012; Tiede, Grafe, & Hobbs, 2015): (1) To be able to apply media for teaching and learning (media didactic competence); (2) developing the media competence of pupils is another task that teachers should be prepared for. Therefore, it is necessary to know facets of media competence and how to promote them; (3) teachers should be able to make use of digital media to apply innovations on the level of organizational development in their schools; and, (4) a central prerequisite for these competence facets is the general media competence of teachers. Furthermore, Tulodziecki (2010) identified that the ability of teachers to evaluate the meaning of media in the life of their students may also be an important dimension to consider.

While these ideas of media pedagogical competence have also been tested in empirical research, they can inspire similar constructs for the field of adult education. However, adult learners may be much more diverse, more experienced and have their own ideas about how to apply media in learning environments. In addition, adult education concerns a diversity of fields, with a much wider range of content. Thus, adult learners potentially have a large heterogeneity in terms of motivation and competence.

Media pedagogical competence model

Particularly for adult education, prior to the model introduced by Schmidt-Hertha, Rohs, Rott and Bolten (2017; Figure 1), there were no models for media pedagogical competence of teachers. The above-mentioned models, which take up media-related

competence facets, are perhaps unsuitable for a detailed description, since they tend to take up and describe media-related competences only in passing, or refer very strongly to an application at the didactic level.

The model from Schmidt-Hertha et al. (2017) also describes media-related facets with a broader pedagogical focus, derived from previous models of adult education (e.g. Bernhardsson & Lattke, 2011; Buiskool et al., 2010; Maryland Department of Labor Licensing and Regulation, 2015), which were examined for media-related facets. In addition, the authors undertook semi-structured interviews with four experts in the field of adult and further education and two guided group discussions with adult educators (first group with six adult educators, second with seventeen adult educators and other stakeholders who were considered experts in the field of adult education), which were analyzed with content analysis conducted (c.f. Mayring, 2000) using MAXQDA software for a computer-assisted qualitative data analysis (Woolf & Silver, 2017). From these theoretical and empirical foundations, media pedagogical requirement descriptions for adult educators were generated and sorted by content. An important part of the model is that it addresses the need to consider that media pedagogical competence cannot stand alone, but is based on more generic pedagogical and media-related competences – as described in the TPACK model (Mishra & Koehler, 2006).

The TPACK model (Mishra & Koehler, 2006) differentiates three core areas of teachers' knowledge: (1) content knowledge as indispensable as teachers should be experts in the field they teach; (2) pedagogical knowledge, regarding how to facilitate learning; and (3) technological knowledge, which focuses on the skills to use media in a very general manner.

In the *model of media pedagogical competence for adult educators* (Figure 1.) these dimensions are referred to as generic competence, subject-related competence, educational and didactic competence, and general media competence. Field competence was added, because it seems to be highly relevant for the adult educator to know as much as possible about the lifeworld and workplace of their participants (c.f. Schmidt-Hertha et al., 2017). The term competence here was used to underline that it is not only about the knowledge of adult educators, but also about their skills, attitudes and motivation to make use of media in their professional activities (c.f. Klieme, Hartig, & Rauch, 2008). Schmidt-Hertha et al. (2017) pick up the idea of content knowledge and call this subject didactic competence, which does – like the other competences mentioned so far – not belong to the core facets of media pedagogical competence but has to be seen as a necessary base for it. Moreover, in the heart of their model (c.f. Figure 1), there are four facets of media pedagogical competence, two of them have been added with respect to the particular conditions in the field of adult education: (1) Media didactic competence is similar to technological pedagogical knowledge in TPACK. (2) Subject-specific media-related competence can be seen as a counterpart to technological content knowledge in TPACK. (3) Media related field competence refers to the knowledge of adult educators about the media usage habits of their participants and knowledge about what applications they are used to, and which one is new to them. (4) Media-related attitudes and values seem to be important when it comes to the question if adult educators are motivated to apply digital media in their courses and if they feel comfortable in doing so. Overall, the model has some similarities with the TPACK model of Mishra and Koehler (2006), but also some additional facets which seem to be of particular relevance in the field of adult education.
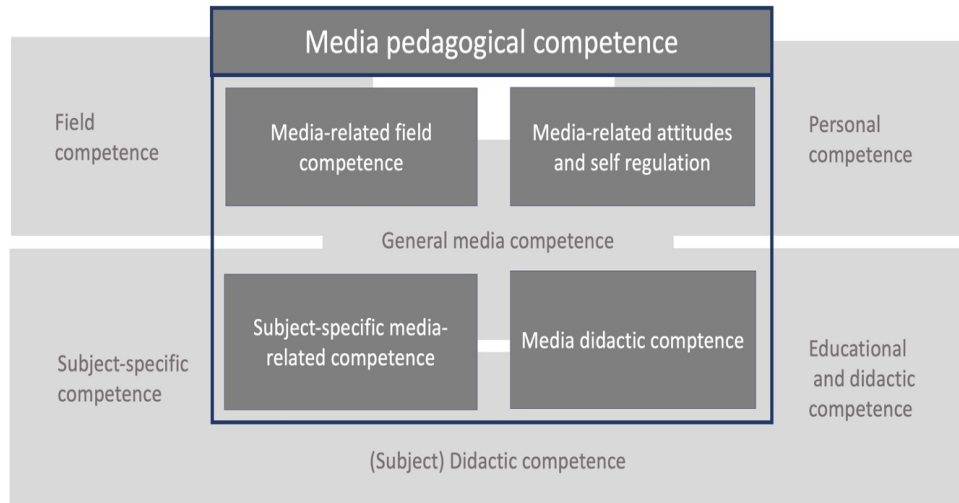
Figure 1: Model of media pedagogical competence for adult educators (Schmidt-Hertha et al., 2017)

Method

Methodological Design

Based on the previously described model of media pedagogical competence of adult educators (Schmidt-Hertha et al., 2017; Figure 1.) and its theoretical and empirical foundations, a test instrument was developed and tested in order to gather data on the current level of media competence of adult educators. The therefore identified competence requirements were converted into specific requirement descriptions. With these, it was possible to describe the competencies of each facet of the model. Following, media didactic competence was transferred into a performance test, the media-related field competence and the media-related attitudes into self-assessment scales. Media-related expertise has emerged as extremely subject-specific in this approach, which is why this facet was non-generalizable in a test.

	Media-didactic competence	Media-related field competence	Media-related attitudes and self-regulation
Number of items	26 items	22 items	31 items
Method of survey	performance test	6-point-self-assessment-scales	6-point-self-assessment-scales

Table 1: content blocks of the test instrument

In the first part of the survey, participants were asked about their demographics and their employment in adult education. In detail, they were asked about their working conditions and their courses, based on a classification used by Martin et al. (2017), as well as about educators' media usage and their own participation in courses about media pedagogical topics.

The second part was the performance test of their media didactical knowledge. In this section, 26 questions were included. The content of these questions was generated out of a systematization among fields of practice (consultation, teaching, and design of learning environments) and an educational chain of action (preparation, diagnosis, implementation and evaluation) resulting from the previously found requirement descriptions. In any combination of these areas of practice and areas of actions, we included at least two items in the performance test. In the combination of implementation with teaching and design of learning environments, we developed 3 items. This ensured that the widest possible range of content was covered by the performance test instrument (The test instrument exists so far only in German). In the following you will find a translated item:

What do you have to expect from an online feedback compared to a feedback round in a classroom event? *Please select one or more options from the list.*

> a)   That the feedback is harder and more directly articulated than in a classroom setting.
> b)   That the participants are generally more satisfied.
> c)   That fewer participants participate in feedback.
> d)   That participants do not respond to further questions.
> e)   That in the case of written communication, feedback is much shorter than verbal feedback.
> f)   That in the case of written communication the feedback is less authentic.

The test items were discussed and adjusted within the project team and in a workshop with a group of scientific experts to confirm content validity.

In the third part of the survey, participants deal with media-related field competence. This facet was divided with 22 items into different 6-point-self-assessment-scales about knowledge and about the meaning of media for their target groups (including usage habits of their target group, media as learning opportunities or obstacles and media in the professional and private life of the participants of their courses, e.g. *What significance does the media-related knowledge of your participants have for your teaching activities?*[1]) about using their knowledge about target groups for preparing courses (e.g. *To what extent did you deal with the media-related knowledge of your participants during the preparation of an event?*), about media-related cultures in companies (e.g. *How important is it for you to deal with the media-related culture in a company where you teach?*) and about occupational changes through digitalization (e.g. *How well do you know about the changes in the working environment of your target group as a result of digitisation?*). The content selection of this facet was also based on the previously found requirement descriptions.

The fourth and last section of the survey consisted of 31 items concerning media-related attitudes and self-regulation specifically examining: Content communication

channels with participants of the adult educators beside the courses; attitudes about digitisation (e.g. *Digital forms of communication with my participants are too impersonal for me.*); willingness to use digital media for teaching (e.g. *I use the Internet to search for materials for my teaching.*); attitudes towards the usage of digital media for teaching and preparing courses (e.g. *When I use digital content for my teaching, I check the sources and content.*); willingness to reflect the usage of digital media in teaching (e.g. *I reflect on the effect of the use of media in my courses.*); and, attitudes towards changes in the professional fields through digital media (e.g. *Digitisation increases the danger for me of becoming unemployed.*). In this section, we also asked the adult educators to undertake aself-evaluation about their media pedagogical competence. The self-evaluation consisted of 6-point-scales, with items adapted from established questionnaires (Treumann et al., 2002; Treumann et al., 2007).

Recruitment and Sample

The questionnaire data were collected via an online survey, distributed in collaboration with various adult and further education associations in Germany. In addition, we were able to use incentives to motivate adult educators to take part in this long and detailed survey. On average, the participants needed 53 minutes to complete this questionnaire. 1.524 began to process the questionnaire, of which, 622 completed the whole survey. The data has been adjusted for dropouts and cases with conflicting information, which was applied to the following analyses without weighting.

Participating adult educators all work in the German adult education sector. Like in many other countries, there is no obligatory training for adult educators in Germany and their educational and vocational background is rather diverse. The majority of adult educators in Germany are working in another business in their first job and less than 30% are full-time adult educators, and even more than half of those are freelancers (Martin et al., 2017, p. 70-74). However, in our sample this was slightly different, as 43.1% worked full-time in adult education. Some two thirds of German adult educators have a university degree (Martin et al., 2017, p. 110), in our sample the share was a little higher (74.6%). The adult educators who completed the questionnaire were on average 52 years of age, one year older than in a representative survey of adult education staff from 2014 (p. 63). Among respondents, 36% were male and 64% female. In comparison to the population of adult educators in Germany, women overrepresented in our sample. Looking at the institutions in which these adult educators taught predominantly, teachers in adult education centres (germ. "Volkshochschule") were overrepresented in the sample (see. Table 2). This may explain the gender ratio to some extent because in adult education centres there are significantly more women teaching than men (ibid.).

Private, commercial institutions	7.1 %
Private, non-profit institutions	3.9 %
In-company Training	2.6 %
Vocational school or college	7.4 %
Adult education centre	71.4 %
Institution of a church, party, union, foundation or association	7.6 %

Table 2: Institutions in which adult educators taught predominantly in the present sample (n = 622)

Within the sample, there were adult educators who taught predominantly in every kind of institution. When considering the topics in which the participating adult educators taught, it can be seen that one in three of them taught in at least two subject areas. Overall, 55 % of them gave courses in the subject area languages, culture and politics, 24% in nature, computers and technology, 23% in pedagogy and social skills, 22% in health and physical education and 14% in economy, labour and law. Looking at the teaching experience, the sample shows a noticeable distribution: while 27% of them had a maximum of 5 years teaching experience, as many had 20 years or more of teaching experience. Each 15% of the participants had five to nine years, 10 to 14 years and 15 to 19 years of teaching experience.

Because an online survey was utilized, it can be assumed that only adult educators who already use digital media participated in our survey (On average, over 90% of the adult population in Germany were online in 2018; Freese & Koch, 2018). Since the questionnaire was very long and the participation voluntary, it can also be assumed that the participating adult educators were interested in our research topic. Nevertheless, almost half of the participants (45%) had never or at least not during the last five years attended a digital media training on their own. After all, a third of the respondents took part in one to two training courses on digital media, 20% had even attended such courses three or more times during the last five years. Although it could be assumed in principle that teachers in adult education have an interest in continuing education, precarious employment relationships are a frequent reason not to participate in continuing education. Non-participation is perhaps therefore not synonymous with little interest. At the same time, informal learning can also be ascribed great importance, so that it is not possible to deduce competences from participation in further education.

Results

Quality of the questionnaire for the assessment of media pedagogical competence of adult educators

In order to confirm objectivity, reliability, and validity of the instrument, detailed considerations were given toward these aspects.

Objectivity

In order to achieve high evaluation objectivity, the test result should not depend on the evaluating person, but rather on objective measurement criteria (Babbie, 2012, p. 147) which is also related to the question formats used in the performance test. The used performance test for media didactics included 25 single- and multiple-choice questions which evaluation criteria are contently defined and can therefore be objectively evaluated using mathematical schemes. In addition, the part of the performance test also includes one open question. For this purpose, detailed coding rules were established. Two researchers independently coded the answers to this open question (Krippendorff's, 2014 $\alpha = .71$). So it can be assumed that the evaluation of the test instrument took place objectively. The other parts of the questionnaire were not constructed as performance tests, so there are neither right nor wrong answers to identify.

The test was not designed for individual diagnosis, but only for looking at the distribution of media pedagogical competence of adult educators. The results of this survey serve exclusively to describe the current condition in the selected group. No individual diagnostic evaluations or minimum standards were defined for the

performance test, which must be fulfilled in order to demonstrate competence in media pedagogy. In addition, the test was used for the first time in a slightly larger sample in this survey, so, no reference values are available for a comparison to date.

Reliability

In the context of this survey reliability is represented by the internal consistency. In the performance test on media didactic competence of adult educators the Cronbach's α was .69. Although the reliability cannot be regarded as very good, it is still close to the reliability values of popular personality tests (Körner, Geyer, & Brähler, 2002). This part of the questionnaire also consists of heterogeneous test items that capture the heterogeneous construct of media didactics in particular and media pedagogic competence in general. If a performance test contains items that are rather heterogeneous for content reasons, the actual reliability with consistency analyses is usually underestimated (Schermelleh-Engel, 2012, p. 137). In addition, media didactic competence is only one part of media pedagogical competence. In-examining all items belonging to media pedagogical competence, these items had a Cronbach's α of .86. For these reasons, the reliability of the used operationalization was interpreted as sufficiently good.

Validity

The contents of the construct media pedagogic competence for adult educators were theoretically well-founded. In addition, the contents of the test instrument were discussed in various groups of adult educators and with experts in this field. This ensured that the contents were discursively hedged, which is why the content of the test instrument can be considered as valid. The ecological validity states that it should be aimed at making the examination conditions as similar as possible to everyday situations in order to be able to conclude from the test results on situations outside the test situation (Messick, 1987). In order to fulfil this criterion, the test instrument was designed in a way that the questions and tasks are similar to the preparing, teaching and evaluating courses as an adult educator. Construct validity includes empirical evidence and arguments used to support the reliability of interpretation of test results in the sense of explanatory concepts that explain both the test results themselves and the relationships between the test values and other variables. The difficulty of the items in the performance test of media didactic competence varied between $32 \leq P \leq 83$ and spreaded widely in this spectrum. This points out a good construct validity.

Media pedagogical competence

In order to take a closer look at the media pedagogical competence within the sample, an exploratory factor analysis was carried out with all items of the three collected facets to check whether the contents of the model can be reproduced and to reduce the number of items. All items of the three facets had a Cronbach's α of 0.86. Since the developed survey represents a test run for a shorter self-evaluation version of the questionnaire, the construct of media pedagogical competence has to be drastically reduced in content. As an extraction method, a principal component analysis was chosen to picture media pedagogical competence. Compared to others, the selected method has the advantage that normal distribution and interval scaling are not absolutely required. To achieve better

interpretability, the rotation method Varimax was additionally selected. According to the Kaiser-Meyer-Olkin-criteria, the measure of sample adequacy (MSA) is meritorious with .846 (Hair, Anderson, Tatham & Black, 1998). Out of the initial 84 items, 33 items remain in the analysis. The remaining items have a good internal consistency (Cronbach's α = .832). To decide the number of factors to be extracted, the Kaiser-Guttman-criterion, the scree-test and the interpretability of the factors have been considered (Cramer, 2003). An item was assigned to a factor if its charge on one factor was at least .40 and at the same time having no charge over .30 on other factors, with the exception that if an item has .20 higher charge on one than another item, it also remained in the analysis (Table 2., Appendix). In addition, each factor should contain at least 3 items.

The combination of these extraction criteria suggests a six-factor solution for media pedagogical competence of adult educators with 33 items. These factors explained 55,7% of the total variance. The following factors have been extracted: factor 1 Dealing with media-related requirements of the participants (9 items, Cronbach's α = 0.903), factor 2 media-related participant orientation (5 items, Cronbach's α = 0.81), factor 3 Media didactic competence (8 items, Cronbach's α = 0,69), factor 4 Knowledge about the media-related environment of the participants (4 items, Cronbach's α = 0.793), factor 5 Rejection of digital media in teaching (4 items, Cronbach's α = 0.794) and factor 6 Preparation with digital media (3 items, Cronbach's α = 0.84) (3 items) (see also Table 1). When considering the content of the individual factor components, factors 1, 2 and 4 can be assigned to media-related field competence. Factors 5 and 6 include media-related settings. Factor component 3 contains - according to the name - items for media didactic competence. Even with this exploratory factor analysis, the facets of the competence model could be reconstructed.

Different types of adult educators

A hierarchical cluster analysis (Ward method with the squared Euclidean distance) was carried out to search for different patterns of adult educators of the different factor components. All of the six components of the factor analysis were included in this analysis. Based on the dendrogram, a 5-cluster solution was chosen. The adult educators of the survey can be assigned to the found clusters as follows:

Cluster 1: rejection of digital media in teaching (n = 84);
Cluster 2: little media didactic knowledge (n = 64);
Cluster 3: the average (n = 293);
    Cluster 4: little knowledge of the media-related environment of the participants (n = 143); and,
Cluster 5: little media-related participant orientation (n = 38)

Cluster 1: rejection of digital media in teaching
This cluster was characterized by the fact that teachers in this group strongly rejected digital media in teaching and only used a small amount of digital media in the preparation of events. Significantly more health and sports teachers were represented in this cluster and significantly fewer teachers from the subjects nature, technology and computers were in Cluster 1 than in the comparison group. In addition, teachers in this cluster had a slightly lower education level and were more often female (both significant at 10% level).

Cluster 2: Little media didactic knowledge
On average, the educators of this cluster had little media didactic knowledge. Nevertheless, they dealt a little more with the media-related characteristics of the participants and used a little more digital media for their preparation of courses than the adult educators of cluster 1. In this cluster, there were significantly fewer full-time working adult educators than in the other clusters.

Cluster 3: the average
In the founded types of adult educators, the third cluster was the largest one which also had mean values in all factors near the average. This cluster was called "the average" and was used as a reference group for the group comparisons below. Before variance analysis were carried out, all prerequisites were checked so that the data would be suitable. Significant differences were identified with post hoc tests (Bonferroni). The adult educators in this cluster showed values close to 0 in all facets of the previous factor analysis. In the performance test of media didactical competence scored on average 17.6 out of 26 points (the whole sample scored on average 16.9 points). They usually used digital media to prepare their courses and did not reject digital media in adult educational settings. The three facets of the media-related field competence were good to satisfactory pronounced in this cluster. The other types of adult educators found are now described and compared to this average type.

Cluster 4: little knowledge of the media-related environment of their participants
The adult educators of this cluster did not deal very much with the medial characteristics of their participants and attached little importance to knowledge about the medial environment of the participants. There were significantly more teachers of health and sports in this cluster and far fewer teachers of business, labour.

Cluster 5: little media-related participant orientation
The educators of this cluster were less concerned with the media-related characteristics of the participants and had a very low media-related participant orientation. However, these teachers were more likely than average to use digital media for preparation. In this cluster, there were no adult educator teaching in the subjects of nature, technology, computers. In addition, members of this cluster had significantly shorter work experience.

Discussion

To the knowledge of the authors, this is the first study to provide objective data on the media pedagogical competence of adult educators. Due to the high level of participation in the study, the results are highly informative and provide some insights into the skills and attitudes of adult educators related to the use of digital media in their teaching.

The results showed that the adult educators surveyed had neither special media pedagogical skills nor were they particularly skeptical about digital media. There were also no dichotomous groups. On the contrary, an entire range of competences and attitudes was evident, without pronounced extremes. Although it is not possible to say whether the competences of the interviewees was sufficient for their teaching activities or whether the competence level was too low, the data however suggest that experience and knowledge in adult education and digital-media leads to a much more open and critical use of digital media. From this potentially the demand could be derived to integrate media pedagogical contents more strongly into the education and further training of adult educators.

When interpreting the findings of the present study, it should be considered that there is little focus internationally on the field of adult education in Bachelor programmes in educational science (Lattke, 2007). Specialisation generally only takes place in Master programmes, which are generally offered as consecutive courses of study; thematic focuses include e-learning, teaching, management and leadership tasks and vocational training (ibid., p. 3). The contents of the courses of study are hardly comparable. Likewise, the proportions and emphases of media pedagogic are - on a first glance - very different. Nonetheless, it must be considered that many teachers in adult education (e.g. in Germany one-third) do not have any educational degree from university (Koschek, 2018).

At the beginning of this report it was identified that there is no basis for statements on media pedagogical competence of adult educators. One potential reason for this is that little importance has been previously attached to the media pedagogical competence of adult educators. On the other hand, there were previously hardly any tests to evaluate the media pedagogical competencies of trainers. In the field of adult education, only a series of procedures for self- and peer-assessment based on interviews, observations, reports and document analyses of educators could be found. These approaches were partly linked to the low level of formal pedagogical qualifications in adult education and have the aim of formally recognising informally acquired competences or promoting the quality of adult education.

The research results presented in this article however provide the basis for a comprehensive description and assessment of media pedagogical competences of adult educators. In addition, they allow a detailed analysis and assessment of the extent to which requirements for the professionalization of adult educators are anchored.

Nonetheless, there were also some limitations in the interpretation of the data. First, there were no concrete requirement descriptions with which the results could be compared. These would have to be defined for the sub-areas of adult education. The competence model presented here could provide an important basis for this. A further limitation resulted from the fact that the heterogeneity of adult education was only partially represented. In this sense, the results did not permit an evaluation across the entire spectrum of adult education.

From a more practice-oriented perspective, the test could perhaps be helpful as an instrument for adult educators to check their own competencies related to the use of digital media and to use this information for further professional development. Therefore the test has been published online as a self-test and some adult education associations are already developing train-the-trainer programs related to the facets of media pedagogical competence named in our model. Knowing in which areas of media pedagogical competence they have development potential, adult educators can choose specific train-the-trainer programs that fit for their profile.

Conclusion

The media pedagogical competence model and the test based on it represent a first attempt to describe and objectively measure media-related competences of adult educators. The results—provide initial insights of media pedagogical skills and attitudes of adult educators. Five different types of adult educators were identified: Adult educators with a negative attitude towards digital media, such with little media didactic knowledge, little knowledge of the media-related environment of the participants, little media-related participant orientation, and teachers with a negative attitude towards digital media.

In order to assess these results, it is only possible to do so against the background of real competence requirements or normative ideas about necessary deemed competences. In the heterogeneous field of adult education, this assessment may certainly lead to very different results and disparate consequences. Therefore, a more detailed consideration of the media pedagogical requirements in the different sub-areas of adult education is necessary in future empirical studies.

Notes

[1] All examples mentioned here are free translations and were used in the test in German.

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Appendix
Table 2: Rotated component matrix

Name of factor	Variables	1	2	3	4	5	6
1 Dealing with media-related requirements of the participants	Preparation in consideration of the media-related competences of the participants	,795					
	Knowledge about the media-related knowledge of participants	,740					
	Knowledge about the learning opportunities of digital media for participants	,734					
	Knowledge about the learning obstacles of digital media for the participants	,733					
	Knowledge of the media-related culture of the organization	,725					
	Knowledge about the media usage habits of the participants	,711					
	Knowledge about the organizational culture in relation to the media-related design	,698					
	Knowledge about the media-related competence of the participants.	,629	,304				
	Knowledge of the participants' professional use of the media	,613					
2 Media-related participant orientation	Relevance of knowledge about learning obstacles for teaching		,746				
	Relevance of the media usage habits of the participants		,714				
	Relevance of the media-related knowledge of participants		,694				
	Relevance of the learning opportunities of digital media for participants		,690				
	Relevance of the media for professional use		,656				
3 Media didactic competence	Aspects for motivated studying during e-learning units			,708			
	Selection of topics for implementation in digital settings			,603			
	What to pay special attention to as an e-moderator			,599			
	Aspects of the design of digital learning environments			,594			
	Advantages of digital learning diaries			,575			
	Comparison of feedback in face-to-face events with digital settings			,574			
	The use of images, videos and texts from the Internet in teaching courses			,462			
	Didactic use of the smartphone in courses			,435			
4 Knowledge about media-related environment of participants	Knowledge about changes in the living environment through digitalization (I)				,768		
	Knowledge about the working environment of the participants (I)				,757		
	Knowledge about changes in the living environment through digitalization (II)				,742		
	Knowledge about the working environment of the participants (II)				,712		
5 Rejection of digital media in teaching	Digital media are superfluous for my teaching					,784	
	No need to deal with digital media.					,743	
	No added value of digital media for teaching.					,731	
	No interest in using digital media in teaching.					,687	-,318
6 Preparation with digital media	Use the Internet to search for materials for teaching.						,863
	Find something on the Internet that can be used for teaching						,850
	Information on the Internet about the subject matter of teaching.						,721

Extraction method: Analysis of the main component.
Rotation method: Varimax with Kaiser normal distribution.
a.   Rotation converged in 6 iterations.

Aims & Scope

The European Journal for Research on the Education and Learning of Adults (RELA) is a refereed academic journal creating a forum for the publication of critical research on adult education and learning. It has a particular focus on issues at stake for adult education and learning in Europe, as these emerge in connection with wider international and transnational dynamics and trends. Such a forum is important at a time when local and regional explorations of issues are often difficult to foreground across language barriers. As academic and policy debate is increasingly carried out in the English language, this masks the richness of research knowledge, responses and trends from diverse traditions and foci. The journal thus attempts to be linguistically 'open access'. Whilst creating a forum for international and transnational debate, contributions are particularly welcome from authors in Europe and other locations where English is not the first language.

RELA invites original, scholarly articles that discuss the education and learning of adults from different academic disciplines, perspectives and traditions. It encourages diversity in theoretical and methodological approach and submissions from non-English speakers. All published contributions in RELA are subjected to a rigorous peer review process based on two moments of selection: an initial editorial screening and a double-blind review by at least two anonymous referees. Clarity and conciseness of thought are crucial requirements for publication.

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