Overcoming Age Barriers. Motivation for Mature Adults' Engagement in Education

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Abstract

Education is the main vehicle for empowering adults (Freire, 2003), and can contribute to community wellbeing (Merriam & Kee, 2014). However, regarding Mature Adults (MAs) (over 45 years old), age has been identified in various studies as a significant barrier to accessing educational activities. This paper focuses on MAs' motivations to learn through an exploratory survey undertaken in six European countries. A K-Means cluster analysis based on 16 variables has been run on n=846 valid cases. Four clusters describing distinctive behaviors and attitudes of MAs towards learning activities were identified. The study confirms that MAs' motivations to learn are very diverse, overcoming some of the so-called *myths of global aging* like the MAs' homogeneity or their motivation to learn declining. Furthermore, analyzing the main motivations of MA learners can be useful for adapting education to cater to their specific needs, boosting a more inclusive education, and promoting MAs' empowerment.

Keywords: mature adults education, age, motivation, empowerment, cluster analysis

Introduction

The progressive aging process of the European population (Eurostat, 2011, 2016a) has put orienting lifelong learning (LLL) toward mature adults (over 45 years, following Crawford, 2004; hereinafter MAs) as one of the priorities in the agenda of the European Union (EU). In 2009, Education and Training 2020 (European Commission, 2009) set as general criteria – among others – the support of LLL in all vital stages of the human being's life, together with the promotion of equity, social cohesion and active citizenship through training, and the promotion of creativity and innovation, including entrepreneurship, at all levels of education. In other words, in addition to the vision of LLL as a necessary tool for MAs to remain an attractive segment for employers (Marcaletti, 2012; Swain, 1995), its usefulness is defended in order to encourage the active participation of this

segment of society (Antikainen, Harinen, & Torres, 2006; Mayo, 2009), thus promoting community wellbeing (Merriam & Kee, 2014) and the empowerment of this social group (Freire, 2003).

However, MAs have traditionally been excluded from education and training activities (Oliveira, 2013). According to the Education and Training Statistics (Eurostat, 2016b), the participation of MAs aged 45–54 in educational activities in the EU was 8.9% in 2014, which is reduced to 6.0% among people aged between 55 and 64 years old. While there has been a positive evolution over the last 10 years (1.5 percentage points more in both age groups compared with 2006), only five countries in the EU already reach the 15% of participation in LLL set by the European Commission (2009) as the target to be reached by 2020.

Therefore, the analysis of the motivational factors that can lead MAs to participate in educational activities becomes essential for the promotion of an educational offer that adapts to the specific needs of this social group, thus fostering a greater presence of older adults in these kinds of activities. Derived from this objective, and within the framework of the GRUNDTVIG project "IMAL-Innovations in Mature Adult Learning" (Jancewicz et al., 2015), this paper focuses on the analysis of over 45-year-old adults' motivations and perceived barriers to their access to education in Denmark, Italy, Greece, Spain, Poland and Turkey. The population group chosen for analysis (over 45 years old), broad and heterogeneous, responds to the need evidenced in the scientific literature to analyze the aging process from the beginning, and how it affects social dynamics, to implement policies that ensure their progressive labor and educational inclusion (Merriam & Kee, 2014; Crawford, 2004; Ranzijn et al., 2006; Diggs, 2008).

The analysis is framed within the review of the main theories about barriers and motivating factors for MA learners, therefore we first identify the main characteristics of this population group. Following this, we contribute to the knowledge of those features, showing the results of an exploratory questionnaire that was administered in the IMAL project's six participant countries. Through a K-Means cluster analysis, it has been possible, using the general sample, to identify four basic profiles of MA learners, together with their main motivations and perceived barriers for participating in educational activities.

Our exploratory study shows the great diversity of MAs' motivations and ways of learning, challenging two of the myths of aging theories: the homogeneity of MA learners (Bjorklund, 2011; Findsen & Formosa, 2011), and the decline in their motivation for learning (Kanfer & Ackerman, 2004). In the mature stage of life, personal characteristics (especially working status and educational level) influence motivation and ways of learning, but they do not necessarily imply a decline in motivation. On the other hand, the applicability of knowledge is a relevant feature, as well as internally-driven motivational factors (such as personal fulfilment and the pleasure of learning itself) which are also clearly represented in results. In this sense, our exploratory study concludes that a better understanding of this great variety of MAs' profiles, motivations for learning, and perceived barriers to it, can boost a more inclusive education, promoting a better personal and social wellbeing of this population and of their communities.

Contextualization

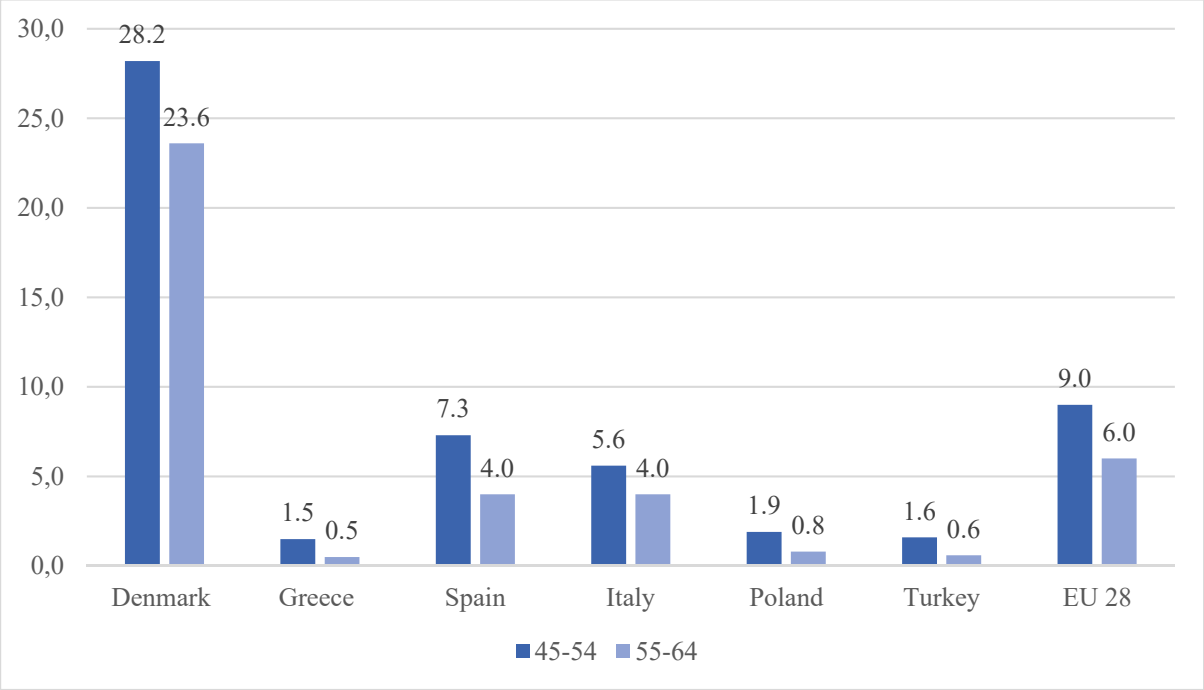
Europe can be described as an "aging society". The demographic change, a process which in recent years has been showing the extent of its impact, is putting pressure on all developed countries. At EU level, the population share of 45-64 year-olds has increased by 7% in the last 10 years (Eurostat data on *Population structure and aging*, 2016a). According to the same source, the trend will increase over the coming decades, with the population of over 65s expected to reach almost 30% of the European population by 2050.

However, the aging of the European population has not necessarily translated into an increase in the educational demand by the MAs. In the EU, Eurostat *Educational attainment statistics* (2016b) reveal that the participation of people over 45 years old in education was 9.0% in the age group between 45 and 54 years, and 6.0% between 55 and 64 years. Among the countries participating in our study, the leading country is Denmark, with 28.2% adults aged 45-54 and 23.6% 55-64 years-old adults engaged in an educational activity. A second group is comprised of Italy and Spain, which, although below the European average, account for 7.3% and 5.6% of MAs aged 45-54 respectively, and 4.0%. of MAs aged 55-64. Finally, Poland, Greece and Turkey show shares below 3% of MAs

participating in educational activities. We can thus conclude that the social and political awareness of the relevance of LLL in recent years has not led to an increase in concrete participation.

Figure 1

MA participation rate in education and training (45-54; 55-64) in IMAL participant countries, 2015



Source: Eurostat: *Educational attainment statistics* (2016b). Own processing

Of course, the participation of adults in education depends to a large extent on the socio-economic and cultural context of each country and on the promotion of training activities promoted by public and private administrations. The first factor that the European Commission (2015) points out is the educational level of the adult population, since, according to *Mathew Effect* (Stanovich, 1986), at a lower level of education, less participation in learning activities, an effect especially evident in the older individuals (European Commission, 2015). This would explain the three groups of countries that we have observed in the *Figure 1* according to their participation in LLL, since, for example, in Denmark 29.7% of the older population (over 55 years old) is below ISCED 2 (belonging to the group most involved in training activities), while in Spain the index is 64.9% and in Italy 59.5% (both in the

intermediate group), and in Turkey it is 83.7% (group with the lowest participation rate) (Eurostat, 2016b).

Another key factor is the national policies agendas on LLL, since, despite the fact that the European Commission has expressed its commitment to improving opportunities for adults lacking basic skills or sufficient qualifications, each country has addressed this issue in different ways (European Commission, 2015). In this sense, the differences are also evident. Among the countries that were part of our project, only Denmark has established Adult Education as an economic development strategy within the Europe 2020 framework, including a quantitative target to increase the number of adults participating in education and training by 160,000 in 2018, commitment that is reflected in the statistics of *Figure 1*.

Although our analysis is exploratory with the aim of understanding MAs motivations for participating in LLL, and we don't deepen in each country features, this framework helps to understand the complexity and heterogeneity of this issue, beyond MAs individual characteristics.

Literature Review

Adult participation in learning is, in most cases, voluntary and intentional (Knowles, 1980). This explains why much of the literature on this topic has focused on the motivational factors of this social group (Chao, 2009; Hubackova & Semradova, 2014; Skolverket, 2000; Swain, 1995). On the other hand, regarding MAs, the age factor is analyzed in different studies as the main barrier to their participation in an educational activity. This may be due to contextual (externally-driven) factors, such as existing ageism in educational and labor institutions, which presuppose the loss of interest and learning capacity of this population group (Van Vianen, 1997). Furthermore, internally-driven factors are said to explain this phenomenon as a self-exclusionary mechanism enacted by MAs when it comes to participation in educational activities (González & Maeso, 2005; Pérez-Serrano, 2001). According to Ranzijn et al. (2006), when adults reach 45 years old their labor and educational horizons start to "narrow" (p. 476), being needed to focus not only on "older people" (over 65 years old), but on MAs (over 45 years old) to understand the effect of the ageing process in their motivations for learning, as also Diggs pointed out (2008).

Due to the age factor, in the literature MAs have usually been considered as a "non-traditional" student group (Murray, Smith, & Nielson, 2010), characterized by a way of approaching learning that is different than for other segments of the population (Bamber & Tett, 2001, as Knowles stated with his theory on *Andragogy* (1980). In this sense, several authors have identified this population group as being mainly motivated by practical and easily applicable learning (Bamber & Tett, 2001; Houle, 1974; Hubackova & Semradova, 2014; Oliveira, 2013).

Following these theories, when the perception of the usability of learning decreases, for example when MAs retire from active working life, their motivation to learn also falls (Felstead, 2010, Taylor & Urwin, 2001; Urwin, 2006). This idea is aligned with the *Age-related motivation decline theories*, which explain the age factor as the most important barrier to the access of educational activities (Chao, 2009; González & Maeso, 2005; Kanfer & Ackerman, 2004; Van Vianen, 1997). These authors point out not only the decline in the usability of learning linked to aging, but also the decrease in cognitive factors: a lower self-confidence in one's own learning abilities, or simply a loss of interest in acquiring new knowledge (Kanfer & Ackerman, 2004).

Works like these and others, such as the case of Chen, Kim, Moon, and Merriam (2008), define the MA in a homogeneous way, with the age factor influencing the personal characteristics above all the other social or personal factors. This contributes to what authors like Merriam and Kee have called "myths of global aging" (2014, p. 3). These myths reflect, among others, the idea that MAs respond to similar characteristics, or that with age this population becomes frailer and loses functional capacity, and, with it, their motivation to learn.

Breaking these myths, Ferrier, Burke, and Selby Smith (2008), Bjorkund (2011), Findsen and Formosa (2011), and Merriam and Kee (2014) note the great heterogeneity of MAs "more than in any other segment of population" (Merriam & Kee, 2014, p. 4), pointing out the active, social, healthy and educated character of many MAs. Ideas like these can be included in the theories of *Age-related motivation maintenance* (De Corte, 2003; Stipek, 1996). These theories argue that education is not separated from life, and consequently motivations can range from criteria that are more utilitarian, to more internally-driven factors, such as the pleasure of learning (Iñiguez Berrozpe & Marcaletti, 2016a, 2016b; Pring, 1999). These theories do not deny the existence of access barriers to education

for this population group, but they do defend the MAs' variety of profiles and motivations when considering a learning activity. This is why it is not possible to confirm the existence of a loss of interest in education, but rather a great heterogeneity regarding their aims for learning (Smith, E., Smith, A., & Smith, C., 2010), and regarding their contextual factors (Schmidt-Hertha, Tikkanen, & Hansen, 2009).

However, it must be observed that, in many cases, the educational offer is not tailored to MAs' needs and motivations (UNESCO, 2010), and it tends to suffer from excessive compartmentalization or atomization that does not take into account this multiplicity of motivational factors (Delors, 1996; Faure et al., 1972; Sen, 1999). These factors may limit MA engagement in education. When understood in this way, adult education requires a more holistic and humanistic approach, taking into account both the heterogeneity of this population and its inseparability from the long and wide life-course of a person (Desjardins, 2004; Houle, 1974; Iñiguez Berrozpe & Marcaletti, 2016a; Pérez-Serrano, 2001; Pring, 1999; Reder, 2009; UNESCO, 2010).

In this sense, adult education must be analyzed, not as being separate from the rest of learning, but as being on the same continuum of the lifetime of a person (Lifelong Learning (LLL)) (Skolverket, 2000). On the other hand, the aforementioned multiplicity of motivational factors, linked to the recognition of the different ways in which learning can take place (formal, non-formal, and informal) has led to the emergence of the term *Lifewide Learning* (LWL) (Reischmann, 2014; Skolverket, 2000; UNESCO, 2010). Both concepts, LLL and LWL, describe the educational reality of the Information Society, in which learning appears in a continuous, intensive and varied way, being able to come from the most diverse sources and responding to different needs (Aubert, Flecha, García, Flecha, & Racionero, 2008). Overcoming sectoral readings of MA learning, in which age is an element of exclusion, this new analysis of educational engagement is proposed through a humanistic and integral approach that has at its core the learner itself (UNESCO, 2010).

On the other hand, the holistic and non-fragmented view of interpreting MA learning addresses not only the causes of educational participation and how it takes place, but also the consequences of it. The effects of LLL on MAs can range from the immediate utilitarian consequence, for example remaining attractive to employers (Marcaletti, 2012), to personal enrichment and

empowerment (Antikainen et al., 2006; Mayo, 2009). In this sense, education becomes very relevant to MAs' wellbeing, increasing their quality of life by favoring active aging (Bjorklund, 2011; Herzog, Ofstedal, & Wheeler, 2002). Furthermore, this personal empowerment can be transferred to the social sphere, promoting community wellbeing (Brookfield, 2012; Field, 2009; Merriam & Kee, 2014). These authors analyze the MAs' important contribution to the increase of the social capital of their communities, and the relevant role that lifelong learning plays within this process. By participating in educational activities, the MA develops cultural and social competencies that, through his/her social networks, contributes to reinforcing the collective identity (Brookfield, 2012), and ultimately the wellbeing of the community (Biggs, Cartensen, & Hogan, 2012; Merriam & Kee, 2014).

Therefore, understanding MAs' motivations for participating in education and their different profiles becomes essential in promoting a more active participation of MAs in society. This idea is related to recent theories that argue for a learner-centered education, being defended by many authors as the most effective way of approaching adult learning (Gorges & Kandler, 2012).

Method

Instrument

The general objective of the survey has been to investigate, based on the theoretical framework arising from the literature review, the needs and the motivations to learn of MAs in the six countries involved in the Grundtvig project. In particular, the survey aimed to explore the conditioning factors of mature adults' learning choices and those that support motivations.

The aim of the survey has not been to reach any representativeness of the data collected within each country, due to the lack of resources to invest in it. On the contrary, the aim has been to build an investigative tool, to be used in different national contexts, in order to collect information about adults' learning attitudes. Furthermore, the methodological design of the survey and of the data analysis have been conceived with a more general explorative aim, with the collection of evidence-based data included.

The main tool of the survey was an on the line standardized questionnaire that was first conceived in English and subsequently translated into the six languages of the project partners.

The anonymous questionnaire covers several topics, starting with a general section devoted to collecting personal data of the respondent, i.e. nationality, age, sex, employment condition, educational attainment. The first thematic section of the tool is focused on past educational and learning experiences, with variables exploring influences on the educational pathways followed and consistency with subsequent work pathways. The second thematic section proposed questions about learning needs, influences on the needs themselves, as well as interests and preferences. The questionnaire's third thematic section included variables relating to concrete opportunities to learn and their effectiveness in different spheres of life. The final thematic section covered different dimensions of motivations to learn (i.e. the easing, the hindering, and the commitment factors). What resulted from this structure is a set of 111 variables, personal ones included.

In terms of methodological assumptions and choices, according to the need for measuring behaviors, attitudes and opinions, all the variables (excluding the personal ones) consist of evaluation scales in order to ease both exploratory multivariate analysis (factor analysis, cluster analysis) and reliability tests (the variables measure exactly what they have to).

The questionnaire has been administered online (via Google and Survey Monkey) in order to reduce costs and try to allow each partner, in their own country, to better reach the convenience sample chosen[1], i.e. a population of over-45 year-old adult learners[2]. Choices made by partners have been different, according to the possibilities to reach, via email, a convenience sample of mature adult learners with a preference for those who experienced any kind of learning activity in the last two years. Thus, the two major constraints to sampling have been the preselection of respondents, according to those who had an email address, and the involvement of those reachable in the social

[1] The sampling technique chosen has been the convenience sampling because no aim to reach any representability of MAs populations has been assumed. In addition to the aim of reducing the costs of more complex sampling techniques, the choice has been made also for facilitating the not academic partners in administering and collecting the questionnaires.

[2] Despite the projects addressed specifically MA learners, the choice of also including in the samples 40 year-old respondents was seen as a way to reach a small sample of the target population that could represent a control group. Age group 40-44 represents 21.2% of the total sample. Although broadening the concept of MAs, the Authors have decided not to exclude this group from the analysis presented into this paper.

environment of the partner organizations[3]. These two factors led, as it will be better explained in the following paragraph, to different sizes and compositions of each country's convenience sample.

With the aim of collecting as much data as possible, the duration of the questionnaire administration has been quite long, extending between June 2014 and February 2015.

Sample

The administration of the questionnaire in the six different partners' languages led to the collection, in the respective countries, of a total of 1,066 completely or partially filled questionnaires. As shown in Table 1, the largest is the Italian sample (n = 460), representing 43.2% of the total sample. The second largest national sample comes from Poland (n = 258), representing another quarter (24.2%) of the total sample, although this is also the sample with the highest number of partially filled questionnaires. Greek (n = 111) and Spanish (n = 106) samples are quite similar and represent about one tenth of the total sample each. The smallest are the Turkish (n = 83) and the Danish (n = 48) samples, representing less than one tenth of the total sample each[4].

Table 1. *Distribution of the sample by participating country*

Country	Frequency	Percentage	Valid percentage	Cumulate percentage
Denmark	48	4.5	4.5	4.5
Spain	106	9.9	9.9	14.4
Greece	111	10.4	10.4	24.9
Italy	460	43.2	43.2	68.0
Poland	258	24.2	24.2	92.2
Turkey	83	7.8	7.8	100.0
Total	1066	100.0	100.0	

Analysis

Cluster analysis allows for working on the general sample, despite differences between the national samples. Indeed, the K-Means method aggregates cases on the basis of their similarities to a single case representing the "center" of the cluster. This method determines the number of clusters in

[3] Concerning each country sample, it is possible to generally refer to the following MAs' social environments: civil servant (Denmark), MAs attending 'university of experience' classes (Spain), social work teachers (Greece), MAs attending training for unemployed persons (Italy), employed and unemployed women (Poland), vocational training teachers (Turkey).

[4] The detailed characteristics of the sample can be consulted in Appendix I

which the sample should be split, thus representing a good exploratory tool in order to better interpret the features of a heterogeneous sample.

This way, despite respondents being heterogeneous according to personal condition (e.g. age, employment status, country), they can be nonetheless aggregated on the basis of the similarities of their answers to specific questions (single items/variables) selected in order to develop the interpretative model.

Thus, the cluster analysis has been carried out using 16 variables concerning different factors relating to "Needs" (n. 6 variables), "Opportunities" (n. 1 variable), and "Motivation" (n. 9 variables) to learn, the ones that demonstrated greater significance (in terms of high mean scores) or critical (low mean scores) for the general respondents. As specified in the previous paragraphs, the 16 variables are homogeneous in their type, as they adopt the same Likert scale[5]. They are listed in Table 2, showing the results of the ANOVA test, that can be used only for descriptive purposes, and indicating the variables with the strongest influences in the composition of the clusters. These are "IL2.1 Technical-professional skills", "ML1.1 Being able to spend at work", "ML1.7 Realizing myself as a person", and "ML1.5 Keeping in touch with the times".

[5] A reliability test of the scale adopting the 16 variables indicates that the model can be implemented. In particular, 2 out of the 16 variables measure the degree of accordance on the basis of reverse scores (ML2.8 The lack of time; ML2.10 The cost of education), thus presenting inter-item correlations, negative values and corrected item-total correlation with values below .3. The only variable chosen from the "Opportunity" section of the questionnaire, WL2.10, has a corrected item-total correlation value below .3 and should be excluded from the scale. Nevertheless, even keeping them within the model, the Cronbach alpha coefficient of this exploratory study is .76, thus not very good but nonetheless acceptable.

Table 2. *ANOVA Test*

ANOVA						
	Cluster		Error		F	Sig.
	Sum of squares	df	Sum of squares	df		
IL2.1 Technical-professional skills	174.480	3	.769	842	226.937	.000
IL2.3 Soft and relational skills (interpersonal communication, group work, etc.).	55.564	3	.925	842	60.098	.000
IL2.6 Topics related to my hobbies, personal interests and general knowledge	45.863	3	.945	842	48.537	.000
IL3.2 Usability of knowledge and skills at the end of the course	44.625	3	.548	842	81.417	.000
IL3.5 Quality of the teacher(s) / training institution	34.277	3	.542	842	63.262	.000
IL3.12 Validation of acquired competences	67.364	3	.774	842	87.012	.000
WL2.10 Reading books, magazines, multimedia materials, etc..	68.252	3	1.000	842	68.276	.000
ML1.1 Being able to spend at work (or in prospect of work) knowledge and skills acquired	112.240	3	.810	842	138.611	.000
ML1.5 Keeping in touch with the times	79.052	3	.620	842	127.556	.000
ML1.6 The pleasure of learning itself	71.635	3	.642	842	111.564	.000
ML1.7 Realizing myself as a person	91.379	3	.683	842	133.885	.000
ML2.8 The lack of time	57.241	3	1.349	842	42.435	.000
ML2.10 The cost of education	32.330	3	1.504	842	21.491	.000
ML3.2 Experiential courses/seminars (I learn while I practice with a group of people in cooperative / collaborative way)	69.124	3	.751	842	92.076	.000
ML3.6 Learning by carrying out a new task (learning by doing, on the job training)	75.385	3	.831	842	90.763	.000
ML3.10 The research of specific contents on the Internet	64.735	3	.791	842	81.832	.000

The 16 variables have been chosen to minimize the number of missing cases. This led to work on n = 846 valid cases (missing n = 220), aggregated into four clusters. The number of cases within each cluster is shown in Table 3. Cluster n. 1 is the smallest (n = 114), the others are more than twice as large (respectively n = 237; 244; 251). The distance between the centers of the clusters is high,

especially between the first and the last, as Table 4 indicates. Distances between the second, third, and fourth are smaller.

Table 3. *Number of cases in each cluster*

1	114
2	237
3	244
4	251
Valid	846
Lost	220

Table 4. *Distances between final clusters' centers*

Cluster	1	2	3	4
1		3.417	3.408	5.557
2	3.417		2.366	2.972
3	3.408	2.366		2.945
4	5.557	2.972	2.945	

Findings

According to the cluster analysis results, a fruitful way to proceed is to summarize the characteristics of each cluster through a descriptive "label", to be used as a shortcut to indicate the specific features of the respondents belonging to each one.

Therefore, the clusters can be named as follows.

- Cluster 1: "Filling the gaps"
- Cluster 2: "Widening own horizons"
- Cluster 3: "Pragmatically recovering"
- Cluster 4: "Lifelong learning oriented".

Table 5. *Cluster analysis*

	Cluster 1: Filling the gaps	Cluster 2: Widening own horizons	Cluster 3: Pragmatically recovering	Cluster 4:LLL oriented
Country (% column)				
Denmark	0.9	9.3	3.3	5.6
Spain	32.5	15.6	1.6	5.2
Greece	8.8	12.7	8.6	15.9
Italy	42.1	21.5	77.0	52.6
Poland		32.1	6.6	11.2
Turkey	8.8	8.9	2.9	9.6
Sex (% column)				
Male	50.9	29.5	56.6	42.6
Female	49.1	70.5	43.4	57.4
Age (% column)				
40-44	13.2	28.3	16.0	22.7
45-54	28.9	42.2	54.9	49.8
55-64	39.5	24.1	27.9	23.9
65 and over	18.4	5.5	1.2	3.6
Employment status (% column)				
Employed	48.2	76.4	47.1	57.4
Unemployed	19.3	8.4	46.3	27.9
Inactive	32.5	15.2	6.6	14.7
Education (% column)				
ISCED 0-2	28.1	9.3	4.9	5.4
ISCED 3-4	36.0	27.1	51.4	41.7
ISCED 5-6	36.0	63.6	43.6	52.9
Contents of learning (Mean)				
IL2.1 Technical-professional skills	2.44	2.53	3.96	4.2
IL2.3 Soft and relational skills	2.72	3.45	3.6	4.14
IL2.6 Topics related to my hobbies, personal interests and general knowledge	3.13	3.6	3.28	4.19
Perceived benefits of learning (mean)				
IL3.2 Usability of knowledge and skills at the end of the course	3.15	4.19	4.05	4.44
IL3.5 Quality of the teacher(s) / training institution	3.35	4.25	3.92	4.42
IL3.12 Validation of acquired competences	2.7	3.39	3.89	4.18
Motivation for learning (mean)				
ML1.1 Being able to spend at work (or in prospect of work) knowledge and skills acquired	2.42	3.72	4.03	4.45
ML1.5 Keeping in touch with the times	2.99	3.75	3.61	4.59
ML1.6 The pleasure of learning itself	3.34	4.05	3.47	4.63
ML1.7 Realizing myself as a person	2.92	4.04	3.37	4.52
Obstacles for learning (mean)				
ML2.8 The lack of time	2.45	3.37	2.3	2.41
ML2.10 The cost of education	2.89	2.91	3.72	3.18
Type of learning (Mean)				
ML3.2 Experiential courses/seminars (I learn while I practise with a group of people in cooperative / collaborative way)	2.38	3.67	3.37	3.96
ML3.6 Learning by carrying out a new task (learning by doing, on the job training)	2.4	3.56	3.36	4.08
ML3.10 The research of specific contents on the Internet	2.75	3.54	3.08	4.09
WL2.10 Reading books, magazines, multimedia materials, etc..	2.6	2.83	2.83	3.85

Depicted below are the salient characteristics of each cluster.

1. Filling the gaps

The keywords that can be used to depict the first, and numerically smallest, cluster are: "elderly", "inactive" and "low qualified". Three quarters of the cluster is comprised of Italian and Spanish respondents (74.6%). Compared with frequency distribution by country of the general sample, within this first cluster the Spanish respondents (32.5%) are particularly overrepresented. On the other hand, Polish (7.0%) and Danish (0.9%) respondents are underrepresented. It can be described as the elderly cluster because it shows the highest share of 55+ respondents, reaching 57.9%, with the share of 65+ at 18.4%, meaning almost one in five respondents belong to the cluster. Genders are almost perfectly balanced (50.9% male). According to the employment status, one third of the respondents are inactive (32.5%), which is double compared with the general sample (14.9%); low qualified respondents are also overrepresented (28.1%) on a basis of almost three times compared with the general sample (9.5%). Of course, considering the frequency distribution and the model values, within the cluster, the employed (48.2%) and the highly qualified (36.0%) represent the larger share of respondents. Nonetheless, the prevalence of elderly, inactive and low qualified men and women is the highest of all the clusters.

The cluster can be named "filling the gaps" because the respondents belonging to it show – in comparison with the other clusters – the lowest mean scores of all the 16 variables considered in the model, except "ML2.8 The lack of time", meaning that they have comparatively fewer problems in finding time to devote to learning. Nonetheless, the needs, interests and motivations lay on the lower levels, so people belonging to this cluster express a general interest for activities leading to acquiring some new knowledge or interesting information for the pleasure of doing it, especially in a passive way (indeed higher scores concerns "IL3.5 The quality of teacher(s)" and "ML1.6 The pleasure of learning itself"). This picture is confirmed by the frequency distributions of three levels (low, medium, and high)[6], with regard to the selected variables. In most of the variables, the "filling the gaps" respondents present the highest shares on low levels compared to the other three clusters,

[6] Low = score 1 or 2 in the scale; Medium = score 3 in the scale; High = score 4 or 5 in the scale.

except for "IL2.6 Topics related to my hobbies etc.", "ML2.8 The lack of time" as already mentioned, and "ML2.10 The cost of education". The interest for active and collaborative learning is particularly poor within this group (low interest at 54.4% compared to a total of 15.1%; high at 7.0% compared to a total of 54.4%).

2. Widening own horizons

As equally well defined as the former case are the features of the second cluster. The keywords to depict this cluster can be: "female", "employed" and "highly qualified". More than half the cluster is made up of Polish and Italian respondents (53.6%), with especially Polish (32.1%), Spanish (15.6%), and Danish (9.3%) respondents overrepresented. On the other hand, Italians (21.5%) are underrepresented. While the age structure of the cluster reflects that of the general sample, with the 40–44 year-olds overrepresented, the gender composition is the least balanced of the four clusters, with the share of females reaching 70.5%. Three out of four respondents are employed (75.4%), almost 17% more compared with the general sample (58.5%), while the unemployed are underrepresented in this group (8.4%, one third compared to general sample) but not the inactive (15.2%). Also overrepresented are the highly qualified respondents (63.6%), but once again not the low qualified (9.3%), which is in line with the average.

The cluster can be named "widening own horizons" because the respondents belonging this group – in comparison with the other clusters, especially the third and the fourth, and despite its imbalance toward employed and high qualified women – show a lower instrumental and acquisitive attitude toward learning (need for "IL2.1 Technical-professional skills" far below the general sample mean score, and motivation for "ML1.1 Being able to spend at work" below the mean values as well). Respondents belonging to this cluster once again demonstrate interest for "IL3.5 The quality of the teachers/training institutions", and show particularly high scores concerning "IL3.2 The usability of knowledge at the end of the course", but also for "ML1.6 The pleasure of learning itself" and for "ML1.7 Realizing myself as a person". This group, despite the appreciation for teachers, is nevertheless more open to different learning paths, showing mean scores higher than the general sample concerning "ML3.2 Experimental courses", "ML3.6 Learning by carrying out new tasks", as well as "ML3.10 The research on the internet".

Thus, apparently confirming gender stereotypes (expressive versus acquisitive behaviors), this group is reporting, much more than the others, problems concerning the lack of time to devote to learning.

3. Pragmatically recovering

Once again, the third cluster shows well-defined features. The keywords to depict it can be: "male", "middle-aged", "unemployed" and "middle qualified". Italian respondents make up more than three quarters of the cluster (77.0%), with Italians themselves overrepresented, and Spanish (1.6%), Polish (6.6%) and Turkish (2.9%) respondents underrepresented. The 45–49 year-old respondents are the largest age group in the cluster (54.9%), overrepresented compared to the general sample (46.3%), while both younger (16.0%) and older (1.2%) age groups are underrepresented. Gender composition, in this case, is the most unbalanced for males (56.6%) among the four clusters. Almost half of the respondents are unemployed (46.3%), almost 20% more than the general sample (26.6%), while both employed (47.1%) and inactive (6.6%) respondents are underrepresented. Also overrepresented are the middle qualified respondents (51.4%), while the low qualified (4.9%) represent a very small share.

The cluster can be named "pragmatically recovering" because the respondents in this group show relatively high scores concerning "IL3.2 The usability of knowledge", "ML1.1 Being able to spend (the knowledge) at work", the acquiring of "IL2.1 Technical-professional skills", and the problem of "ML2.10 The cost of education". These pieces of evidence support the interest expressed by this group for strongly work-related learning opportunities, as well as for content immediately spendable in the work environment, or at least in the job seeking, as the majority of respondents in this cluster are unemployed.

For those belonging to this third cluster, the cost of learning is a problem to be taken into account before committing to activities, yet their investments in cheap ways to acquire new knowledge or information (e.g. reading books or researching on the internet) appear limited.

4. Lifelong learning oriented

There are only two keywords that can be used to depict the fourth, and numerically largest, cluster: "mean distributions" and "highest scores". Two thirds of the cluster is made up of Italian and Greek respondents (68.5%), with Greek (15.9%) and Turkish (9.6%) respondents overrepresented, while Spanish (5.2%) and Polish (11.2%) respondents are underrepresented. The main feature of the cluster, however, except for the national composition, is that it perfectly overlaps the characteristics of the general sample under all the descriptive personal dimensions considered: age (slightly higher than the share of those aged less than 55, at 72.5%), sex, employment status and educational attainment (ISCED 0-2 slightly underrepresented).

On the other hand, the cluster can be named "lifelong learning oriented" because the respondents belonging to it show – in comparison with the other clusters – the highest mean scores in all the variables considered. The only exceptions are "ML2.8 The lack of time" and "ML2.10 The cost of education", meaning they have fewer problems than respondents belonging to other groups in finding time and money to devote to learning. All the other dimensions related to needs, opportunities and motivations to learn present mean scores higher than in the other clusters.

In 6 out of 16 variables included in the analysis, the share of "high" scores is greater than 90%, in another 4 it is over 80%, and in another 3 it is over 70%. The only exceptions are, as already reported, "ML2.8 The lack of time" (21.5%), "ML2.10 The cost of education" (48.2%), but also "WL2.10 Reading books etc." (66.1%), but this is nonetheless a share almost double than that of the general sample.

This cluster aggregates the more motivated and learning oriented adults of the general sample, reflecting attitude and interest for all relevant dimensions associated with the experience of learning in adulthood.

Discussion

Despite starting from a heterogeneous sample, taking into account socio-personal features, the cluster analysis allowed us to aggregate cases based on their similarities, obtaining four basic profiles

of mature adult learners and their main motivations (and barriers) for participating in educational activities.

The results of our exploratory study show a great variety of MA profiles in terms of their motivations and perceived obstacles to learning, as well as the methods through which the learning is undertaken. Among them, only the first and smallest cluster, "Filling the gaps", reflects the characteristics that the scientific literature has traditionally ascribed to the MAs: less motivation to learn, less confidence in their own abilities as students, and less interest in education, or, when they do participate in an educational activity, a greater preference for more passive and traditional methods, such as the master class (Chao, 2009; González & Maeso, 2005; Kanfer & Ackerman, 2004; Van Vianen, 1997).

Nonetheless, the other clusters are in line with the breakdown of these above-mentioned myths. The results evidence the great heterogeneity of this population group in terms of their motivations and ways of learning. On the one hand, cluster 3, "Pragmatically recovering", looks for the usability of the technical or professional skills that they can acquire through education, mainly to spend them at work, and this is aligned with other studies such as those by Houle (1974), Oliveira (2013), Gorges and Kandler (2012), Hubackova and Semradova (2014). On the other hand, clusters 2, "Widening own horizons", and 4, "Lifelong learning oriented", advocate for learning as an integral process to enrich life that can be pleasant by itself, as was shown in previous studies by Antikainen et al. (2006), Mayo (2009), Pring (1999), Iñiguez Berrozpe & Marcaletti (2016a; 2016b).

In these three learning profiles that defy the more traditional view of the MAs, there is also a great diversity of the most valued ways of learning. Beyond the master classes, these are people open to different learning paths, either through training by doing (cluster 3), or other active methodologies such as experimental courses or learning by carrying out new tasks (clusters 2 and 4), included in them methods of autonomous learning like reading or searching the Internet. These results show the great heterogeneity within the MA population in both their learning objectives and the way in which they learn, as claimed by authors such as Ferrier et al. (2008), Smith et al. (2010), Bjorkund (2011), Findsen and Formosa (2011) or Merriam and Kee (2014).

Except for cluster 1 that showed, in general, less motivation to learn, in the rest of the profiles, the problem found differs in general from the traditional stereotypes attributed to this section of the population, as in the case of the aforementioned *Age motivation declining theories*. Obstacles like lack of time for cluster 2, the cost of education for cluster 3, and no particular ones for cluster 4 (the group with most motivation) were found as significant. Therefore, these profiles can be included in the theories of *Age-related motivation maintenance* (De Corte, 2003; Stipek, 1996), due to the fact that age does not seem to be a factor in the limitation of learning activities. They also show that an interest in education can develop either due to externally-driven, utilitarian factors or internally-driven factors. Other socio-personal factors, such as sex, educational level or employment status, seem to be greater determinants than age itself, as Schmidt-Hertha et al. (2009) and Iñiguez Berrozpe & Marcaletti (2016a) have shown previously.

Conclusions

Limiting the MA vision to the so-called *myths of global aging* disguises a reality of great heterogeneity, which is predicted to be even greater in the coming years, according to the aging process that is affecting the occidental societies. In this process education is increasingly present, although in many cases not tailored to MAs' needs and motivations. Nor is it sufficiently atomized considering the multiplicity of MA profiles and motivations for learning.

In our study, we explored the great diversity of this segment of the population regarding its educational engagement, concluding that there is a complex reality beyond the traditional understanding of adult education, especially in mature age. Our results demonstrate that education is not separated from the long and wide life-course of a person, and that it can overcome age barriers in its understanding of motivations and ways of learning. If learning has already been considered *lifelong*, especially in recent years, we, as previous publications (Reischmann, 2014; Skolverket, 2000; UNESCO, 2010), defend the idea of promoting also *life wide learning* in adult education. Education must be understood in the context of the lifetime of a person, but also in the context of the different ways it can be tailored to the different needs of adult learners. Therefore, we call for a new analysis of MA educational engagement through a humanistic and integral approach that finds at its

core the learner itself. This holistic approach also takes into account the multiple and relevant effects of education in mature adulthood, from the personal enrichment and empowerment of the aging, to their contribution to community wellbeing and social capital. On the other hand, policies for educational inclusion need to focus on MAs (over 45 years old), because it's the moment when the ageing process and all the myths related to it start (Merriam & Kee, 2014), and, specially, as Diggs (2008, p. 80) states "a person most likely to age successfully would continue to be active through middle age and beyond, by taking on productive roles in society and replacing roles that were lost as they start to age".

Regarding the limitations of our study, our objective was not to analyze the differences between the different countries participating in the study, and indeed this was not possible given the exploratory nature of the study and the fact that there can not be a probabilistic representation of each national sample. As a result, future research should delve deeper into this issue though larger samples, comparative studies between countries, and understanding the benefits to the topic that qualitative methods can bring.

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