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# Media Literacy 45+

Development of Digital Skills Framework  
through Social Media for Low Skilled/Low  
Qualified Persons over 45 Years Old

National Report for Spain

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## Introduction

Digital technologies are key drivers of innovation, growth and job creation, and therefore digital competence is increasingly linked to participation in the labor market. Digital competence is not only about being familiar with digital technologies, but also about how new technologies and online media are used. “The demand for digital technology professionals has grown by 4% annually in the last ten years. Yet digital skills are lacking in Europe at all levels. Despite continued strong employment growth, the number of unfilled vacancies for ICT professionals is expected to almost double to 756000 by 2020” (New Skills Agenda for Europe, 2016: 7). In the same way, almost half the EU population lacks basic digital skills; with about 20% of people having none at all. The rapid digital transformation of the economy means that almost all jobs now require some level of digital skills, as well as the participation in society at whole does. The collaborative economy is changing business models, opening up opportunities and new routes into work, demanding different skill sets, and bringing challenges such as accessing upskilling opportunities. On the other hand, the internet is changing employers’ recruitment and selection methods, and the process of job search by individuals. Employers and recruiters are not only posting vacancies on the internet, but they are increasingly using the internet to screen and select applicants. Despite the significant increase in the use of ICT & social media by low-skilled/low-qualified adults, they demonstrate a low level of awareness and understanding of the broader implications that their online activity can have on their social & professional life. It is thus important that low-skilled/low-qualified adults (especially over 45) to develop their media and digital skills so that they are able to effectively use social media in a way that can generate increased opportunities for them in the social and professional arena.

Spain is one of the most important ICT markets by volume in Europe: €105,868 Million. There are more than 33,000 ICT companies, including digital content, operating in this country. The sector employs more than 471,000 workers (Informe ONTSI, 2017). The personnel employed in the ICT sector and the Content amount to 471,860 people in 2016, 4% more than in 2015. Employment continues with the growth path that began in 2013 and the negative trend experienced a few years ago is now overcome. The majority of the employed personnel (78%) comes from the ICT sector, specifically 367,906 people.

The methodology used on this study consisted in a combination of data. The first step was based in collect background information of the current state of affairs on the topic. At the same time, interviews with the recruiters and/or HR managers took place. After the interviews, a follow up desk research was made, based on the results of the interviews.

The **target groups** of the project are:



- i. low-skilled/low-qualified unemployed adults 45+ in Romania, Greece, Portugal, Spain & Italy and
- ii. employment/career counselors and/or relevant authorities, organizations and companies working with low-skilled/low-qualified unemployed (e.g. PES, recruiters)

The aims of the project are the following:

- i. Developing the digital & media skills of low-skilled/low-qualified unemployed adults 45+ years of age through innovative tools, so that they are motivated and able to build a robust online professional identity to strengthen their access to employment, thus leading to social & economic inclusion.
- ii. Enhancing the knowledge of employment/career counselors, VET providers, recruiters and/or relevant authorities and organizations working with low-skilled/low-qualified unemployed and equipping them with a new approach & tools for supporting and interacting with middle-aged unemployed persons through social media.

Digitalization that can be defined as the development of new and more efficient business models or the improvement of human capital will have a positive impact on productivity that could compensate the tendency of the economy to contract. This positive impact of digitalization could lead to an increase between 1.3 and 1.8% of per year GDP.

The potential results of the study in Spain maybe used by state authorities and business leaders in the definition of inclusion strategies for adults over 45 in the labour market that emerge from the burgeoning ICT sector. In addition, acknowledging that the population has low digital skills, different initiatives could be launched to remedy and, in parallel, reduce the unemployment rate caused by the lack of digital skills.

# Chapter 1: Setting the Scene: Digital Literacy in Spain

## 1.1 Digital Literacy in Spain

| Age Group          | EU/Spain            | Individuals who have low overall digital skills | Individuals who have basic overall digital skills | Individuals who have above basic overall digital skills | Individuals who have no overall digital skills |
|--------------------|---------------------|---|---|---|--|
| All Individuals    | European Union (28) | 26%   | 26%   | 31%   | 1%   |
|                    | Spain               | 28%   | 23%   | 32%   | 2%   |
| 16 to 24 years old | European Union (28) | 15%   | 25%   | 57%   | 0%   |
|                    | Spain               | 11%   | 24%   | 63%   | 1%   |
| 25 to 34 years old | European Union (28) | 21%   | 29%   | 46%   | 0%   |
|                    | Spain               | 23%   | 27%   | 46%   | 0%   |
| 35 to 44 years old | European Union (28) | 27%   | 29%   | 36%   | 1%   |
|                    | Spain               | 31%   | 26%   | 37%   | 2%   |
| 45 to 54 years old | European Union (28) | 30%   | 29%   | 27%   | 1%   |
|                    | Spain               | 33%   | 26%   | 28%   | 2%   |
| 55 to 64 years old | European Union (28) | 31%   | 25%   | 16%   | 1%   |
|                    | Spain               | 36%   | 20%   | 14%   | 4%   |
| 65 to 74 years old | European Union (28) | 26%   | 18%   | 7%  | 1%   |
|                    | Spain               | 24%   | 12%   | 5%  | 3%   |

TABLE 1: DIGITAL LITERACY IN SPAIN AND EU (28 COUNTRIES) IN 2018

**Source: Eurostat, 2018**

In the table above, we can see that the percentage of individuals with low digital skills increases with age for both Spain and the EU. As we can see in the table, the percentage of people aged 16 to 24 who have low level of digital skills is lower than the European average, although the percentage of individuals from the same age group who do not have digital skills is higher than the European percentage. Following with the same age group, the percentage of individuals that have a basic level is lower than the European level. However, the percentage of people who possess digital skills above the basics is higher in Spain than the European average. Likewise, we can see that the percentage of individuals aged 25 to 34 with low digital skills is higher in Spain than in Europe. Although, it is interesting to note that the percentage of people belonging to this age group who have basic digital skills is only lower than the European average by one percentage point. In addition, the percentages of individuals from 25 to 34 years old who have above basic digital skills and no digital skills are equal to the European average. As for the group of 35 to 44 years old, the percentage that has low levels of digital skills is higher than the European average and the percentage that has basic levels of digital skills is lower than the EU. On the other hand, the percentage of individuals from 35 to 44 years old who have above basic digital skills are one point higher than the European average. However, the European average is one point below the Spanish percentage with respect to individuals from 35 to 44 years with no digital skills. The percentages of people between 45 and 54 and 54 to 64 who have low digital skills are higher than the European average although the percentages of these age groups that have basic digital skills in Spain are lower than the EU. The percentages of people between 45 and 55 who have digital skills are higher than the European average. However, the percentage of individuals of that age group who do not have digital skills is higher in Spain than in the EU. Finally, the percentages of people with basic, low, basic skills, above basic or non-digital skills of 54 to 74 years are lower in Spain than in the EU.

**TABLE 1: DIGITAL LITERACY IN SPAIN BY AGE GROUP FOR 2015, 2016 AND 2017**

| SPAIN                           |      |   |   |   |  |
|---------------------------------|------|---|---|---|--|
| Age Groups                      | Year | Individuals who have low overall digital skills | Individuals who have basic overall digital skills | Individuals who have above basic overall digital skills | Individuals who have no overall digital skills |
| All Individuals                 | 2015 | 23%   | 24%   | 30%   | 2%   |
|                                 | 2016 | 25%   | 23%   | 31%   | 2%   |
|                                 | 2017 | 28%   | 23%   | 32%   | 2%   |
| Individuals, 16 to 24 years old | 2015 | 10%   | 26%   | 62%   | 1%   |
|                                 | 2016 | 10%   | 26%   | 62%   | 0%   |
|                                 | 2017 | 11%   | 24%   | 63%   | 1%   |
| Individuals, 25 to 34 years old | 2015 | 21%   | 25%   | 47%   | 1%   |
|                                 | 2016 | 23%   | 24%   | 47%   | 2%   |
|                                 | 2017 | 23%   | 27%   | 46%   | 0%   |
|                                 | 2015 | 26%   | 29%   | 35%   | 1%   |

|                                 |      |     |     |     |    |
|---------------------------------|------|-----|-----|-----|----|
| Individuals, 35 to 44 years old | 2016 | 29% | 27% | 36% | 1% |
|                                 | 2017 | 31% | 26% | 37% | 2% |
| Individuals, 45 to 54 years old | 2015 | 29% | 27% | 23% | 4% |
|                                 | 2016 | 32% | 26% | 25% | 2% |
|                                 | 2017 | 33% | 26% | 28% | 2% |
| Individuals, 55 to 64 years old | 2015 | 27% | 21% | 11% | 2% |
|                                 | 2016 | 30% | 19% | 13% | 3% |
|                                 | 2017 | 32% | 20% | 14% | 4% |
| Individuals, 65 to 74 years old | 2015 | 16% | 10% | 4%  | 2% |
|                                 | 2016 | 19% | 9%  | 4%  | 2% |
|                                 | 2017 | 24% | 12% | 5%  | 3% |

**Source: Eurostat, 2018**

Table 2 shows the changes in digital literacy in Spain in three time periods. We can see there are not significant changes among young age groups (16-24 and 25 to 34) but there are important changes for older age groups (35-64 and 65-74 year olds). With regard to younger age groups (16 to 24 and 25 to 34), the percentages of individuals with low digital skills have increased from 2015 to 2017. However, the percentages of individuals from 16 to 24 with basic digital skills although in 2015 and 2016 remain stable, decrease in 2017. In addition, the percentages of individuals from 25 to 34 with basic digital skills have increased in 2017. On the other hand, individuals from 16 to 24 with high digital skills have increased percentage from 2015 to 2017, but those from 25 to 34 have decreased. A detail to highlight is that the percentage of individuals from 25 to 34 years without digital skills has decreased to reach 0%. Another important fact that emerges from the table is that the percentages of individuals aged 35 to 74 who have low digital skills have increased from 2015 to 2017. Regarding the percentages of individuals with basic digital skills, the percentages of individuals from 35 to 64 have decreased from 2015 to 2017. However, the percentage of individuals from 65 to 74 with basic digital skills has increased in 2017. In addition, we can see that the percentages of individuals with high digital skills, the percentages of individuals from 35 to 74 have increased in 2017. In contrast, the percentage of individuals from 35 to 74 without digital skills has also increased in 2017 in relation to 2015.

**TABLE 2: DIGITAL LITERACY AND UNEMPLOYMENT (2017)**

| Groups  | European Union (28) |            | Spain           |            |
|---|---------------------|------------|-----------------|------------|
|   | All Individuals     | Unemployed | All Individuals | Unemployed |
| Individuals who have low overall digital skills         | 26%                 | 34%        | 28%             | 39%        |
| Individuals who have basic overall digital skills       | 26%                 | 24%        | 23%             | 22%        |
| Individuals who have above basic overall digital skills | 26%                 | 24%        | 23%             | 22%        |

**Source: Eurostat, 2017**

In Table 3, it can be seen that the percentage of unemployed adult individuals with low digital skills is greater than the percentage of employed individuals, both in the European Union and in



Spain. Which leads us to suppose that adults with low digital skills have more difficulties in getting a job. On the contrary, the levels of unemployment are lower in adults with basic and advanced digital skills. This is noted both in the Spanish and in the European average. In this sense, the graph shows the high level of penetration of ICT in the employment sector, since the percentages of unemployed are lower among individuals who have advanced and basic digital skills in the European Union and in Spain.

The most relevant statistical findings that we can observe in the three tables are the following: first, the percentage of individuals with low digital skills of 16 to 24 years is lower in Spain than the European average. In addition, the percentage of this same group that has high digital skills is higher than the EU average. However, the percentage of all individuals with basic skills is lower in Spain than in the EU. It should be noticed that the highest percentages of individuals with low digital skills both in Spain and in the European Union are from 45 to 64 years. Second, we can see that in Spain the percentage of individuals with limited or low digital skills has been increasing from 2015 to 2017. In addition, the percentage of all individuals without digital skills has been maintained in the three selected periods. Third, it can be noticed that the level of unemployment of adults is higher when it comes to adults with low digital skills. This is the same for the European Union as for Spain, which has higher percentages of unemployment than the European average.

## 1.2 Literature Review

The European Commission has been introducing different initiatives to stimulate the opportunities that emerged from the global information economy. Based on the Europe 2020 Strategy, a qualitative change can be observed in the relevance given to the ICT sector and to digital transformation. The flagship initiative of the Digital Agenda of the Europe 2020 Growth Strategy, which inspires the public-private partnership Grand Coalition for Digital Employment, specific campaigns such as e-skills for digital jobs, or the constitution, in February 2014, of the Policy Forum Strategic in the field of digital entrepreneurship, are expressions of the interest of the Council and the Commission in this area (Alvarez-Flores, Nuñez-Gómez and Rodríguez Crespo, 2017). The Digital Agenda reflects the lack of digital literacy and digital skills and is committed into taking advantage of the full potential of ICT, accounting for the close relationship between ICT and employment in terms of the professional, users and businesspersons. In addition, international organizations and educational authorities and institutions have to promote information technology literacy in formal and non-formal education as a basic competence. Pirzada and Khan (cited by Alvarez-Flores, Nuñez-Gómez and Rodríguez Crespo, 2017) argue that currently the digital skills combined with higher education are linked to high-level work and the improvement of employability and therefore, efforts should be directed to the training focused on digital skills. In this sense, the New Skills Agenda for Europe, approved in June 2016, aims to obtain the best of human capital with the aim of promoting employability, competitiveness and growth in Europe. The agenda considers that it is essential to equip people with the right skills for current and future jobs and considers, among the measures to be adopted, the reinforcement of digital skills as well as linguistic and mathematical competences.

Particularly in Spain, the growth of the ICT sector and the opportunities it provides have gained the attention of the government, that is implementing actions and strategies that aim at





enhancing the effects of the use of technologies both for the economy and the population. As it has been drafted by the Digital Agenda for Spain and the branch of the Grand Coalition in Spain, emerged in 2013, which seeks to improve digital skills, establishing a series of priorities in terms of training, certification, learning and innovative teaching, mobility and promotion to attract young people to the productive sector (Alvarez-Flores, Nuñez-Gómez and Rodríguez Crespo, 2017).

The public sector is advanced in terms of quality and variety of online services offered, but with potential for improvement in the promotion of the use of ICT. Spanish institutions are at the forefront in Europe in quality and offer of online services, according to the Online Services Index (OSI). Spain is in second place, with a score of 0.94 out of 1, only behind France and at the same level as the United States. In the e-Government readiness index (EGDI), which measures the ability of a government to offer its services via ICT, Spain is at the same level as digital leaders such as Norway with a score of 0.81. However, Spain is only ahead of Italy, in terms of the effectiveness of public administration in promoting the use of ICT in some areas. With a score of 3.8 out of 7, it is behind countries like Sweden or Norway that surpass 5 points. Even though the government has been successful in digitalization of its services and processes, there is room for improvement in the promotion and expansion of the digital world between consumers and companies. Institutions have been successful in promoting investment in infrastructure, however there is potential to focus efforts in areas that are not as advanced, such as in the development of digital talent (McKinsey and COTEC, 2017).

At the same time, companies are making progress in terms of digitization, but they are still far from the more advanced European countries. Online transactions between companies are still much lower in Spain, with a score of 5.1 out of 7 compared to countries as the United Kingdom and Norway with values close to 6 points. In addition, Spanish companies have a low level of technology adoption (4.9 points) compared to European digital leaders and the United States (6.1 points), which indicates that there is room for significant improvement. Spending on online advertising per capita is 4 times higher in countries such as Norway or the United Kingdom than in Spain, where the percentage of online advertising is of 30% (McKinsey and COTEC, 2017).

In this context of accelerated innovation, there are companies that are leading the transformation. In recent years there has been a significant development of successful startups, some of which have expanded internationally such as Privalia, Wallapop and Cabify, and others such as Ticketbis or Socialpoint have been acquired by large multinational enterprises. In a situation in which the focus are on-line activities, connectivity, peer-to-peer business models and apps, some of these companies have achieved significant growth and have become a reference worldwide, as in the case of dedicated Kantox to the management of foreign exchange and international payments and Carto dedicated to geospatial analysis. In this sense, many significant results have already been reached in the digitization process. More and more tasks and activities are digitized helping the country to be located above the European average in part of the digital metrics; 67% of Spanish people use Internet frequently, 44% of Spanish companies use social networks and 98% of millennials have used the Internet in the last three months. Spain has also managed to lead the European rankings of investment in communications infrastructure - ranking fourth in the European Union. According to the Index of Economy and Digital Society - DESI, Spain is in position 14, above the European average, with a positive evolution in recent years. However, in 3 of the 5 dimensions that comprise the DESI, Spain is still below the European

average (below the average: Connectivity, Human Capital, Internet use, above the average: Integration of the economy digital and digital public services). Spain stands out especially in the Digital Public Services metric, where it ranks 6th, well above the European average (McKinsey and COTEC, 2017).

Spain ranks 14th out of the 28 EU Member States in the Digital Economy and Society Index (DESI) of 2017. In general, Spain has obtained better results in all measured dimensions, except for the human capital, an area in which it obtained a worse result than that registered last year despite having experienced a steady growth in the number of graduates in STEM. Particularly noteworthy are the results obtained by Spain in the field of digital public services, although the dimension in which it has progressed the most is the integration of digital technology. Generally speaking, despite the fact that, the public and private sectors in Spain are rapidly progressing towards the integration of digital technologies, it seems that some of the indicators reflect a low level of demand from users, with a lower level of growth in digital skills that hinders development in the dimension corresponding to human capital (DESI, 2017).

In terms of human capital, Spain ranks 16th in the EU countries and is below the Union average. Although there are more and more Spanish families that have access to the internet connection, the level of basic and advanced digital skills are still lower than the EU average. Only 53% of citizens aged between 16 and 74 have basic digital skills (56% in the EU), and ICT specialists represent a lower percentage of the active population (2.4%, compared to 3%), 5% in the EU). Spain records satisfactory results in terms of the number of graduates in STEM (science, technology, engineering and mathematics), with a proportion of 21 graduates per 1,000 individuals (EDPR España, 2017). According to Salcedo, Alfama Guillén and Cruells López (2013) there is an inverse relationship between age and Internet use, which means that the older the number of users is lower. The relationship is more evident. If you compare the age range of 55-64 with 65-74, the number of users in this last group is almost half; In the case of those over 75, the percentage of users is very low, only 4%, compared to 22% of the previous minimum age and 64%, which is the percentage of Internet users over 18 years of age. Certain studies (Montero and Nájera, 2012) categorize three generational groups of older population, already existing, beyond use, identify a negative correlation between the age ranges of the population and the availability at home of digital ICTs, tablets and computers with Internet connection). In addition, the use of social networks by older people, although it is well below the average, reaches 14% of population over 56 years. In the next age group, those over 64 years old, presents a similar percentage and among Internet users over 75 it reaches 25%. It is also highlighted that the use of social networks has increased in recent years (Montero Navarro and Nájera Sánchez, 2012). These data are similar to the E-Spain 2012 report of the Orange Foundation, which points out that interest in social networks is not very widespread among those over 65 (15.3%) but it is increasing. Regarding the type of information consumed, the largest user of the Internet privileges the search for current information on travel, maps and procedures of the administration (del Arco, Carabias, Javier et al., 2011). The negative direction between higher age-less use can be established mainly in uses of the network associated with changes in the life cycle between the age ranges of the elderly population, such as seeking employment, management or complaints. Perhaps the exception that there are uses of the network not associated with the life cycle is the electronic mail or the so-called IP telephony, that is, the uses most associated with communication.

### 1.3 Policy and Major Stakeholder Initiatives

In Spain, several projects have been carried out to improve the technology literacy of the population, aware of the crucial role of education through technology, as well as the acquisition of the basic skills to become active and participative citizens, generating possibilities for social inclusion and employability (Ortega Sánchez, 2009).

At 2005, the Spanish state adopted new legislation to address the development of the information society and the convergence of Europe with autonomous communities and autonomous cities. In accordance with the provisions of this law, the government of Spain created a National Plan, called "Plan Avanza", as part of the central themes of the Spanish National Reform Program designed to achieve the objectives of the Lisbon Strategy. The general objective of the plan was to achieve an adequate use of ICTs, in order to contribute successfully to economic growth, increasing competitiveness and productivity, promoting social equality and improving the well-being and quality of life of citizens. To achieve the proposed objectives, the plan developed a structure formed by five action axes: Training, Content and Digital Services, Development of the ICT sector, Infrastructure and Trust and Security. Specifically, the training was in charge of implementing actions related to electronic skills and digital literacy. It was divided into two parts: the first - citizen training, with the aim of citizen inclusion; and the second, the training of SMEs, with the aim of promoting the use of ICT in SMEs (EDPR España, 2017).

On July 16th 2010, the Council of Ministers approved the 2011-2015 Strategy for Plan Avanza 2. This second stage gives continuity to Plan Avanza's course of action. It includes projects already in progress and updates initial objectives to adapt them to the new challenges of the network society. Now that most of the objectives set have been achieved and being aware of the need to move towards a Knowledge Society, a new phase starts consisting of 5 action areas: Infrastructures, Trust and Security, Technological Training, Digital Content and Services, and ICT Sector Development. One of the main objectives of Plan Avanza 2 is to contribute to an economic model change in the country through ICT, as spreading ICT use allows for an increase in competitiveness and productivity, and favours equal opportunities by boosting the economy and consolidating a sustainable model of economic growth.

Citizen training is an important part of the Plan Avanza strategy which aims at informing citizens about the advantages of internet usage and ICT. There are eight programmes scheduled which intend to include people into the information society. Each of these programmes aims at a different target group and all of them include commissioning studies, dissemination activities, training, social networking and provision of computer equipment where necessary. SME training makes up another important part of the Plan Avanza strategy, with the objective to train SMEs in ICT and help them achieve implementation of e-business solutions, including electronic invoicing, to improve competitiveness and productivity, with the final goal of moving SMEs towards the knowledge economy. A total of 1,874 million euro is dedicated to these actions. Since September 2009, the Ministry of Education together with the Autonomous Communities through the Steering Committee of ICT is coordinating the Escuela 2.0 project, a nationwide ICT

plan for schools. This project aimed at launching the twenty-first century digital classrooms and equipping the classrooms with technology infrastructure and connectivity in order to generalise the access to hardware and digital content in schools and pedagogically integrate ICT into school life. Over two years (2009-2011) nearly 650,000 students in the third cycle of primary education and the first cycle of ESO were provided with a laptop as a learning tool; 30,000 digital classrooms have been put into operation; 160,000 teachers have participated in trainings related to ICT and has provided with a significant impetus to the production and use of digital educational content. The Ministry has also expanded the range of courses in the ICT Network Instruments and its methodological aspects, experimentation and innovation.

Telecommunications and Information Society sector developments in Spain are monitored and analysed by the National Observatory for Telecommunications and the Information Society (ONTSI), a body part of to the public corporate entity Red.es. ONTSI, currently the leading public observatory of the information society in Spain, gathers and synthesizes various indicators, prepares studies as well as provides informative and updated services related to the Information Society. In addition, ONTSI also enables dialogue between the ICT sector and the different public administration bodies for the definition of policies and their subsequent evaluation. Three main focus areas of ONTSI studies include: Digital Economy, Digital society and Digital Public services. Besides, ONTSI is also in charge of monitoring and evaluating the Information Society Promotion Programmes implemented by red.es (e.g. Plan Avanza).

Following the government's strategy on development of the digital economy and society in Spain during the period 2013-2015, the Council of Ministers adopted on February 2013 the Digital Agenda for Spain. This strategy is set as the umbrella programme of all government actions jointly lead by the Telecommunications and Information Society and the Ministry of Industry, Energy and Tourism and the Ministry of Finance and Public Administration. The agenda sets guidelines on the targets to be with regard to ICT and e-Government in order to achieve the Digital Agenda Europe 2015-2020 objectives. The main objectives of the Digital Agenda for Spain are: Encourage the deployment of networks and services to ensure digital connectivity; develop the digital economy for growth, competitiveness and internationalization of Spanish companies; improve e-government and digital public services; building confidence in the digital; Boost RTD and innovation in the industries of the future; promote inclusion and digital literacy and ICT training new professionals. Meanwhile, in order to achieve the above mentioned objectives, seven specific plans have been published during the first half of 2013: ultrafast telecommunications and networks; ICT in SMEs and e-commerce; promotion of the digital economy and digital content; international Plan for technology companies; trust in the digital; development and innovation in the ICT sector; digital inclusion and employability. While, two more plans on eGovernment General State Administration and Digital Utility will be made publicly available during the second half of 2013.

Given that the Spanish Educational System has transferred its powers in educational competences to the Autonomous Communities, the policies and initiatives can be implemented in heterogeneous ways depending on their application scope and the strategies of the different regional.

The following is a list of multi-stakeholder partnerships of major relevance to the e-skills issue:

- **Literacy Plan and digital training for Barcelona 2010-2015:** The main objective of the 5-year programme, overseen by the Barcelona City Council, is to assess the state of the current situation in digital training, evaluate the actions already performed,

and define a joint strategy on digital literacy. A training programme for a period of 5 years is to be executed. Special attention is drawn to means for closing existing

- gaps in IT related skills. Targets include: 12,500 Professionals to be trained in technology to improve their technological skills; 12,000 young people to be given the chance of improving their professional orientation, adding technological competition to their orientation process; 22,000 unemployed people to receive technology training; 1,200 individuals aged 55 years and older to be given the chance to participate in ICT programmes; 30,000 additional citizens to receive training in basic technology. The total budget of the programme is € 6.4 million.
- **Red CEMIT:** Under this initiative (2011-13), 98 ICT centres across Galicia are set up for getting the general population acquainted with new ICTs. A main component of the initiative is training (from ICT practitioners to citizens and employees in the public sector) provided both online and in presence. Free use of “open classrooms” is offered to all stakeholders. Hands-on support is offered by ICT experts. Dissemination and awareness raising activities are conducted as well. The training offer consists of basic training in ICT, ICT for enterprises and entrepreneurs, ICT for the unemployed, e-administration, social networks, operations through the Internet, leisure on the Internet, ICT equipment, image and audio, open software solutions and specific courses upon demand. The total budget of the programme, which represents a multi-stakeholder partnership between enterprises, public administration, civic society associations of women and the elderly etc., is about € 660 million for the whole period (2 years). Achievements so far include 10,000 persons trained in 2011, 38,000 hours of free training offered in 2012, and 30,000 users at the time of writing.
- **“Soy mayor y me gusta navegar”:** Cibervoluntarios, an NGO with more than 1,500 volunteers, has the mission to bring ICT closer to more than 10,000 persons per year who would otherwise risk staying excluded from the information society. The objective is to teach elderly citizens about how ICTs can be useful in their daily life. This implies going one step beyond providing basic e-skills and showing them that ICTs are fun and can be used on a daily basis for meeting their needs and interests: leisure, doctor, mobile phones, music, videos, potentiality of network, etc. The initiative has started in 2011 and is ongoing.
- **CENATIC- Training with and within free software:** CENATIC is the National Reference Center for free software based ICTs. Its main goal is to assess and disseminate useful applications of free software in the public sector. Besides this, it works as disseminator of complementary services to users of free software. It makes the link between the free software code developed by the Spanish public sector and provides it to the private sector and enterprises, in order to boost the industry of ICTs in Spain. Several services are provided, one of them being the training in the use of ICTs applications and e-skills. The objective is to show the advantages of free software and disseminate the benefits of working in an ICT open community: sharing knowledge and resources, fostering public-private partnerships, raising awareness around ICTs, making a more competitive community and business sector thanks to the use of ICTs. Stakeholders involved include: the Spanish Ministry for Industry, Energy and Tourism; the Regional Governments of Extremadura, Andalucía, Asturias, Aragón, Catalunya, Balearic Islands, Galicia and the Basque Country; and Telefónica.
- **Plan Avanza 2 National Plan (Action area "ICT Training: enterprises"):** One of the main objectives of Plan Avanza 2, the major Spanish information society strategy for the period 2011-15, is to contribute to a paradigm shift in the economics of the country through ICT, based on the observation that spreading the use of ICT can be



a means to improve competitiveness and productivity, favour equal opportunities, boost the economy and establish a sustainable model of economic growth. The first stage of Plan Avanza, initiated in 2005, aimed at catching up with EU mainstream, especially regarding IT network coverage and connectivity. Plan Avanza 2 seeks placing Spain on a leading position in terms of development and use of advanced ICT products and services. Plan Avanza 2 focuses on 10 objectives: 1) Promoting innovative ICT processes in the Public Administration, 2) Spreading ICT in healthcare and for the welfare, 3) Modernizing the education and training model through the use of ICT, 4) Spreading telecommunication networks and increasing their capacity, 5) Spreading trustworthy ICT among citizens and enterprises, 6) Increasing the advanced use of ICT solutions among citizens, 7) Spreading the use of ICT business solutions in enterprises, 8) Developing technological skills in the ICT sector, 9) Strengthening the digital content sector and intellectual property rights in the current technological context and within the Spanish and European legal framework, 10) Developing green ICT.

## 1.4 Synopsis

In summary, the Spanish government has joined forces to comply with the recommendations of the European Union regarding the development of the information society and the challenges associated with the advent of the ICT sector. For this reason, it has adapted its legislation to achieve the proposed objectives and the plans and strategies have been carried out both nationally and at the level of the autonomous governments with the ultimate goal of integrating the entire population in the information society. Following the strategy of the EU for the development of the digital society, the Digital Agenda for Spain was adopted, which established the lines of all government actions in Telecommunications and the Information Society. The agenda establishes the lines of action to achieve the objectives that must be achieved in relation to ICT and electronic administration according to the directives of the Digital Agenda of Europe 2015-2020. The main objectives of the Digital Agenda for Spain include: Encouraging the deployment of networks and services to ensure digital connectivity; develop the digital economy for the growth, competitiveness and internationalization of Spanish companies; improve electronic administration and digital public services; building confidence in the digital; Promote RTD and innovation in the industries of the future; promote inclusion and digital literacy and the training of new ICT professionals.

## Chapter 2: The Perspectives of HR managers

### 2.1 Objectives of the study and research questions.

#### Project Objectives

##### Overall:

To promote the social and economic inclusion of low-skilled/ low-qualified adults 45+ excluded from the labour market through advanced media literacy competence and digital skills focusing on the use and utilization of social media for professional purposes.

##### Specific:

- To develop the digital competence of (low-skilled or low-qualified) unemployed adults 45+ to build a robust professional identity online thus promoting their access to employment opportunities.
- To familiarise and equip middle-aged unemployed with practical guidance and skills on how to benefit from online media sources and tools in their effort to access employment.
- To introduce to employment / career counselors and / or relevant organisations and companies working with middle-aged unemployed (e.g. Employment Services, head-hunting companies) a new approach on how to interact with middle-aged unemployed through social media.
- To develop a mainstream skills building methodology for low-skilled or low-qualified middle-aged unemployed specifically for the use of social media and promote it to organizations active in providing training services to middle-aged unemployed

The main research questions we aimed to address are:

- How important is Digital Competence in the workplace for people 45+ years old?
- What skills and competences related to Digital Competence are expected out of prospective employees who are 45+ years old?
- What are the most common social media platforms used in advertising, screening and selection process?
- How important is an applicant's Facebook, LinkedIn, Twitter etc. during the hiring process?]

### 2.2 Methodology

To achieve the proposed objectives, we conducted a study under a mixed methodology that is, using a qualitative and quantitative methodology. The technique for data collection was interviews that allowed us to obtain mostly qualitative information, as well as some quantitative



data. To carry out the interviews, we prepare a calendar of interviews. This is a set of prepared questions designed to be formulated exactly as written. The interview schedules have a standardized format, which means that the same questions are asked to each interviewee in the same order. Therefore, the technique consisted of a structured interview, also known as formal interviews. In this type of interview, the questions are formulated in an established and standardized order and the interviewer will not deviate from the interview schedule or inquire beyond the answers received (so that they are not flexible). They are based on structured questions and closed. However, in one of the sections of the questionnaire, we have left a limited number of open questions, with the aim of expanding the qualitative data. The interviews were conducted during the months of January and February of the year 2018.

The strengths of the methodology and the chosen technique are that this type of interviews are easy to replicate since a fixed set of closed questions is used, which are easy to quantify, which means that it is easy to prove reliability. In addition, structured interviews are quite quick to carry out, which means that many interviews can take place in a short period of time. This means that a large sample can be obtained that is representative and has the capacity to generalize for a large population. However, this type of methodological decisions have limitations; In this sense, structure interviews are not flexible. This means that new impromptu questions can not be asked (that is, during the interview) since an interview schedule must be followed. Moreover, the answers to the structured interviews lack details since only closed questions are formulated that generate quantitative data. This means that an investigation will not know why a person behaves in a certain way. For these reasons, we dedicate a section of the interview to make a series of open questions, and thus complement the research with qualitative data.

## 2.3 Results

### 2.3.1 Demographic Information

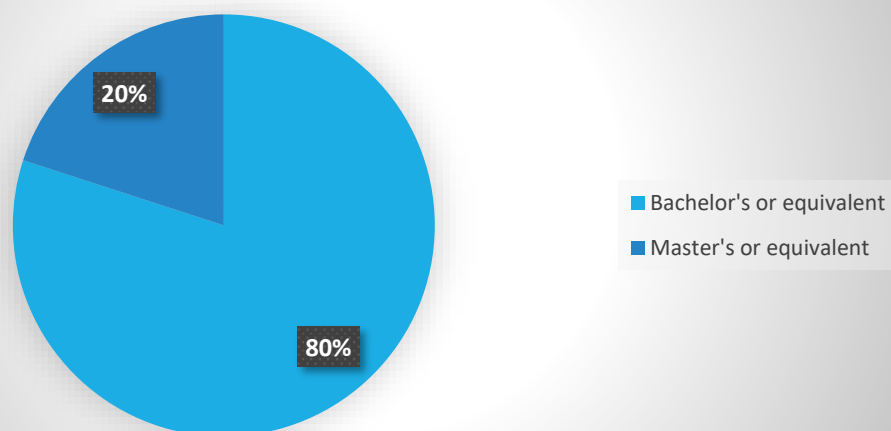
The participants of the sample have an average of 41 years and in percentage terms, 20% are men and 80% are women.

#### Graphic 1

Educational level of the respondents



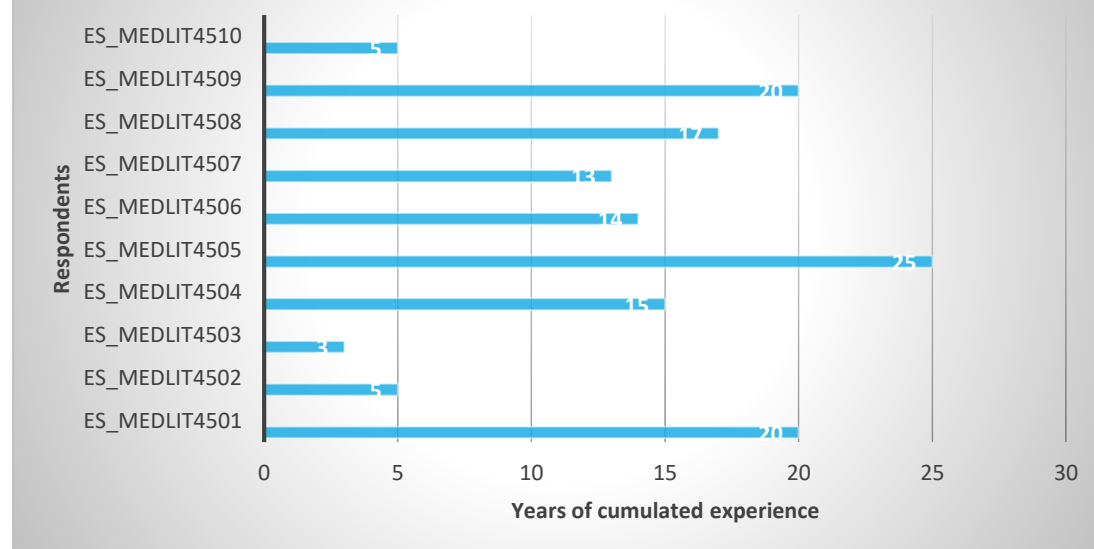
## Educational level of the respondents



Graphic 2

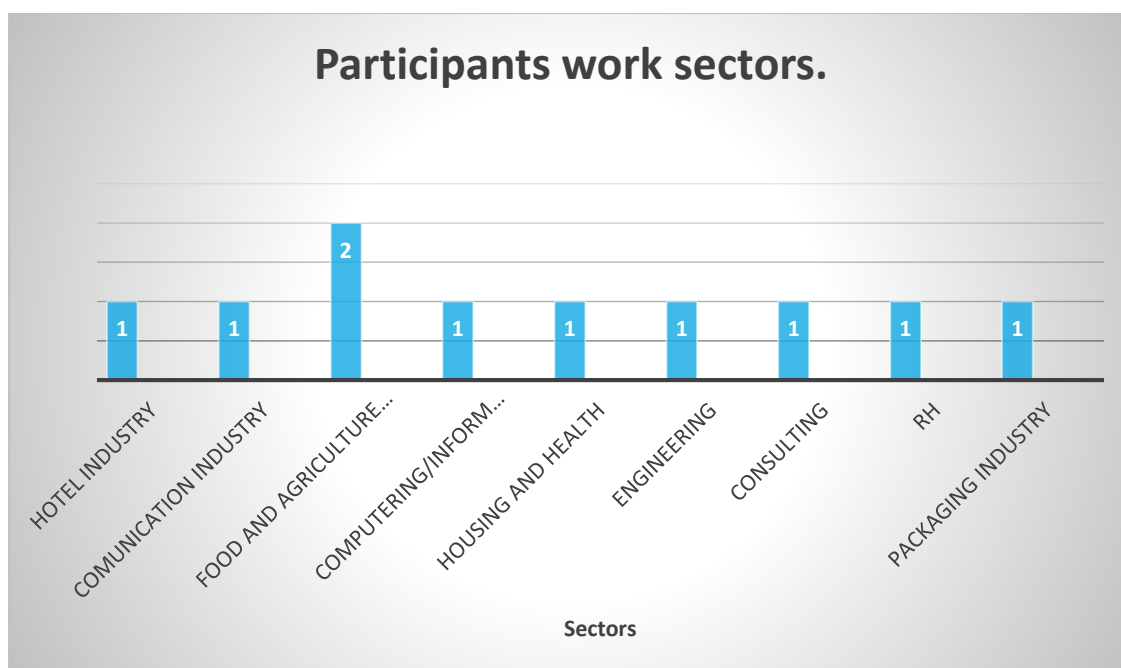
Years of cumulated experience in RH of respondents.

## Years of cumulated experience in RH



Graphic 3

Participants work sectors.



## 2.3.2 Open-ended Questions

### 2.3.2.1 Digital literacy

1. How important is digital literacy for potential employees that can be hire? Are the expectations different or equal between employees who are under 30 and those who are over 45? Why is that?

About the importance of digital literacy, the majority of respondents answered that it is very important that employees have digital skills, especially for the specificity of the company. The rest of the interviewees, in the same proportion, answered that it is important but that it is not necessary, that there is also another type of work in the company that does not need this type of skills and that is not important since the jobs of The company does not need this type of skills. With respect to expectations, most respondents say that the answers regarding the knowledge of digital skills are the same for employees of 30 years as for those over 45 years. The rest of the interviewees argued that the expectations are greater for those under 30 years, since these belong to a generation that grew in this type of technology, a difference of those over 45 years who came in contact with these in other ways.

According to the answers analyzed, digital literacy is important for employees, since it affects older workers in terms of the tasks they have to fulfill within the company. However, the majority of respondents answered that they have higher expectations of digital knowledge for those under 30 years of age.

### 2.3.2.2 Duties of employees 45+ years of age and their link to digital competence

2. a. With what kind of tasks are employees over 45 employed in your company?  
b. How important is digital competence for what they do? Do they invest in training programs aimed at improving the digital skills of their employees?

The interviewees answered that the tasks performed by employees over 45 years are commercial or management tasks, accounting or administrative tasks, machine operators, product development, packaging, computer and Internet tasks at a user level, address or tax and labor advice, technical assistance, management, waiters and reception tasks. Some of the tasks mentioned relate to digital capabilities since they require the use of computers. Some of them require familiarity with the internet and specific software of the company, making reservations and dealing with customers online.

Most of the interviewees argue that they have carried out training programs related to digital capabilities, in large part of daily use programs, such as Excel or word processor. The rest responded that they do not carry out training because the company does not need advanced levels of digital skills due to the type of activity they carry out.

### 2.3.2.3 Digital literacy and recruitment

3. a. Is digital competence a barrier to the recruitment of people over 45?
- b. Do you remember to have rejected a potential candidate due to his poor digital skills?

For the most part, respondents answered that it is not compatible with digital skills, it is not a barrier to hiring employees. However, 30% of the interviewees argued that it is a barrier due to the type of activity that takes place in the company, since they require a trained personnel in digital skills for the tasks. According to the answers of all the interviewees, only 20% of them have rejected candidates for lack of digital skills, the rest do not remember having done it. Two interviewees did not answer the question.

### 2.3.2.4 Digital literacy gaps

4. Is there any possibility or task in particular related to digital competence in which future employees should improve?

HR managers have not reported on particular skills gaps related to digital competence, but have listed some competencies that they believe current and future employees should consider. Among them the use of shared document applications, the use of government platforms and specific thematic area of the company, ability to adapt to software changes and opening to constant learning.

### 2.3.2.5 Role of Social Media Platforms in the hiring process

5. a. Which social networks do you use most frequently for recruitment purposes (recruitment and selection)?
- b. If you use social networks for contracting purposes, do you use them frequently? In what way do you use them? What are the reasons that led you to use these in particular?

While 40% of respondents argue that they do not use social networks for employee recruitment, 60% argue that they do. The most used are the websites of companies and LinkedIn, because it is considered as a social network of professionals. Secondly, Facebook and Twitter are also used,

although in a lower percentage. Both Facebook and Twitter are used to a greater extent for advertising and for positioning on topics of interest to the company. Taking into account this information, the futures have to take into account to contact LinkedIn and the social networks of LinkedIn as well as the websites of the companies that they are interested in applying for the vacant positions, which are the most used for this procedure. Also, if the candidates are interested in being aware of the services and activities that companies offer, they should consider using both Facebook and Twitter.

#### 2.3.2.6 Role of Social Media Platforms in advertising new openings

6. a. What social networks do you use most frequently for other reasons (announcing new jobs, internal communication, marketing purposes)?
- b. If you use social networks for other purposes, do you use them often? In what way do you use them? And what are the reasons that have led to use these particular platforms?

The social media platforms most used by the interviewees for advertising are Facebook and Twitter. Secondly, some interviewees argued that they also use YouTube and Instagram. On the other hand, a large part of the interviewees argued that they use WhatsApp for internal communication, in order to transmit information about meetings or events.

Two of the interviewees stated that they do not use social networks for advertising purposes. This should be taken into account by future candidates to be informed of the public positions of the companies and the offers of employment and services they offer.

#### 2.3.2.7 Importance of Social Media Profile

7. How important is the profile of Facebook, LinkedIn, Twitter, etc., of a candidate during the hiring process? Why?

According to the responses of the interviewees, applicant's Facebook, LinkedIn and Twitter profile are not important during the hiring process for human resources managers. Some of these interviewees stated that they would pay attention to the profile in LinkedIn because it is a professional social network but in general, all interviewees agreed that they pay more attention to personal interviews, to the aptitudes and to the competences that the candidates show personally; as well as in the previous experience.

#### 2.3.2.8 Social Media and Internal Usage

8. a. Do you use social networks such as Skype, WhatsApp, etc., for internal purposes? How long have you been using them for these purposes? Are employees expected to know how to use them?
- b. Do you use social networks like Skype, etc., to interview candidates? How long have you been using such media to interview, if at all? Are employees expected to know how to use them?

Of the representatives of the companies, none reported using social networks to interview the candidates. Most use WhatsApp for internal communication of the company and a few use YouTube for the same purpose. Those who use WhatsApp, they do it for about 2 years, and argue that they use it for informational and organizational purposes. They expect employees and candidates to be able to use social networks and especially WhatsApp at a medium level, since they do not consider it a great challenge either.

## 2.4 Synopsis

In summary, the analysis of respondents' answers show that most companies do not consider a barrier to hiring that candidates do not have a high level of digital skills but that they are interested in being open to learning and demonstrating skills. of predisposition. The majority of interviewees do not use social networks to interview candidates, although some of them use them for advertising purposes. In addition, most social media users often use WhatsApp to communicate internally and expect employees to be able to use it. Regarding the selection process, none of the interviewees argued that they use social networks neither for the selection process nor for the interview process, which shows that they value more the presence and work experience of the candidates than their profiles in social networks.

## Conclusions

In conclusion, we have been able to make a state of the art about digital literacy in Spain, paying special attention to adults over 45 years of age. In general terms, we could see that numerous projects are being carried out (in Europe and in particular in Spain) to technologically literate the population, aware of the importance of education through technology, as well as the acquisition of the basic skills to become active and participatory citizens, generating possibilities for social inclusion and employability.

The Spanish government has joined forces to comply with the recommendations of the European Union regarding the development of the information society and the challenges associated with the advent of the ICT sector. For this reason, it has adapted its legislation to achieve the proposed objectives and the plans and strategies have been carried out both nationally and at the level of the autonomous governments with the ultimate goal of integrating the entire population in the information society. Following the strategy of the EU for the development of the digital society, the Digital Agenda for Spain was adopted, which established the lines of all government actions in Telecommunications and the Information Society. The agenda establishes the lines of action to achieve the objectives that must be achieved in relation to ICT and electronic administration according to the directives of the Digital Agenda of Europe 2015-2020. The main objectives of the Digital Agenda for Spain include: Encouraging the deployment of networks and services to ensure digital connectivity; develop the digital economy for the growth, competitiveness and internationalization of Spanish companies; improve electronic administration and digital public services; building confidence in the digital; Promote RTD and innovation in the industries of the future; promote inclusion and digital literacy and the training of new ICT professionals.

Also we could be able to see that Spain ranks 14th out of the 28 EU Member States in the Digital Economy and Society Index (DESI) of 2017. Particularly noteworthy are the results obtained by Spain in the field of digital public services, although the dimension in which it has progressed the most is the integration of digital technology. Despite the fact that, in general, the public and private sectors in Spain are progressing rapidly towards the integration of digital technologies, it seems that some of the indicators reflect a low level of demand from users, with a lower level of growth in digital skills that hinders development in the dimension corresponding to human capital. In terms of human capital, Spain ranks 16th in the EU countries and is below the Union average. Although there are more and more Spanish families that have access to the internet, the levels of basic and advanced digital skills are still lower than the EU average. Only 53% of citizens aged between 16 and 74 have basic digital skills (56% in the EU), and ICT specialists represent a lower percentage of the active population (2.4%, compared to 3%), 5% in the EU. In this sense, we could see that the percentages of people between 45 and 54 and 54 to 64 who have low digital skills are higher than the European average although the percentages of these age groups that have basic digital skills in Spain are lower than the EU. The percentages of people between 45 and 55 who have digital skills are higher than the European average. However, the percentage of individuals of that age group who do not have digital skills is higher in Spain than in the EU. Finally, the percentages of people with basic, low, basic skills, above basic or non-digital skills of 54 to 74 years are lower in Spain than in the EU.

Regarding the interviews, we have observed that, about the importance of digital literacy, the majority of respondents answered that it is very important that employees have digital skills, especially for the specificity of the company. The rest of the interviewees, in the same proportion, answered that it is important but that it is not necessary, that there is also another type of work in the company that does not need this type of skills and that is not important since the jobs of The company does not need this type of skills. With respect to expectations, most respondents say that the answers regarding the knowledge of digital skills are the same for employees of 30 years as for those over 45 years. The rest of the interviewees argued that the expectations are greater for those under 30 years, since these belong to a generation that grew in this type of technology, a difference of those over 45 years who came in contact with these in other ways. The hiring processes are still fairly traditional in that still most of the interviewees use personal interview methods and value the skills of conflict resolution and adaptation to changes. The vast majority of respondents do not use social networks for the selection process and interviews with candidates and only some of them said they use social networks to advertise their companies. Another fact that is not minor, is that the interviewees do not consider that the lack of digital skills is an inconvenience for hiring although some of them realize that the company's own activity requires basic levels of management of these technologies.

Based on the main results and conclusions, the following policy recommendations could be stressed:

- Policy makers should be aware that low to medium incomes are most at risk when it comes to job losses caused by digitalisation. Therefore, shifts in demand for labour stimulated by digitalisation should be monitored closely and measures to support and guide these workers during transitions should be offered. This will require further



improvement of job guidance and training programmes in order to respond to the new needs of the labour market.

- To avoid the digital divide and increased inequality, reforms in initial vocational education and lifelong learning should be closely monitored and implemented.
- The new forms of work, like teleworking, freelance work and crowdsourcing confront companies and governments with new questions about social protection, and health and safety issues. The legal framework of these different types of work should be examined to determine whether it needs to be updated in specific areas in order to maintain workers' protection and to adequately cover new forms of work as well.
- Policymakers should also bring their social protection mechanisms into line with the new flexible employment relationships and ensure social protection to all types of workers.
- Spain should tailor adult digital skills learning policies so that adults can engage in meaningful learning opportunities throughout their life course, irrespective of their employment status or life circumstances.
- The State should work towards stable support structures for adult learning and the continuous evolution of a comprehensive adult digital skills learning system, able to provide continuity of provision and to respond adequately to emerging needs.
- The State should develop systems and tools to anticipate adults' skills needs, both for employment and other policy objectives (e.g. health).
- The State should monitor the effectiveness of adult learning policies at all levels and choose appropriate outcome indicators to document them

Developing and implementing effective policies that promote adult learning can improve lives, societies and economies. To improve adult skills levels, and in particular to raise adults' basic skills (literacy, numeracy and digital skills), high quality programmes are essential. These should include better outreach to excluded adults, and more effective use of ICT. Strategies to implement ICT in adult learning should ensure a good balance between four elements: a clear vision for promoting adult digital skills and harnessing digital potential; ensuring the availability of high quality learning resources; comprehensive programmes to support adult educators in updating their skills and using ICT effectively; and innovative approaches to ensure adequate investment in infrastructure and hardware. The coherence of the many different strands of policy and provision for adult learning needs to be improved and policies need to be informed by evidence and proper monitoring.

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