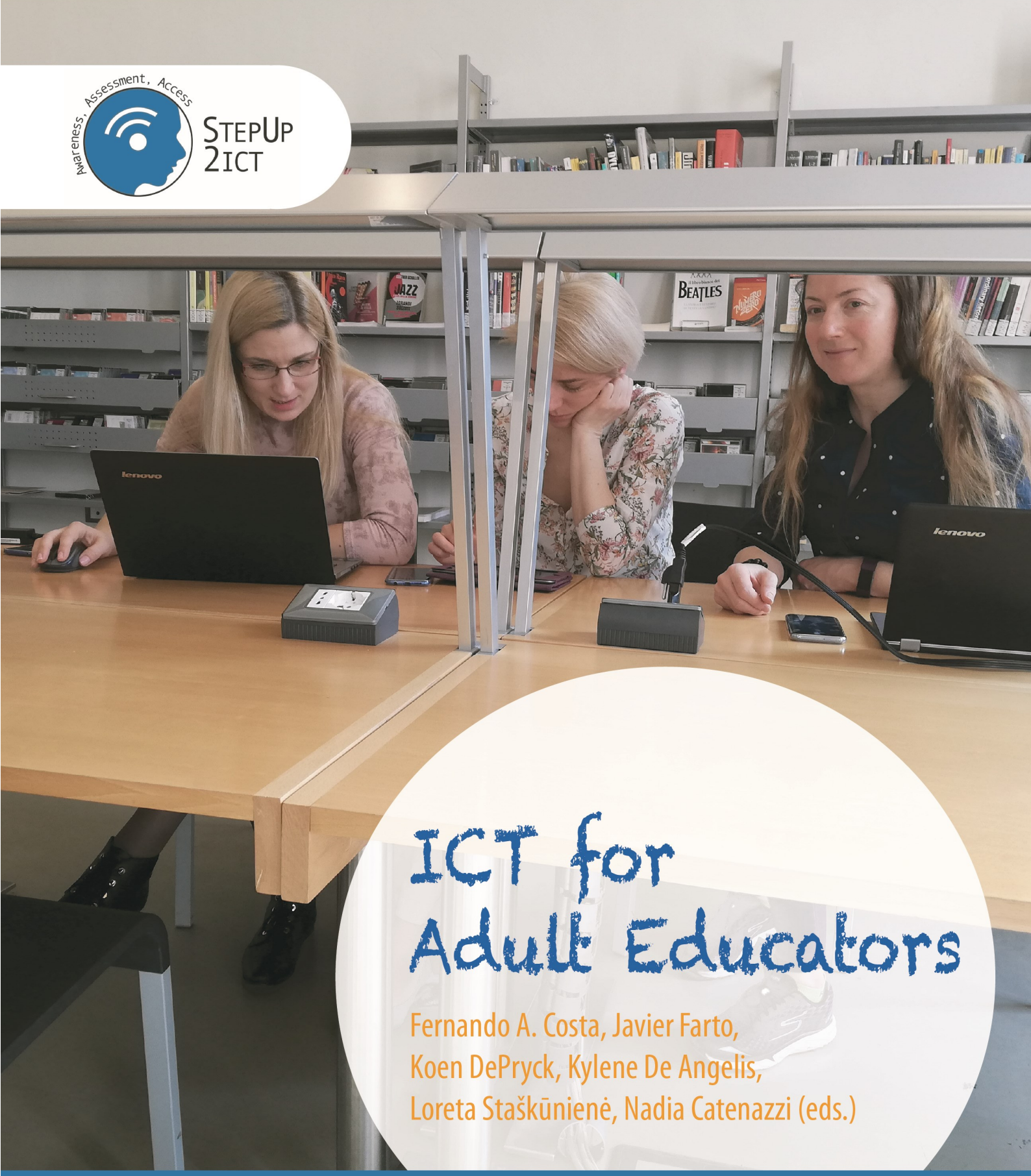
Awareness, Assessment, Access

StepUp 2ICT



ICT for Adult Educators

Fernando A. Costa, Javier Farto,
Koen DePryck, Kylene De Angelis,
Loreta Staškūnienė, Nadia Catenazzi (eds.)

2019

Co-funded by the Erasmus+ Programme of the European Union

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2019

Title: ICT for Adult Educators

Project website: www.stepup2ict.eu

Project Partners:
Training 2000 (Coordinator), Italy
Institute of Knowledge Management, Belgium
Klaipeda University Continuing Studies Institute, Lithuania
Asociacion Instituto Europeo de estudios para la formación y el desarrollo, Spain
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ISBN: 978-989-8753-51-9
Publisher: Instituto de Educação da Universidade de Lisboa
Cover: Fernando Albuquerque Costa
Layout: Maria Alexandra Ramos
Pictures: AAA-STEPUP2ICT project and courtesy from Pixabay

If you have any questions regarding this book or the project from which it originated please contact the partner in your country. You can find contact details on the project website www.stepup2ict.eu.

The editing of this handbook was finished on 2019.

Co-funded by the Erasmus+ Programme of the European Union

This Erasmus+ Strategic Partnership project has been funded with support from the European Commission. Project number: 2017-1-IT02-KA204-036606
The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

This project has received grant support from Movetia funded by the Swiss Confederation. The content reflects the authors' view and Movetia is not responsible for any use that may be made of the information it contains.

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01 Foreward

This handbook is the result of the “Stepping Up to Technology in Adult Education towards Awareness, Assessment and Access” transnational project. It is meant to support adult educators in using ICT tools and digital media in their working framework.

The StepUp2ICT project focuses on building the ICT capacity of adult educators in their specific occupational context. It is mainly focused on training and workplace practices and aims for impact on the awareness of strategic and operational inclusion of the potential of technology for learning by adult education provider organizations.

The present handbook is not a text-book, academic work or a book that addresses the ICT skills curriculum. It is created to help every adult educator to use e-learning methods, tools and techniques from the planning phase to the evaluation of participants' learning phase.

This handbook consists of an introduction, where the concept of andragogy and the idea of learning activity are explained. The reader can then find a description of the situation of adult education in Europe, mainly in the partner countries and a definition of the adult educator profile on which the project and its results are based.

For a better operationalisation of the work to be done, in the adult training process six different domains are considered:

1. Planning and coordinating a training
2. Assessing training needs
3. Designing training content
4. Developing training content
5. Delivering a training
6. Evaluating a training

In chapter 5, for each domain the reader can find a description of what is intended with the domain and the competencies and objectives to be developed for the adult educators.

In chapter 6, the handbook includes the description of 6 training activities using open online digital tools to promote the use of digital technologies in adult education settings.

The activities are examples of what can be done with technology in adult learning and education.

At the end, chapter 7 includes the description of the tools used, underlining the pedagogical potential for the adult learning.

More activities and tools descriptions can be found online at:

02 Introduction

Adult Education (AE), sometimes also referred to as 'ALE' (Adult Learning and Education), is a very broad field. AE can be formal or non-formal (and anything in between), and it stretches across many professional domains but also covers a wide range of personal issues. On top of that, "adults" are not all of the same age – the term refers (depending on the context) to young adults (aged 16 or older) as well as to seniors well beyond the age of retirement.

The United Nations, in their 2015 policy document frame ALE as follows: "All people, irrespective of sex, age, race, ethnicity, and persons with disabilities, migrants, indigenous peoples, children and youth, especially those in vulnerable situations, should have access to lifelong learning opportunities that help them acquire the knowledge and skills needed to exploit opportunities and to participate fully in society."

Over and over again, participants in ALE confirm that competent trainers matter and make a real difference. But what makes for a competent educator in ALE? The field will be hard pressed to come up with a generic set of competencies applying to all while at the same time sufficiently different from profiles of educators in other contexts. The broad domain of ALE requires a broad range of educators in many different roles (teacher, instructor, coach, etc.). The diversity of adult educators is a function of the context (formal and/or non-formal, personal/professional/cultural/social), the role (tasks and responsibilities) and the personal background of the educators.

All three may involve some aspects having to do with ICT. The survey designed by StepUp2ICT is an attempt to look at how ICT might be an element in a core of the common profile of an adult educator. ICT competencies, after all, are important and (too) many adults, including adult educators, are still struggling to come to grips with how ICTs can contribute to acquiring the knowledge and skills needed to exploit opportunities and to participate fully in society.

The importance of ICTs is clearly stated in the UN's Sustainable Development Goals, a careful selection of 17 ambitious goals aiming at ending poverty and extreme hunger, to ensure quality education for everyone, to improve healthcare, to end gender and other types of inequality, to protect and restore the sustainable use of ecosystems, to improve social and economic development by providing decent work for everyone and by stimulating economic growth by 2030.

How is that possible? ICT is a key driver for not only improving the quality of education but also for attaining many – if not all – of the other goals. Conversely the absence of ICT competencies tends to increase the widening of the knowledge gap: not only between countries but also within communities, among generations, between employees in different sectors but also within a single sector, including education in general and adult education more specifically.

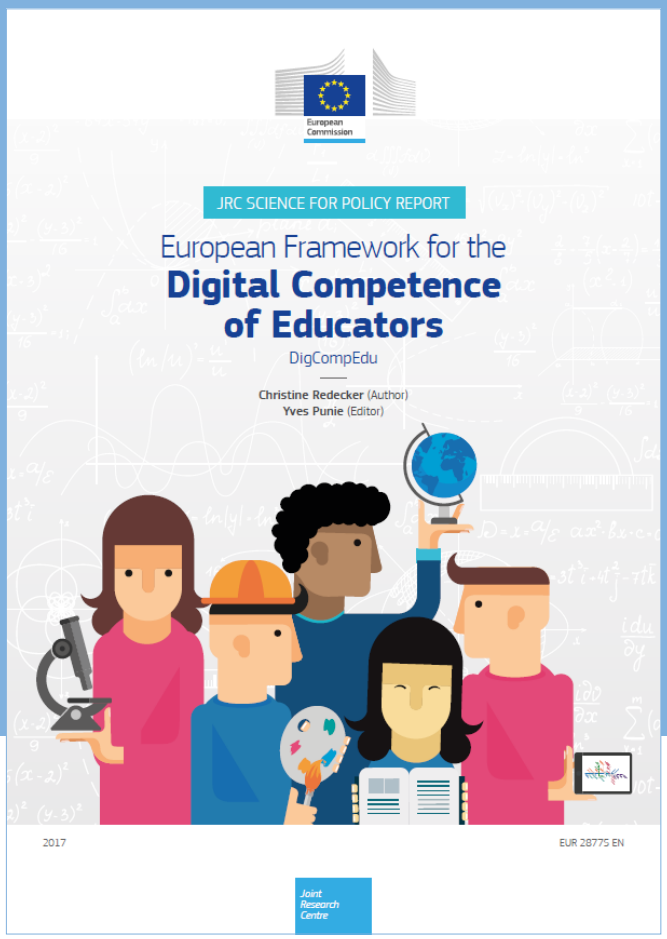
Strengthening ICT competencies, therefore, is imperative for adult educators themselves as for their admittedly very diverse formal or non-formal learning objectives. For trainers in AE, this affects not only their personal participation in society but also their professional opportunities and responsibilities. How can they contribute to the generic and/or specific ICT competencies of their learners if their own (professional) ICT competencies are below par?

This raises questions about which ICT competencies adult educators need in general and also to work in a specific domain or with specific target groups.

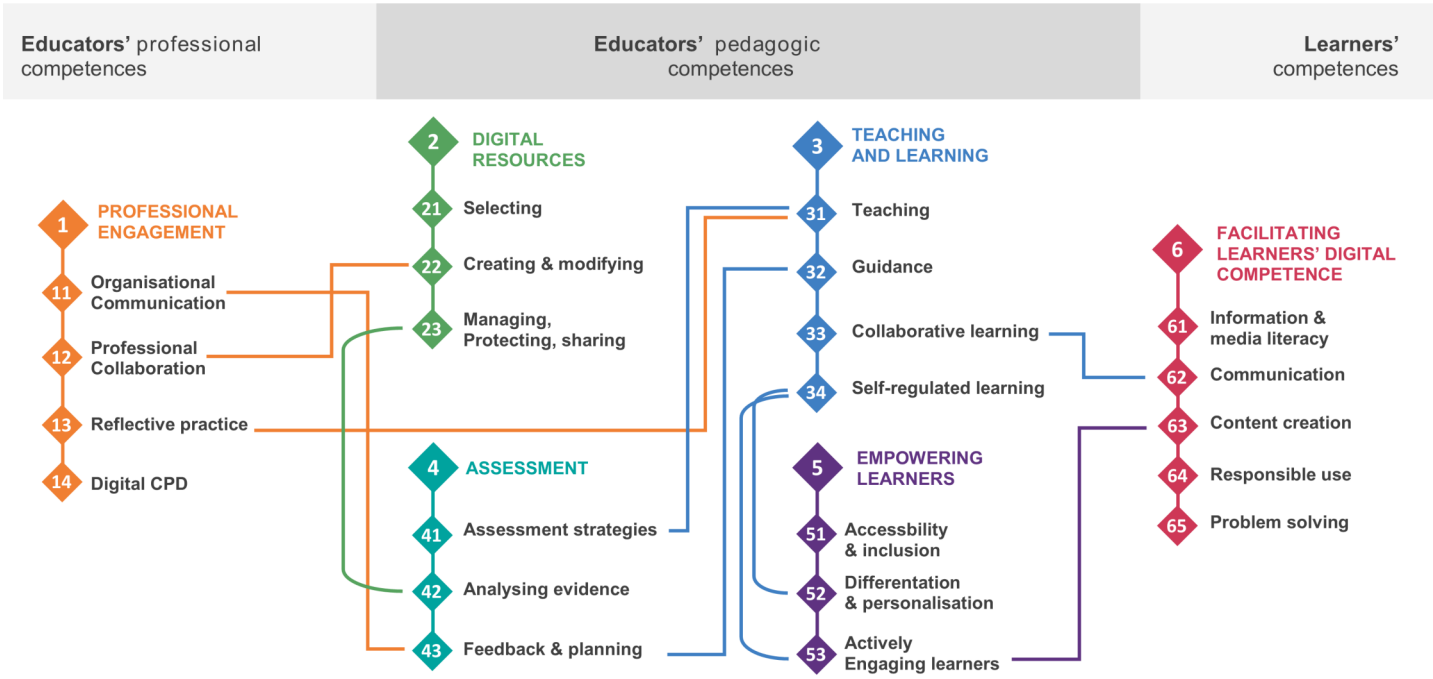
DigComEdu - European Framework for the Digital competencies of Educators is directed towards educators at all levels of education, including general and vocational adult education and training and non-formal learning contexts. (See in the next pages more information about the DigComEdu framework.)

DigComEdu

The framework proposes "a progression model to help educators assess and develop their digital competency". It outlines six different stages through which an educator's digital competency typically develops. [...] At the first two stages, Newcomer (A1) and Explorer (A2), educators assimilate new information and develop basic digital practices; at the following two stages, Integrator (B1) and Expert (B2), they apply, further expand and structure on their digital practices; at the highest stages, Leader (C1) and Pioneer (C2), they pass on their knowledge, critique existing practice and develop new practices. Please note the structural similarity with the Common European Framework of Reference for Languages (CEFR). This progressive structure (with or without an assessment) could be used to design courses and training for professional development of (adult) educators.



This is the framework DigCompEdu puts forward:



The framework is based on 6 domains.

1. PROFESSIONAL ENGAGEMENT

is the "ability to use digital technologies not only to enhance teaching, but also for their professional interactions with colleagues, learners, parents and other interested parties, for their individual professional development and for the collective good and continuous innovation in the organisation and the teaching profession." It includes the use of ICT for organisational communication, professional collaboration, reflective practice and digital continuous professional development.

2. DIGITAL RESOURCES

refers to coming to terms with the variety of digital (educational) resources: "to effectively identify resources that best fit their learning objectives, learner group and teaching style, to structure the wealth of materials, establish connections and to modify, add on to and develop themselves digital resources to support their teaching. At the same time they need to be aware of how to responsibly use and manage digital content. They must respect copyright rules when using, modifying and sharing resources, and protect sensitive content and data, such as digital exams or students' grades." This domain includes selecting digital resources, creating and modifying digital resources and managing, protecting and sharing digital resources.

3. The TEACHING AND LEARNING domain includes teaching (designing, planning and implementing the use of digital technologies in the different stages of the learning process), guidance, collaborative learning and self-regulated learning – contributing to a shift in focus from the teacher-led to the learner-centred approach.

4. ASSESSMENT is the domain in which, besides using ICTs for assessing learners, digital technologies can contribute to directly monitoring learner progress, to facilitating feedback and to allowing educators to assess and adapt their teaching strategies. The domain includes Assessment strategies (using ICT for formative and summative assessment), analysing evidence, and feedback and planning.

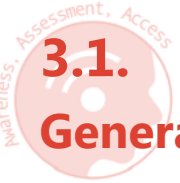
5. Using ICT for EMPOWERING LEARNERS focuses on accessibility and inclusion, differentiation and personalisation as well as on actively engaging learners.

6. Finally, in line with the societal and professional importance of ICT, FACILITATING LEARNER'S DIGITAL COMPETENCY is a generic outcome of (adult) education. It includes information and media literacy, digital communication and collaboration, digital content creation, responsible use and digital problem solving.

This generic framework for ICT competencies of educators provides an excellent context to define and position the diverse general as well as specific competencies adult educators need to work with adults in their specific contexts. It also provides an interesting approach to continuous professional development based on an assessment of the level of competencies already obtained.

03 Situation of adult education in partner countries

The topic of ICT in adult education requires the analysis of the specifics of the adult education system. Desktop research was specifically sought to disclose the situation in adult education by exploring the general framework of adult education, legal documents and institutions in charge, main activities and professional competencies of adult educators in the partner countries.



3.1. General framework of adult education

As stated in the desktop research in the partner countries, the term "adult education" means a combination of educational acts addressed to adult people with several aims, including lifelong learning; second chance to complete own curriculum studies; basic knowledge useful for the integration into the labour market; update knowledge aimed at professional retraining; other non-formal training. Therefore, in all partner countries, adult education is based on the fact that all adults need to update and improve their skills and competencies.

The adult education in the partner countries is addressed to young adults aged 16 and older to achieve the second level certificate, and to adults aged 18 and older seeking a job or already employed.

Generally speaking, the framework of adult education in the partner countries can be classified into three main areas: **formal provisions**, **non-formal provisions** and **self-education** (informal learning).

- Formal adult education includes general education, vocational education and training, and higher education. All these activities are carried out in the relevant institutions: gymnasiums for adults, special departments of vocational schools, specialized departments of universities when learning ends with the granting of a diploma.

- The focus of non-formal adult education is to provide an individual with conditions for lifelong learning, meet the needs of cognition, upgrade already acquired qualifications and obtain additional ones.

- Self-education (informal learning) is a natural daily self-directed process of learning which may not necessarily be pre-planned; it is less organised and structured and may be driven by personal motives or by professional or family circumstances. Along the formal and informal adult education, there should be mentioned a new possibility of recognition of prior informally gained knowledge and skills. The procedure of informally gained skills formalization is quite popular in some universities that use their own methodologies. During the past several years, the Third Age University has gained popularity in the partner countries.

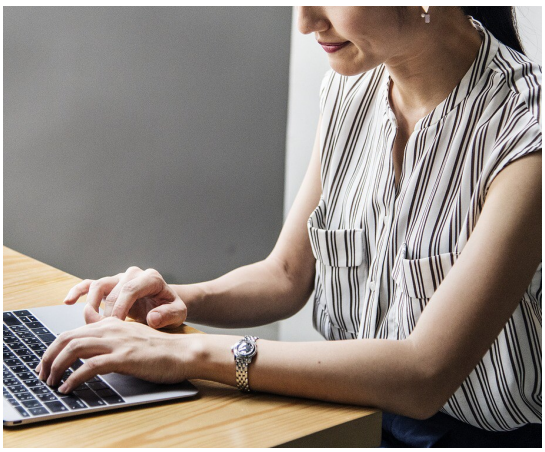
3.2. Legal documents

The most recent development of legislation concerning adult education involves a number of specific legislative acts and agreements in each partner country. Summarizing the tendencies, it could be stated that, with respect to the above distinction among formal, informal and non-formal education, **countries usually have formal education regulated by a general law of the education system**. Some countries (e.g. Lithuania, Switzerland) have specific laws on non-formal adult education. However, in other countries (e.g. Spain) continuing adult education is regulated under Educational Administration: mainly through the general Education Organic Law. In Portugal, non-formal education is not ruled by specific legislation. All partner countries have no specific regulations for informal learning.

However, the case of Belgium coud be an interesting example of positioning the adult education in the legal system. Adult Education is considered by Flemmish Goverment as education of chances: lifelong chances to learn, to integrate and to qualify. The key concepts of education of chances are: the ageing of the population and the need to stay active (work) longer, migration and superdiversity of society, participation in society, labour market shortages in certain sectors (eg. health and care), the increasing presence of technology and ICT, the importance of digital literacy and digital competencies, and accessible educational trajectories for people with lower formal qualifications.

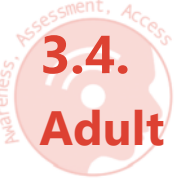
3.3. Institutions in charge

Due to the national specifics, countries have rather different ranges of institutions in charge of adult educator professional preparation. The discussion starts on the conceptual level. For instance, in Lithuania, the concept "Andragogy" is used to define the branch of science, therefore, the university level study programmes (Bachelor and Master) that prepare adult educators are usually called "Andragogy studies". In Portugal, the term "andragogue" is not used and it is even a term under serious criticism. Pedagogy has to be considered a humanist and critical educational method, appropriate for both formal and non-formal education. Therefore, in academia, the most used term is "adult educator". There are no specific higher education degrees in charge of initial or continuing education and training of adult educators in Portugal. In Flanders, there are no specific requirements for the training of adult educators. In the formal education system, in order to qualify for tenure, adult educators tend to obtain a qualification as teachers at the level of secondary education. Nevertheless, some universities and other providers offer courses and programs for adult educators, typically focusing on specific themes and needs or catering to specific target groups.



In non-formal adult education, as a rule, most adult educators in the partner countries work without any special preparation for working with adults, and they are usually recruited among teachers of the national education system (e.g. Lithuania, Italy).

In addition, each partner country has a network of associations, unions, foundations and umbrella organisations, which provide provisions for on-going training of adult educators.



3.4. Adult learning activities

The term "adult education" indicates all the activities organized by the public system and private system, addressed to education, cultural growth, and in-service training for adults.

The activities carried out by adult educators in the partner countries are:

- needs-assessment activities (identification of needs, possibilities, potential and capacities of adult learners; identification and assessment of entry levels, prior learning and experience of the adult learners);
- preparation of course activities (identification of learning resources and methods; planning and organising the learning process; setting, negotiating and communicating the objectives of the course and informing adult learners of the structure of the learning process);
- facilitation of learning activities (relating the learning process to the living world and practice of the adult learner; empowering, activating, motivating and encouraging the adult learner; creating a positive learning environment; making content accessible; managing group process and dynamics, etc.);
- monitoring and evaluation activities (providing support and feedback to the learners; evaluating the context, the process and the outcomes);
- counselling and guidance activities (offering career information and other information on work environments; obtaining information on careers for adults; offering guidance and counselling);
- financial management activities (managing resources and budgets; preparing applications for funding; determining and elucidating benefits);
- overall management activities (working in accordance with existing procedures; monitoring and evaluating programmes; building relationships with other organisations; lobbying and negotiating, etc.);

- marketing and public relations activities (marketing of programmes; assessment of demand for existing provision and for new programmes, establishing relationships with external communities);
- administrative support activities (dealing with administrative issues; informing staff and learners of administrative issues);
- ICT support activities (supporting the design of ICT-based and mixed-mode programmes; delivering ICT-based programmes; conducting and facilitating assessment within on-line environments; etc.);
- overarching activities (working with others; linking to social contexts, networks, stakeholders, and the wider community; coaching new staff, reaching target groups).

3.5. Adult educator competencies

Regulation on "adult educator's competency" does not exist in any partner country, except for Portugal, including standards and a univocal adult educator profile. In Lithuania, there was approved *The Descriptor of Andragogues' Professional Activities* (2013) where the andragogue professional competencies are attributed to three activity areas: education, management and research. In the Descriptor, there are also defined the necessary general competencies. The education area competencies are defined as ability to evoke, organize adult learning activities, and training; the management competencies comprise analysis of adult learning assumptions in a particular situation, planning of new learning situations, and assessment of teaching / learning outcomes; the research competencies are defined as a study of the theory of lifelong learning and analysis of theoretical feasibility and practical work. The necessary general competency is named as a set of abilities, such as ability to initiate, creativeness, ability to cooperate, communicate, work in a team, ability to reflect on experience, learn and develop one's capacities, update information and skills, etc. The ability to use ICT is also attributed to the general competency, especially for such capacities as information management, communication via IT tools, and networking at the national and international level. In **Portugal** and **Spain**, there are several types of adult educators, that is, adult educators with different profiles, depending on the training context in which they work, with different characteristics in terms of teaching-learning process.

In general, in the partner countries it is considered relevant that adult educators demonstrate competencies in the following areas: **technical knowledge** (related to the training area), **andragogical knowledge** (related to the teaching-learning process, adjusted to each training context and appropriate to the specific group of adults with whom they work) and technological knowledge (related to the field of digital literacy). In this last area, it is not so much knowledge that comes from the area of computing, but especially the **ability to use digital technologies fluently** and in a way adjusted to the purposes and contexts of its use. Except for Portugal, ICT competencies are not compulsory for trainers, therefore, training in ICT tools depends on the trainers' personal motivation and initiative.

3.6. ICT tools used

ICT tools for the teaching-learning process of adults are mostly understood in all partner countries as a possibility to learn in distance or online, especially in the context of formal education. It is considered a more flexible way to provide people with wider learning opportunities seeking for a certain education or qualification. Nowadays, the main tools for distance or online learning organization include the virtual learning environment, video conferences or seminars, and open educational resources. The obvious tendency in all partner countries is that most distance or online learning takes place in higher education institutions.

It is not the same situation for non-formal adult education in the partner countries, in which the use of ICT depends on the specific organisation and the individual educator's choice. Even though adult educators' ICT capability and proficiency is clearly recognized in the partner countries (Switzerland, Portugal), not all trainers have the same level of ICT skills and knowledge, and that affects their training methodology and the attractiveness of the course. On the other hand, e-learning courses are spreading more and more in all partner countries.

The activities and participation in EPALE is becoming more and more popular with both adult educators and adult education organizations.

04 Adult educator profiles in partner countries

Methodology

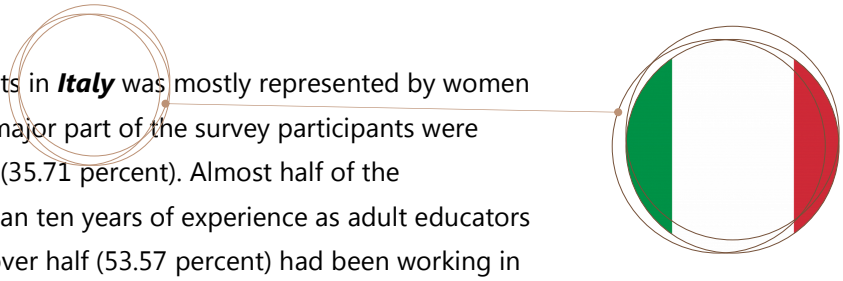
The content of this chapter is based on the information collected through the questionnaire developed within the StepUp2ICT project, in order to gather data about the use that adult learners make of ICT. The questionnaire consists of three blocks. The first block (questions 1-6) is intended for describing the population of adult education. The data collected allows describing the specifics of adult educators' professional activity, their functions and important competencies. The second block (questions 7-11) allows highlighting the importance of ICT in adult educators' work. The data collected provides evidence on the importance of ICT in adult educators' work as well as on the skills required by adult educators in order to apply ICT in various areas of their professional activity. The last block of questions (11-13) focuses on the use of ICT in 6 domains of adult educators' activity. The data collected allows assessing the use of ICT in these domains as well as distinguishing the competencies to be acquired by adult educators in order to apply effectively ICT in all 6 domains.

4.1. Adult educator profile

The analysis of the survey data allowed for the description of the population of adult educators in the partner countries.

In ***Belgium,*** the majority of respondents were women (75.2 percent), while men constituted only one quarter of the total number (25.8 percent). This fact shows a slight overrepresentation of the female staff. One fifths of the respondents (19.4 percent) were 30 or younger, almost one-third (29 percent) were aged 31 to 40, more than one third (35.5 percent) were aged 41 to 50 and only about 16.1 percent were aged 51 or older. The majority of the survey participants had more than 10 years of experience (41.9 percent) as adult educators; a slightly smaller part (35.5 percent) had between 5 and 10 years of experience. 41.9 percent of the respondents worked with socially disadvantaged groups; 29 percent of the respondents taught Dutch as a second language, and 41.9 percent of the respondents taught in the Second-Chance to Learn programs. This is mainly due to the geographical location of the centres and to the rather inflexible profiles of the centres: they are not allowed to change, add or drop programs at their own discretion. Other centres with different profiles may therefore also have different educator profiles. 10 percent of the participants work with older learners and 32.3 percent teach languages, although it is unclear whether the teachers of Dutch as a second language included themselves in that category. All survey participants in Flanders (100 percent) emphasized social competencies and instructional competencies as the most important. Andragogical competencies were listed as important by 41.9 percent of the survey participants and ICT competencies were listed as important by 45.2 percent of the survey participants. Cognitive competencies (25.8 percent) and personal competencies (22.6 percent) were perceived to be (relatively) less important. 48.4 percent of the respondents indicated that they would like to improve their ICT skills. Unsurprisingly, this was strongly correlated with the group who indicated ICT competencies as important. Next on the wish list were instructional competencies (41.9 percent) and andragogical competencies (35.5 percent). The latter may be due to the fact that very little teacher training for adult educators was available. Most of the adult educators fulfilled their didactic training

requirements at the level of traditional secondary education.
However, for most of the respondents the importance of ICT for adult education goes without saying: 54.8 percent of the respondents believe that ICT is important in adult education, 41.9 percent of the respondents even believe it is very important. We find exactly the same percentages when respondents are asked if they feel ICT may enhance the effectiveness of adult education: 54.8 percent of the respondents agree and 41.9 percent of the respondents totally agree. Nevertheless, 22.6 percent of the respondents indicated that they seldom use ICT in teaching/learning of adults, but that might be an effect of the wording of the question and/or the possible answers. 58.1 percent of the respondents sometimes use ICT, and 12.9 percent of the respondents always do.

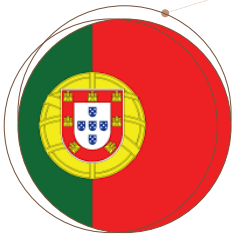


The sample of respondents in ***Italy*** was mostly represented by women (67.86 percent), and the major part of the survey participants were aged between 41 and 50 (35.71 percent). Almost half of the respondents had more than ten years of experience as adult educators (42.86 percent) and just over half (53.57 percent) had been working in formal adult education at the level of secondary education with young adults (50 percent) and socially disadvantaged adults (46.43 percent). Most of the respondents were teachers, members of training centres, university professors, operators of job placement offices, job experts, business experts etc. Respondents of the survey carried out the following activities as adult educators: teaching Italian language and literature, teaching history, teaching ICT technology, teaching English language and business English, research in networking field, counselling, guidance, social economic project management, counselling on innovation, guidance and active search on the labour market, laboratory tasks, teaching tourism laws, training planning, apprenticeship training, training in civil protection, training on start-ups, enterprise, canvas business models, and business planning. The main difficulty they encountered in their work experience was the trainees' lack of interest and motivation. They also acknowledged that technology tools and innovation policies were inadequate, preventing the growth and the competitiveness of Italian enterprises and the educational sector in general. Furthermore, they reported 1) that those who had lost a job had great difficulty finding another job, 2) that public administrations were disinterested in adult education;

3) shortage of ICT skills; 4) difficult communication with foreign people; 5) trainees' different starting points; and 6) difficulty in planning courses linked to the labour market trends. To successfully work with adults, almost all respondents indicated that social competencies (96.43 percent) and instructional competencies (85.71 percent) were the most important, followed by ICT competencies (67.86 percent), personal competencies (64.29 percent), cognitive competencies (53.57 percent) and andragogical competencies (46.43 percent).

The majority of the sample of respondents in ***Lithuania*** were women (81 percent). This tendency reflects the population of adult educators in Lithuania, which are typically female. The major part of the survey participants belonged to the age group between 41 and 50 years old (42.9 percent). The tendency again reflects the population of adult educators in Lithuania, which typically consists of older people. This fact confirms the presumption that profession of adult educators in Lithuania is aging and younger people should be attracted. Respectively, the major part of the respondents (81 percent) had more than 10 years of experience in adult education. The survey participants were distributed almost equally between the two sectors of adult education: 61 percent of the respondents were involved in non-formal education; 52 percent of the respondents were involved in formal education. The sample of respondents mostly represented those working in continuing adult education (38.1 percent) and non-formal adult education (33.3 percent). The majority of the survey participants (76.2 percent) indicated that the target group they worked with were adults between 25 and 60 years old. To sum up, most of the Lithuanian respondents were teachers from adult schools, vocational training centres, university professors, etc. The Lithuanian survey participants carried out the following activities in their sector: lecturing and training, individual counselling, tutoring and coaching, preparation of learning materials, career guidance, teaching a subject, planning and organising non-formal adult education, attracting new learners, marketing activities, coordinating non-formal adult education activities in a district, research on the quality of adult education, organizing adult education events (seminars, job-shadowing, peer-learning, etc.), working with a community, informing about adult education opportunities management and dissemination, cooperating with stakeholders (labour market office) and developing adult education programmes, developing and implementing

projects in adult education, creating learning environments, etc. When identifying the major problems in their professional activity, the Lithuanian survey participants recognized the lack of skills to work with digital devices (such as smart board and tables) and their application in the learning process. In fact, the informants stressed the need for IT competency for the application of technologies in planning and assessment of the learning process, working with learners, and developing learning resources. Regarding the most important competencies for successful work with adults, almost all respondents indicated ICT competencies (85.7 percent), social competencies (81 percent), and andragogical competencies (81 percent) as the most important, followed by personal competencies (71.4 percent), instructional competencies (61.9 percent) and cognitive competencies (47.6 percent).



The majority of respondents in ***Portugal*** were women (62.2 percent). The majority of respondents (37.8 percent) were 41 to 50 years old. Additionally, the majority of respondents were very experienced as they had been working for more than 10 years in adult education. The majority of respondents (41.6 percent) indicated they worked in formal educational settings, while 36.3 percent of the respondents were developing their professional activity in different contexts understood as formal education contexts, especially in what refers to provision allowing a school education diploma and/or vocational education and training – both initial or continuing education. Two thirds of the respondents worked with employed adult learners (70 percent), while half of them (50.3 percent) worked with young adults who were not participating in the labour market, and 49.9 percent of the respondents worked with unemployed adults. Most respondents pointed out the problems and challenges related to adult learners. Lack of motivation of adult learners was listed most often, followed by learning difficulties of the learners - some specific to learning school-based subjects such as Maths, Portuguese, or English as a foreign language, and others of a technical kind, mostly linked to specific workplaces. They also listed resistance to learning, especially in adult learners affected by unemployment, as well as the heterogeneity of adult learner groups in several forms of education. The lack of the use of ICT was also a challenge. Most of the respondents considered social competencies (82.2 percent), teaching competencies (68 percent) and digital competencies (58.9 percent) instrumental towards the success as an adult educator. Furthermore, 36.9 percent of the respondents chose digital competencies as the competencies they would like to improve as adult educators, followed by social competencies (23.7 percent) and teaching competencies (15.8 percent). Overall, the data revealed that digital competencies were of utmost importance to adult educators.

Thirty-five percent of respondents in ***Spain*** were between 31-40 years of age. Seventy percent were women and 30 percent were men. Thirty-seven percent had more than 10 years of experience as adult educators and another 37 percent had less than 5 years of working experience. The survey showed that 50 percent of the respondents in Spain worked in non-formal adult education, and 40 percent of them worked across formal, informal and/ or non-formal adult learning settings. Thirty percent worked with young adults (<25 years old) and 24 percent worked with older learners (>60 years old). The importance of competencies for adult educators were ranked as followed: 1st social competencies, 2nd instructional competencies, 3rd ICT competencies, 4th personal competencies, 5th cognitive competencies and 6th the andragogical competencies. Respondents were interested in improving these skills in the following order of importance: ICT competencies (34.1 percent), cognitive competencies (18.2 percent), social and instructional competencies (each 13.6 percent), andragogical competencies (11.4 percent), and personal competencies (9.1 percent).

The sample of respondents in ***Switzerland*** consisted mostly of men (64.71 percent). Almost one-third (29.41 percent) of them were aged between 31 and 40. The majority of the respondents had experience of more than ten years as adult educators (70.59 percent). Most of the respondents had been working in formal adult education with different adult categories at the higher education level (76.47 percent). They worked mainly with young adults and with professionals who returned to school for specialization or refresher courses and for retraining. Most of the respondents were teachers, university professors, members of training centres, etc. The Swiss adult educators who answered the survey carried out various activities: most of them taught ICT technologies, others taught Italian, andragogy, communication skills, stress and conflict management, human-computer interaction, etc. As activities they mentioned curriculum definition, training planning, distance training, etc. Among the challenges they encountered, they found it particularly difficult to keep students involved, motivated and engaged. Another challenge was the need to adapt the teaching modalities and the workload for employed students. Other respondents complained that students did not fulfil the basic

requirements to participate in the course. They also complained about the lack of time for know-how and competency transfer. Respondents indicated instructional competencies (100 percent) and social competencies (88.24 percent) as the most important competencies to successfully work with adults, followed by ICT competencies (70.59 percent), personal competencies (64.71 percent), andragogical competencies (52.94 percent) and cognitive competencies (29.41 percent).

In summary:

- The analysis of survey data allowed us to describe the population of adult educators in the partner countries. Summarizing the main demographic trends, we can confidently state that adult educators in the partner countries are mainly represented by women, and the majority of respondents belong to the age group "41 to 50 years old". Additionally, the majority of respondents are very experienced as they have been working for more than 10 years in adult education. The majority of respondents work in formal education or non-formal education.
- The main difficulties adult educators encounter in their work environment across the partner countries are: 1) the trainees' lack of interest and motivation; 2) inadequate technology tools and innovation policies, preventing the growth and the competitiveness of Italian enterprises and the educational sector in general; 3)great difficulty finding another job for those who had lost a job; 4) lack of interest of public administrations for adult education; 5) lack of ICT skills; 6) lack of skills to work with digital devices (such as smart board and tables) and to apply them in the learning process, etc.
- Most of the respondents in the partner countries consider social competencies, teaching competencies, and digital competencies to be paramount for success as an adult educator.

4.2. ICT use and importance

The second block of the questionnaire was geared towards the identification of the need for ICT and its importance in the work environment of adult educators in the partner countries.

Almost all respondents in the partner countries believe that the role of ICT in adult education is important and almost all agree that ICT enhances the effectiveness of adult learning. Concerning the implementation of ICT competencies and tools, almost two thirds of the respondents in the partner countries always use ICT in their job.

The major part of the respondents in all partner countries use ICT for browsing/searching the internet to collect information to prepare learning materials; to communicate online with adult learners; for browsing/searching the internet to collect learning materials or resources to be used by adult learners during the study process. Other main activities relate to downloading/uploading/ browsing materials from virtual learning environments and learning platforms; preparing exercises and tasks for adult learners; using applications to prepare learning materials and presentations for educational process, etc. As "other answers" respondents mentioned "use of certain training programmes or applications for learning purposes", "home assignments with certain programmes", etc.

The major part of the respondents in the partner countries considered using ICT, and using specific equipment (e.g. interactive whiteboard, laptop, etc.), important for peer learning communities or group work. Moreover, the survey participants in the partner countries considered using ICT important in learning (how to create websites/home page, video conferencing, etc.); subject-specific ICT use: tutorials, simulations, etc.; multimedia (digital video, audio equipment, etc.).

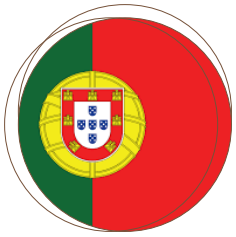
4.3. ICT use in the 6 domains

The third block of the questionnaire was intended to highlight the tendencies of ICT use in the six domains considered in the context of the StepUp2ICT project.

In **Belgium**, respondents were asked about the importance of ICT skills. 61.3 percent of the respondents listed using the internet during the learning process, 41.9 percent referred to using specific equipment, 61.3 percent referred to using ICT in learning (although some jotted a question mark next to this item), and 64.5 percent listed multimedia as important. Participating in (online) professional Communities of Practice or Peer Learning Communities lags behind: only 25.8 percent of respondents ticked that box. When asked in which domain (phase) of the teaching process they actually use ICT, respondents indicated the following: 64.5 percent "sometimes" use ICT in the planning of the training content. They refer to templates. 64.5 percent "seldom" use ICT in the assessment of needs of their learners but 51.1 percent would like more training in this domain. 32.3 percent "sometimes" use ICT in designing training content. 71 percent "often" use ICT in developing training manuals and handouts. They refer mainly to MS Word and MS Powerpoint. Only 25.8 percent are interested in more training in this domain. 77.4 percent "often" use ICT in the delivery of the course, probably facilitated by the availability of an online learning platform available to all students including those who do not own a computer (in the Open Learning Centres each adult education institute is required by law to offer computers to students). Also, most classrooms in the centres for adult education have beamers and interactive whiteboards. The latter are important candidates for further training (64.5 percent). 77.4 percent "always" use ICT in the assessment of the quality of the training course. It becomes clear that ICT is considered important by adult educators in Flanders; adult educators are not equally familiar with the use of ICT in all domains (phases) of the teaching and learning process; the number of tools (websites, apps, platforms) used by adult educators is fairly limited. Only very few actively explore 'what's out there'; even of ICT-tools that are used, only a small part of the potential is actively used.

In ***Italy*** almost all respondents considered using ICT in learning (subject -specific ICT use: tutorials, simulations, etc.) important, followed by using the internet in the learning process (e.g. how to create websites/ home page, video conferencing, etc.) The areas in which the respondents would like to get more training are: ICT use in the evaluation of the training results and assessment of the quality of the training course (59.26 percent); ICT use in the delivery of the courses (51.85 percent); ICT use in the planning of the training content (48.15 percent). The most used ICT tools are the internet, PC, e-learning platforms and interactive whiteboards. They also use social networks, Whatsapp, Microsoft Office, videos and various software.

In ***Lithuania,*** the percentage of "often using ICT" in each area is: 74.9 percent use in designing the training content; 63.16 percent use in planning the training content; 57.21 percent use ICT in delivery of the course; 49.4 percent use in developing training manuals, handouts, and exercises. In planning of the training content, the Lithuanian participants would like to be able to use various virtual environments, such as Moodle, open educational resources, digital learning platforms, special learning applications, Google Apps, etc. In the needs assessment, the survey participants would like to be able to use digital questionnaires, digital needs assessment tools, Google Apps, etc. In designing the training content, adult educators from Lithuania would like to be able to use open educational resources, Moodle, Google Apps. In developing the training materials, participants would like to be able to use Moodle, various graphical-textual tools. In delivery of courses, respondents would like to use digital devices, applications for learning, virtual learning environments. In evaluating the learning process, they would like to be able to use special digital tools. The areas in which the respondents would like to get more training are: ICT use in the evaluation of the training results and assessment of the quality of the training course (66.7 percent); ICT use in the delivery of the courses (61.5 percent); ICT use in the planning of the training content (47.6 percent); ICT use in the assessment of adult learners' needs (52.4 percent); ICT use in designing the training content (66.7 percent); ICT use in the development of training manuals, handouts, and exercises (57.1 percent). The most used ICT tools are the internet, PC, e-learning platforms and interactive whiteboards.



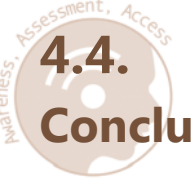
In ***Portugal,*** 93.5 percent of the survey participants use ICT for planning education and training contents; 82.2 percent use ICT for assessing adult learners needs; 94.2 percent use ICT for designing the education and training content. They use ICT the least for the assessment of adult learners needs (82.2 percent) and for evaluation and assessment purposes (82.5 percent), so these may be the two areas that merit particular attention in terms of concrete proposals on what can be done with ICT in the education and training course to be developed. When asked to specify the areas in which respondents would like to obtain further training in digital technologies, the answers show three areas that stand out: 1) the use in the development of activities and practical exercises; 2) the use in the design of training contents; and 3) the use during the implementation of the training.

In ***Spain,*** 94.7 percent of the participants use ICT often for planning the training content; 37.5 percent use ICT sometimes for assessment of adult learners´ needs; 72.2 percent use ICT often for designing the training content; 83.3 percent of the participants use ICT often for development of training manuals, handouts, and exercises. Participants show an interest to be trained equally in all six ICT domains. However, "designing of the training content" was the preferred domain, followed very closely by "delivery of the courses" and "development of training manual/handouts/exercises". The least interest was evidenced for "planning of training content", followed very closely by "assessment of adult leaners needs" and "evaluation of results/ assessment of quality" (both with the same representation).

Most of the respondents in ***Switzerland*** consider "how to use ICT in learning (subject-specific ICT use: tutorials, simulations, etc.)" as the most important ICT skill, followed by "how to use multimedia tools (digital video, audio equipment, etc.)", "how to use specific equipment (e.g. interactive whiteboard, laptop, etc.)", "how to use the internet in the learning process (e.g. how to create websites, video conferencing, etc.)". The ICT skill on "how to participate in peer learning communities or group work with other adult educators" is considered to be less important. Regarding the ICT use in the six competency areas of an adult educator, ICT is often used in "delivering the course" (100 percent), followed by "planning the training content" (82.35 percent), "designing the training content" (70.59 percent), "developing training manuals, handouts, and exercises" (70.59 percent) and "evaluating the training results and assessing the quality of the training course" (52.94 percent). On the other hand, ICT is little used for "needs assessment". The areas in which the respondents would like to get more training are: ICT use in the delivery of the courses (47.06 percent), ICT use in the assessment of adult learners' needs (47.06 percent). Regarding the most widely used ICT tools, respondents indicated both *HW technologies*, such as computer, tablet, network, beamer, interactive whiteboard, and *SW technologies* such as e-learning platforms (Moodle), applications to create and deliver the training content (Powerpoint, Video editor, Microsoft Word, YouTube, Web site, databases, MOOC etc), and social networks (Whatsapp, ResearchGate, etc.). In the future some respondents would like to use ICT to promote interaction and real-time feedback in the classroom, and Augmented and Virtual Reality tools.

In summary:

- The respondents in the partner countries stated that the three most important skills for an adult educator are: 1) how to use specific equipment; 2) how to use ICT in learning; and 3) how to use multimedia.
- This information, together with their preferences to be trained in ICT (relative to the six domains), should be taken into consideration for the development of the next outcomes of the project, especially in the preparation and delivery of the modularized training program.
- The participants affirmed that they are equally willing to be trained in all the ICT domains, but most notably in designing the training content, delivery of the courses, and development of training manuals/ handouts/ exercises respectively.



4.4. Conclusions and recommendations

The results obtained in all partner countries indicate that ICT competencies are considered very important to adult educators participating in this survey. In fact, a large majority of respondents agreed that digital technologies facilitate adult learning and indicated that they often used ICT in their practices of education and training. With respect to the other competencies, digital competencies are ranked third with more than a half of the answers. However, when asked about the role that digital technologies play in adult education in all partner countries, the vast majority perceive that ICT is very important or just important.

The survey results show that the lack of ICT skills is not considered a big issue, but it is considered, however, an important issue to enhance trainers' and trainees' competencies. Furthermore, the respondents recognize that they lack ICT skills and indicate that they would enhance their competencies, mainly in terms of improving their understanding of the use of ICT in the evaluation of the training results and assessment of the quality of the training course.

The respondents in the partner countries stated that the three most important skills for an adult educator are 1) how to use specific equipment, 2) how to use ICT in learning, and 3) how to use multimedia. This information, together with their preferences to be trained in ICT (relative to the six domains), should be taken into consideration for the development of the next outcomes of the project, especially in the preparation and delivery of the modularized training program. Participants affirmed that they are equally willing to be trained in all the ICT domains, but most notably in: 1) designing of the training content, 2) delivery of the courses, and 3) development of training manuals/ handouts/ exercises respectively.

In summary, for the design of the training program for adult educators and for the open activities (OER) to be developed, the main findings suggest that:

1. The andragogical potential of the wide range of digital tools available should be explored if an adult educator wishes to improve their use in his/her professional and andragogicalpractice.
2. The assessment of adult learning needs and the evaluation of education and training itself are the two areas that may deserve particular attention in terms of concrete proposals on what can be done, and how, with ICT tools.
3. The diversity of digital technologies referred by the adult educators and its strong linkage with online and Web 2.0 tools suggest that we can concentrate on creating a diversification of proposals of activities with this type of tools.
4. This diversification should depend not only on the different domains of action of the adult educator, but also on specific needs identified among the adult educators that will be candidates for the education and training courses.
5. The implementation of a prior diagnostic activity about the knowledge and skills of the adult educators before starting a training program may be a strategy to be included in the design of the training program itself in order to allow the necessary adjustments in each case.
6. The smaller percentage of references of digital communication tools suggests that in the design of training of trainers, special attention should be given to digital technologies that allow communication and interaction, either as a way of encouraging communication between the trainer and trainees, or as a stimulus to interaction and collaboration in virtual and online contexts among trainees.
7. With the same justification, also the incentive to use online platforms as support for training may be an element to be taken into consideration in the design of the training program of trainers to be created within the project.

05 Training domains

As referred above, in this chapter a description of each of the six training domains considered in the StepUp2ICT project and the digital competencies that adult educators should have or develop can be found:

1) Planning and coordinating a training,
2) Assessing training needs,
3) Designing training content,
4) Developing training content,
5) Delivering a training, and
6) Evaluating a training.

Planning and coordinating of training

Description

Planning and coordinating the training of adults has many dimensions, most of which are addressed in the following subchapters.

A typical job description of a training coordinator in adult education (including corporate settings) might list several of the following elements:

- Identify skills or knowledge gaps that need remedial training;
- Create an (annual) training plan for different target groups;
- Design and develop those training programs (outsource them, or develop in-house);
- Manage the training facilities and equipment;
- Decide on appropriate training methods (including but not limited to F2F/Blended/ Distance learning, traditional classroom formats, simulations, coaching and mentoring, on-the-job training, professional development);
- Use proven adult education principles and stay informed about new training methods and techniques (gamification, ...);
- Design, prepare and/or purchase educational materials;
- Involve experts in instructional design and in the subject matter of the training; when needed organise train-the-trainer sessions;
- Provide information to (potential) learners;
- Collect feedback from trainers and learners;
- Assess instructional effectiveness and determine the impact of training;
- Maintain a curriculum database;
- Maintain teaching and training records;
- Manage the budget for the training;
- ...

While some of those tasks might be assigned to a dedicated responsible person, most of the time a coordinator will still be in charge of observing the total picture. Training in the domain of the coordination of adult education is training in aspects of project management, even when the 'project team' is just a single person.

Digital Competencies

The main training project coordination competencies include:

- describing the scope and the phases of the training, including a statement of work to be done;
- developing a communication plan: who needs to know what, and when do they need to know?;
- dividing the training project into (small) tasks which can be assigned (also to yourself) and scheduled, thereby setting a baseline project plan;
- monitoring the training project progress against the baseline;
- identifying risks connected to the smooth execution of the training you are coordinating;
- Fortunately, many ICT tools can support these competencies.

Assessing training needs

Description

By needs assessment we refer to a methodological process where measurements and references/criteria are needed to make the right decisions to favour learning. Efficient use of the training needs assessment is necessary to achieve quality in education. Initial learning needs assessments should be utilized to guide adult learners in their learning process, verifying their knowledge, skills and abilities in order to establish the right starting point for training and also to provide motivation. Within this context, Information and Communication Technologies are useful tools to take advantage of important resources, such as time and educational materials.

There exist different kinds of assessment processes: normative (individual assessment is conditioned by its relative position with respect to the group), criterial (when using external references, for example educational objectives, external learning frameworks), and personalized assessment (the reference used to detect needs in one's learning progress/ abilities).

For the training needs assessment, one can use self-assessment, an assessment performed by the adult educator or a combination of both types. In the case of adult on-line learning, self-assessments become even more relevant to help the adult learner identify his learning level/needs. When using ICT for training needs assessment purposes, the following main options can be selected:

- Computer-based assessment: use of ICT resources at some of the stages of the process (preparation of the questions, forums, results report, etc.);
- Computer assisted assessment: with a completely automated process from the beginning to the end, covering both trainer and adult leaner tasks. In this case, it is particularly important to keep the andragogical approaches in mind, by not limiting the training needs assessment to the use of tests. For instance, the potentiality of the software available can be combined with other strategies, such as a portfolio, to collect information from the adult learner.

Under the constructivist approach, three main learning areas must be taken into consideration in the training needs assessment: conceptual (knowledge, comprehension, application, analysis, synthesis and evaluation), procedural skills, and attitudinal competencies.

After finishing the training needs assessment, it would be advisable to provide appropriate feedback to the adult learners, so they can become aware of/identify their learning needs. In addition, it is highly recommended to clarify/inform about what has been planned to cover those needs and how and when the necessary training will be facilitated. One important benefit of utilizing high quality feedback is that it acts as an effective motivational element.

Digital Competencies

- To detect the characteristics/peculiarities of the majority of the adult learners group, prior to the beginning of the course/training (knowledge, skills, abilities and personal attributes related to the learning contents planned), to adapt the teaching process when necessary.
- To know at the beginning of the training course which adult learners have learning difficulties, and what their needs are in order to carry out a work program with them.
- To inform adult learners about the needs detected for better performance, in order to engage them with their own learning process and encourage them for good achievement/ results.
- To be able to use ICT tools in order to identify the learners' needs, competency gaps and areas for improvement, plan targeted training and reflect on learners' achievements;
- To be able to enhance the diversity and suitability of needs assessment formats and approaches.

3 Designing training content

Description

Designing, planning and determining training contents consists of identifying learning resources and adequate methods (including ICT tools) to put into practice the planned training and enhance the participants' competencies.

Effective training content incorporates a variety of training strategies, taking into account:

- competencies to be acquired,
- participants' prior experience and knowledge,
- participants' learning styles,
- principles of adult learning,
- group size.

Planning and organisation of training content also includes:

a) Deciding which instructional methods will support learners in acquiring the competency and confidence to use their new knowledge and skills. Typical instructional methods include lectures, case studies, demonstrations, practice, games, role-playing, videos, self-reflection, debate, group discussion and simulations.

b) Designing the training content with the best sequence, using the data analysed.

Through the introduction and use of ICT there is a shift of the training process from teacher-led to learner-centred processes. Thus, the role of a digitally-competent adult educator is to be a mentor and guide for learners in their progressively more autonomous learning endeavours. In this sense, digitally-competent educators need to be able to design new ways, supported by digital technologies, to provide guidance and support to learners, individually and collectively, and to initiate, support and monitor both self-regulated and collaborative learning activities (European Framework for the Digital Competency of Educators - JRC SCIENCE FOR POLICY REPORT – 2017).

The usage of ICT represents an important advantage for trainers, which could help plan and design training contents in a more practical, innovative and fast way. Some major contributions of the usage of ICT in the training content design are:

- Reducing the designing time and accelerating the whole planning process (Saving time);
- Possibility to collect a large amount of information and to elaborate it in a fast and practical way (Efficiency);
- The content to be delivered is well organized and easy to access (Accessibility),
- The trainer improves his/her technological skills that can be used in other situations (Self-improving);
- Possibility to create a modern, innovative and more interesting pattern (Innovation).

Digital Competencies

The main objectives of the "training content design" section of the handbook are to present resources, in particular activities and tools that can be used to plan and organise the training content keeping in mind the various backgrounds, learning needs, levels, etc. of adult learners.

The resources will concentrate on developing the following competencies for adult education professionals:

- To be able to use suitable ICT tools for designing the training content, considering the specific learning context and the learning objective;
- To be able to use a specific ICT tool for designing and ideating the training content;
- To be able to design the training content with ICT tools and share the output with other adult educators.

4 Developing training content

Description

Learning materials are a necessary part of any program or activity that involves knowledge acquisition and retention. Depending on the learning objectives and length of the educational program, learning materials may include workbooks, training manuals, computer-based lessons and audio-visual aids. The best approach to developing learning materials is to start by examining the training plan and available resources.

When using ICT for the development of learning materials, the following options can be selected:

- Internet-supported learning: supporting traditional activities with electronic learning materials (e.g. examples, presentations, films).
- Web-enhanced learning: expanding traditional activities with new learning content (e.g. solving additional tasks online, discussing issues mentioned during the teaching and learning, forum discussions).
- Blended (mixed) learning: e-learning elements are an integral and inseparable part of the entire educational process.
- Online (e-learning) learning: the entire educational process is carried out via the Internet; direct contact with the educator is limited to online.

All the models assume strong commitment of an educator to the development of the content on the subject for the teaching-learning process. Successful integration of ICT into teaching and learning depends on the educator's ability to structure the learning environment and design engaging learning materials in ways that merge learner-centered approach with the advantages that ICT offers.

Digital Competencies

ICT use in developing learning manuals, handouts, and exercises:

- To be able to identify, assess and select ICT tools for the development of learning manuals, handouts, and exercises;
- To be able to consider the specific learning objective, context, andragogical approach, and learner group, when using ICT tools;
- To be able to prepare, edit, change and improve digital content (texts, tables, images, photos, audio records, digital tasks, games, interactive activities, etc.);
- To be able to use ICT tools in preparing integral and complex tasks aiming at learners' own knowledge creation or in creating diversified production of contents, solution of real problems and communication;
- To be able to respect possible restrictions to using/re-using/modifying ICT tools in developing training manuals, handouts, and exercises.

5 Delivering a training

Description

During the delivery of training, the trainer implements all the decisions made during the planning phase. Digital devices, resources and tools are not just intended to support, but mainly to foster and enhance new formats and methods of training. This in turn fosters and enhances the training and learning process in itself, thereby adapting the training process to the technological development of our days and contributing to the continuous digital development of trainers in general.

In fact, considering the enormous andragogical potential that digital technologies have in the process of teaching and learning, the use of ICT is a major contributor to the various identifed areas of the action. The use of ICT contributes to:

a) orchestration and management of the effectiveness of training interventions, promoting active engagement of trainees (training);

b) promotion, management and enhancement of the communication and the interaction with or among trainees, within or outside the training sessions (communication);

c) fostering and enhancing trainees collaboration in the process of learning and of creation of knowledge (collaboration);

d) guidance and assistance for trainees, individually or collectively, and monitoring their learning process, enabling them to reflect on and regulate their own learning (guidance).

Digital Competencies

- To be able to use ICT tools to support the delivery of training courses;
- To be able to structure the training course so that different ICT activities jointly re-enforce the learning objective;
- To be able to set up learning sessions, activities and interactions in a digital environment;
- To be able to structure and manage content, collaboration and interaction in a digital environment;
- To be able to use ICT tools to respond promptly to learners' needs, to interact and guide learners, to remotely monitor learners' progress;
- To be able to reflect on the effectiveness and appropriateness of the ICT strategies chosen;
- To be able to experiment with and develop new formats and andragogical methods for training.

6 Evaluating a training

Description

This domain refers to training evaluation in two different contexts:

a) assessing student learning;

b) evaluating the quality of the training program.

Assessing student learning means verifying if students have reached the expected learning goals. One challenge of effective assessment is to ensure that there is a close alignment between the learning goals and the assessment activities used to evaluate whether learning goals have been achieved. To this purpose it is important to monitor students' learning progress during the training course (formative assessment) and not only at the end (summative assessment). In-course assessment techniques systematize the process of getting useful and timely feedback on student learning and allow trainers to adjust their teaching to help students learn.

Evaluating the quality of the training provides information about the usefulness, appropriateness and effectiveness of the training programs. It is useful to provide feedback to the trainer, giving suggestions for changes and improvements in the training methodology and content.

Training evaluation is conducted by collecting data from the training participants. There are different approaches to training evaluation. A widely used approach is the traditional Kirkpatrick's model (1976) based on four levels of evaluation (reaction, learning, behaviour and results outcomes) or its more recent extensions such as Kaufman's model, which splits level 1 into "input" and "process".

The usage of ICT in this domain provides an important added-value for trainers, who could assess student learning and evaluate the quality of the training in a more efficient, effective, accurate, engaging and innovative way.

Some major contributions of the usage of ICT in the training evaluation domain are:

- easing the process of creating and reusing assessment material by trainers (efficiency),
- getting timely and specific information on student learning progress (efficiency, accuracy),
- providing timely and specific feedback to students (effectiveness),
- promoting interaction and collaboration among trainers and students in the classroom (engagement, innovation),
- increasing engagement and motivation among students (engagement).

Digital Competencies

- To be able to use ICT tools to monitor the training process and obtain information on learners' progress;
- To be able to analyse and interpret available evidence on learner activity and progress, including the data generated by the ICT tools used;
- To be able to provide personal feedback and offer differentiated support to learners, based on the data generated by the ICT tools used;
- To be able to use ICT tools for the overall evaluation of the quality of training, analyse available evidence and reflect on it.

06 Learning activities with open digital tools

This chapter includes the description of the training activities created for each domain to stimulate and promote the use of digital technologies in adult activities settings. These activities should be seen as examples of what can be done by adult educators in their practice. In the Chapter 7 it is offered the description of the tools used in the six different activities presented here.

In the Adult Education field Open Educational Resources (OER) can offer the opportunity for change in training and learning processes if we are able to encourage educators to explore and use digital technologies to engage in learning. That is what we are applying in the context of this project. In fact, since new skills are required for planning and using new learning environments with the potential of digital technologies, in the StepUp2ICT project the main idea is precisely to create and propose some learning activities that make use of the information and communication technologies for the different areas of intervention of the adult educator.

According to OER Commons, OER "are teaching and learning materials that you may freely use and reuse at no cost, and without needing to ask permission. Unlike copyrighted resources, OER have been authored or created by an individual or organization that chooses to retain few, if any, ownership rights." (https://www.oercommons.org).

Under this philosophy, any educator can freely use available pedagogical materials, and also recreate, reformulate or blend it with other materials and pedagogical resources. By actively participating in this co-creation process, each educator can add something new, and also adapt materials to specific contexts and groups, thus contributing to a richer and more meaningful education and training for all.

Breakdown of a training

Domain: **Planning and coordinating a training**
Time/Duration: 4 sessions of 2-2.5 hours each (1-1.5 days)
Difficulty level: Demanding
Tool: ProjectLibre
Equipment: Computer, productivity software, ProjectLibre (or equivalent software), internet connection

Brief description

In this activity, you will breakdown the training (a programme, a course…) you need to plan (or coordinate) into small tasks and you will (re)organize those tasks and assign resources to them.

Added value

Planning and coordinating a training in Adult Education can be fairly complex. Using project management software allows you to track and to manage smaller (a course, a lesson…) but also larger projects (a programme, moving a programme online). The software allows you to zoom in (micromanagement) and to zoom out, keeping an eye on the total picture. The software allows you to keep track of progress and to investigate the effect of changes (deadlines, availability of resources…).

Learning what?

- To create a breakdown of the training project into small tasks.
- To assign resources and other properties to each task.
- To create reports on the training project which can be shared with others.
- To update the planning when necessary.

Detailed description of the learning activity

Session 1

In the first part of the activity we can start using sticky notes on a blackboard or a wall (if available, software such as Simply Sticky Notes might be used as well). Following the structure of the StepUp2ICT project, the participants will be asked to start to break down a different aspect of the training: Needs Assessment (identifying the training needs of the participants), Design (selecting the training content), Development (creating training manuals, handouts, and exercises), Delivery of the training (instruction for successful training) and Evaluation (evaluating the training and assessing the participant's learning). A different colour can be used to breakdown each of the phases into greater detail and yet another to dig even deeper (e.g. to the level of 'send email to participants to present the trainer').

The number of levels that are described will obviously depend on the complexity of the project, the time available, the number of participants, etc.).

Session 2

Study of a ProjectLibre file in which the trainer has already entered the main elements of the training. This file is distributed to the participants and is used to explore the ProjectLibre functionality and user interface. The participants in the training add the elements from session 1 to the file. Markers, links (precursors and successors), and resources are explained and implemented in the project file. Different types of reports are presented. Bloom's taxonomy verbs (provided as a handout or lookup by the participants) are used to describe the tasks. Risks, communication are added to each of the lines (when appropriate).

Detailed description of the learning activity (cont.)

Session 3

The participants in the training construct a breakdown for one of their own training events. Here as well, the structure the StepUp2ICT project (Planning, Needs Assessment, Design, Development, Delivery of the training and Evaluation) might be a good starting point. The breakdown is coded in ProjectLibre. As in the precedent session, special attention is paid to using Bloom's taxonomy verbs to describe the tasks. Participants report on their breakdown and learn how to optimize the critical path (while staying realistic about different scenarios). Risks analysis, etc. is added to each of the lines.

Session 4

It is suggested that the files created in sessions 2 and 3 are used and updated by the participants throughout the remainder of the training. In this session, there could also be a good opportunity to reporting on and optimisation of the critical path and to present and discuss together the different outputs.

Steps

1. A breakdown of the training activity into tasks, using Bloom's taxonomy to describe the tasks.
2. Exploring ProjectLibre using a file prepared by the trainer, and adding the outcomes of session 1 to the file using the software.
3. A breakdown of one of the participants' 'real' training activities in ProjectLibre (each participant for himself or herself). Trainers and other participants provide support.
4. Reporting on and optimisation of the critical path and presentation and discussion of outputs.

Notes & link to the tool

ProjectLibre is a free tool available for download at https://sourceforge.net/projects/projectlibre/.
While we are using a standalone desktop version of ProjectLibre in this training, ProjectLibre Enterprise Cloud will be released soon bringing cloud features to the program (compare: GoogleDocs vs. a standalone wordprocessor). As a cloud based program, ProjectLibre Enterprise Cloud will be comparable to MS Project Server. This cloud based version will, however, not be for free.

Tips & tricks

It is important that the planning of the training designed (planned, coordinated, etc.) by the participants remains realistic. The software tends to 'shrink' the time needed to complete tasks and series of tasks. Sufficient emphasis must be on how to use the software to accomplish this.

Other software such as MS Project can also be used in this training activity .

Security & digital identity

There are no known security issues with ProjectLibre. As the program runs standalone on a desktop, there are no digital identity issues. An email address is needed to install the software. We recommend to create a gmail of other address specifically for this purpose.

Creating a quiz with corrective feedback

Domain: **Assessing training needs**
Time/Duration: 3 sessions of 2 hours each
Difficulty level: Demanding
Tool: Questionmark
Equipment: Computer/multi-touch device; Internet connection

Brief description

Taking as a reference the Bloom´s Taxonomy you will create a quiz with corrective feedback following a series of questions (eighteen in total), upon completion. Through this quiz you will assess the knowledge that adult learners have about one particular subject of your choice connected to your field of expertise.

Added value

This kind of tools offers a lot of possibilities to boost self-assessment processes, according to the competency levels manifested. Moreover, Bloom's taxonomy has been typically used to inform or guide the development of assessments, curriculum, and instructional methods such as questioning strategies. Therefore it is a very appropriated the use of this logical framework to develop this activity as it is related to the learning/ teaching goals in educational and academic contexts.
It is also an innovative way to support the activity and allows the co-creation and effective organisation of data and feedback.

Learning what?

- Creating questions/ items using ICT.
- Applying stimulus (images, audio or video).
- Choosing from 20 different item types according to the objectives.
- Defining feedback at question and topic levels.
- Reviewing and try out questions.
- Setting time limits for the assessment.

Detailed description of the learning activity

Stage 1: Planning

Start the activity by focusing in a real adult learner's class that you work with. Please, focus on a subject that you teach and take into consideration their curriculum framework of reference.

Stage 2: Definition of the assessments questions/quizzes.

Once you have decided on the particular learning goals to be approached, you must define eighteen questions to explore the adult learners´ needs regarding to the particular training that you will perform. The questions must be structured/levelled according the Bloom´s taxonomy. Please, prepare three questions for each level: Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation.

Stage 3: Using Perception tool to create the training needs assessment contents.

You must register the free trial first, in order to use the tool. Before doing so, you must be interested in exploring the samples provided through www.questionmark.com page or you might sign-up for webinars. It would be necessary to clarify the meaning of every Bloom´s Taxonomy level by including a description and/or examples before the question/ exercise used for the assessment. Different item types should be used such us drag-and-drop, explanation screens, hotspot, matching, multiple response, etc. (at least eight different types). Remember to include stimulus like images, audio or video.

Stage 4: Giving Feedback

Please prepare the feedback that will be provided at a question level, when applicable. Also a score per outcome should be provided to the adult learner at the end of the quiz, by using for instance percentages or graphics .

Steps

1	2	3	4	5	6	7
Planning the activity: setting the target group, the competency level, the training intended (objectives, contents), etc.	Review and description of Bloom´s taxonomy (drafting examples for the different levels).	Development of the questions/ quizzes.	Become familiar with Perception tool. Exploring its possibilities (available on the website).	Registration for using the tool (free trial).	Selection of the different item types to be used. Desktop research to identify appropriate images/videos, etc.	Designing the feedback.

Tips & tricks

When developing the items for the quiz, remember to write them in such a way that they are fair, valid, and reliable. For achieving it, you must avoid trick questions, confusion and misleading. In order for the items to be valid make sure that they are specifically related to the objectives of the assessment and also are adapted to the level of knowledge of the stakeholders. In order to be reliable, the items need to reduce the possibility of guessing.

When developing the items you can use the following structure: question/ quiz, choices/ possible responses, score for each choice, and feedback to provide guidance to the learner, where applicable.

Please take into consideration the characteristics of well-written items/stimulus:

- Clearly described.
- Concise.
- Positive phrasing.
- Avoid jargon.
- Avoid testing multiple pieces of knowledge in a simple question.
- Similar length. As short as possible.
- Avoid keywords from the stimulus.
- Avoid grammatical cues/ inconsistencies.
- Reduce the possibility of guessing as much as possible (yes/no answers increase that possibility). Advisable to provide 4 possible answers when using closed-ended questions.
- Focused on assessing knowledge abilities about the subject matter and not about language skills.

It is desirable that someone else reviews the quiz in relation to its spelling, grammar, accuracy, readability, and interpreting.

Notes & link to the tool

Questionmark is a software tool which allows measuring knowledge, skills and attitudes. It enables to author, deliver, and report on tests, quizzes and surveys for pre-course test and needs evaluation (among others applications). Questionmark training solution is under different trademarks with similar features and some updates (Perception, OnPremise, OnDemand). This is not a free tool but you can get a personalized demo and a free 30-day trial
www.questionmark.com
Perception 5.7 Install Guide:
www.questionmark.com/content/questionmark-perception-57-install-guide

Security & digital identity

Questionmark incorporates many security features to ensure that Perception's assessments can be run in a safe and secure environment at work or at home:
www.questionmark.com/es/content/a4-security

It also offers advice for security using the tool:
www.questionmark.com/content/perception-security-recommendations.

Create a mindmap to design your training content

Domain: **Designing training content**
Time/Duration: 2 sessions of ±1:00H
Difficulty level: Intermediate
Tool: Mindmeister
Equipment: Computer desktop or mobile device; Internet connection

Brief description

In this activity, you will create a Mindmap. This supports the adult educator to visualize the training content needed/to be created to achieve the foreseen learning outcomes. Once finalized the mindmap can be shared with colleagues to create similar content in line with all learning objectives of a course.

Added value

Creating a mindmap to plan the design of training content allows the educator to have an overview of every single piece of content.

An online mindmap allows to quickly collect and organize the content and to share information with different targets. Digital technologies make this process much faster and easier, as it allows users to use different functions in order to have a big picture of the training content that an adult educator may want to develop.

Learning what?

- To create an online mindmap
- To integrate different elements (links, texts, documents, images) in the mindmap
- To share information with peers.

Detailed description of the learning activity

Start the activity by reflecting on which specific learning outcomes you want to focus on to design the training material and to identify one or maximum two specific learning outcomes. It is important to have a clear idea of what you want to achieve by creating the training content.

As a second element in relation to the learning outcomes you should identify exactly what the learner needs to take away from the learning experience and why he/she needs to acquire the information in the first place.

Now, you can sign-up on Mindmeister to start creating a mindmap. Click on “New mind map”, choose a theme and write down the name of the main topic at the centre of the map. Define the main key points connected to the topic which the learners should acquire.

In order to define the correct design elements, gather the learning material for each key point, by introducing links, images, documents, etc. in the mindmap.

At this point, decide on the multimedia elements you would like to incorporate in your training content.

Now, move around the elements in the mindmap to define a “natural” sequence of the different key points and related activities you have foreseen.

Once you have finished, click on “share” at the bottom left side of the screen and insert the email addresses of the peers with whom you would like to share your mindmap

Steps

1	2	3	4	5	6
Reflect on specific learning outcomes and learners' needs.	Familiarize with mindmaps, Mindmeister and different functions.	Set the specific topic of the training design.	Collect learning material.	Design a mindmap with key points in the sequence of delivery.	Finalize the mindmap, share with peers and discuss different topics.

Tips & tricks

Before starting the activity, ensure that the adults have an email account so that they can subscribe to the application.

Encourage the trainees to be as precise as possible and to keep the ultimate results that they need to achieve in mind.

Notes & link to the tool

Mindmeister is a free tool and is available online at www.mindmeister.com

Security & digital identity

All mindmaps created within Mindmeister are private until the user chooses to publish them and make them public. Please remind the user to quote the authors or to check the copyright of the material used to create the training content.

Presenting learning material in digital lesson format

Domain: **Developing training content**
Time/Duration: 3 sessions of 2 hours each
Difficulty level: Demanding
Tool: Moodle
Equipment: Computer/multi-touch device; Internet connection

Brief description

This activity presents how to deliver a learning material in lesson format to present information as a series of HTML pages to the student who is usually asked to make some sort of choice underneath the content area.

Added value

The Lesson Module of Moodle can be adapted to a wide range of activities, not all of them have to be graded. Also, this activity has more advantages such as the possibility of self-directed learning of a new topic, applicability for different learning styles, including role-play, simulations/decision-making exercises, interactive fiction, differentiated revision guides. All of these features make learning path more attractive and engaging.

Learning what?

- To set up a lesson.
- To set up the content of the lesson.

Detailed description of the learning activity

To create a lesson go to your Moodle course and turn editing on, add an activity or resource to the section where you want the lesson.

Under the appearance tab, name your lesson, and then choose your maximum number of jumps or answers by selecting the dropdown for the maximum number of answers. Set this value as needed. This number can be changed later if needed.

Make any further changes you need to the settings and click save and display.

You will then be taken to a page asking what you would like to do, choose the type of page that you would like to create to get started.

When editing a page, you will have to give that page a title, which will show up in the tab for the page.

The next piece is a HTML editor, where you can format images or texts, embed videos or link to other sites.

Next, name your jumps or answers. Here you can change these sections to HTML by selecting that option from the dropdown, saving and reopening the section. HTML allows to use images, formatted text, links, etc. in your answers.

Once you have filled in this content, save your page.

You will be taken to the lesson editing page, where you can add more content or questions.

Once you have completed your pages, return to the top of the lesson editing page and edit your pages. With the jump dropdown, select the page title for the page to where you would like each button to jump. If you would like to end a branch, choose the "End of Lesson" option from the dropdown.

Once all of your jumps are set, your lesson should be ready

Steps

1. Divide the lesson into a few logical and equal parts, each of which may end with a question about that part.
2. Develop questions for each lesson part.
3. Plan a further learning path for correct and incorrect answers.
4. Sign up to the MoodleCloud.
5. Set up the settings of your lesson.
6. Add the content and questions to the lesson.
7. As in Moodle teachers and students have different roles, it is useful to view and check out the created lesson in a student's role.

Tips & tricks

When designing a lesson, it is advisable to split the lecture material into small even parts - large text distracts the reader.

It is recommended to ask questions that indicate whether a student has perceived a part of the lecture he/she has read out. The questions should not be confusing nor very complicated.

It is always good to include an analysis of the average duration of the lecture, as it allows a student to plan his/her time and evaluate possibilities.

Notes & link to the tool

Moodle is offered in a variety of pricing plans, including a free version. To use a free version, the adult educator may need a Moodle partner or internet service provider (ISP) to host the Moodle site. In addition, there is an opportunity to create learning courses on MoodleCloud (https://moodlecloud.com/), which does not require installation or upgrading.

Security & digital identity

To be able to use the MoodleCloud hosting services, teachers and students have to receive an account.

There is no limit to the age of students, but every user must comply with the terms and conditions specified.

For more information read "Terms & Conditions of Service" (https://moodlecloud.com/app/terms).

Keeping a digital diary about the course training

Domain: **Delivering a training**
Time/Duration: 3 sessions of ±1:00H
Difficulty level: Intermediate
Tool: WordPress
Equipment: Computer desktop or mobile device; Internet connection

Brief description

In this activity, we will create a weblog using the features of WordPress. The central idea is to provide trainers (and trainees, afterword) with the competence to create, share and comment online content, encouraging them to keep a digital diary about the training sessions and, by this way, to develop a feeling of (virtual) community around the group.

Added value

In a training context, the implementation of activities characterized by dialogue and reciprocity (collaborative learning) can be promoted and fostered by the creation of weblogs. In fact, the creation and management of a weblog allows to maintain continuous communication among learners, fostering the feeling of virtual community among the group of trainees.

Recognizing the importance of interaction with others and the importance of feedback about their findings, opinions and achievements, this strategy could be used as a way to share the learning activities and the work done with other people interested in the subject.

Learning what?

- To create and organise an online content sharing space.
- To create multimedia texts with hyperlinks.
- To produce a digital diary.

Detailed description of the learning activity

Do initiate the activity by questioning trainers (or trainees) about the informative and interactive aspects of the Internet, speculating how the production and dissemination of content on the network takes place.

Take the opportunity to present weblog examples, discussing with them the subjects chosen by the authors, their general appearance or visual template and the forms of interaction allowed to the readers.

At this point you can ask them to propose a suggested title for the weblog and ask them to check if there are already other blogs with the same name.

To start creating the online sharing space, you must register and create a blog address in the following format: <blogname.wordpress.com>.

Once registered, you can adjust the look and the blog structure. In order to do so, you can choose a theme by going to the "Appearance" or "Presentation" menu, in the "Themes" option.

The next step will be to invite each of the trainees to this common blog. Also they must register and write their contributions.

Finally, after the visual and the structure are defined, it is really a matter of writing and publishing the first post and inviting all the trainees to do the same. For example, they can each start by introducing himself or herself

Steps

1. To become familiar with the world of WordPress weblogs.
2. To reflect on the topic you would like to develop.
3. To sign up for the application and start to create a blog.
4. To set the overall look by choosing a template.
5. To define which pages are static and which is the main navigation.
6. To create static pages and to check the structure meanwhile created.
7. To write the first "post".

Tips & tricks

Before starting the activity, make sure that each trainer (trainee) has an email account, so that they can subscribe to the application.

It can trigger new ideas and raise even more interest in the exploration of the resources that this service offers, asking some initial questions, such as: How should be written in this type of online sharing spaces? What kind of resources can be used in a weblog? Do we let our readers comment on what we write? etc.

There are several video tutorials on the Internet on how to create a weblog using WordPress. If you find it interesting and necessary, start this activity by presenting some of these resources.

Encourage trainers to use the "hyperlink" feature to expand the content displayed by linking to images, other webblogs, and websites with materials that enrich the subjects covered.

There are some other freely available tools that can be used for the same goal:
Blogger: http://blogger.com; Weebly: http://weebly.com;
Wix: http://wix.com.

Notes & link to the tool

Wordpress is free and is available online at http://wordpress.com

Security & digital identity

If necessary, explain how to customize the WordPress profile, and guide the trainers on how to check out the Privacy and Security Policy for the service.

Weblog posts can be open to comments from visitors if that option is marked during the weblog customization.

Remember that images and other published content must be free of copyright and properly referenced.

Create a competition in the classroom

Domain: **Evaluating a training**
Time/Duration: 3 hours in 2 sessions
Difficulty level: Demanding
Tool: Socrative
Equipment: Desktop or portable computer; mobile devices; projector; Internet connection

Brief description

In this activity you will learn how to create a competition for learner teams based on quiz answers using Socrative.

Added value

It is very important to be able to visualize learner understanding. This activity is useful for building assessments and seeing results in real-time. From the learner point of view this is also an engaging way to learn.

Learning what?

- To create an assessment quiz.
- To create a competition by delivering the quiz to students.
- To analyse the results.
- To interpret and evaluate the results.

Detailed description of the learning activity

This activity allows you to define a quiz, launch a competition for the students' team in the classroom based on that quiz, monitor the answers in real-time and get a report of the results at the end.

At the beginning a planning step is needed to design the quiz, which means choosing the topic, the question typology and defining questions and answers. In this planning phase you also need to define the target group and the number of student teams.

At the same time you need to get familiar with the Socrative tool to create quizzes and competitions. You can use the online help on the tool web site or a YouTube tutorial (e. g. https://bit.ly/2tyZrjD, https://bit.ly/2hp7FKH).

In order to be able to use the tool, firstly you have to create a free account as a teacher at https://b.socrative.com/login/teacher/#register/info and secondly to sign in.

Now you are ready to create a quiz: select "quizzes" from the top menu, and then click the "add quiz" button and "Create New"; then follow the instructions to add questions: for each question select the typology (multiple choice, true or false and short answers) and insert contents; at the end "save and exit".

Back to the main menu, select the "launch" item and then activate the "space race" button.

Choose the quiz you have just created and adjust settings: number of teams, shuffle options, etc.

Then start the race, share the unique code to allow students to join your room by logging at https://b.socrative.com/login/student/ to answer the questions.

Click "finish" to close the competition when all the participants have finished the activity and click on "view chart" to visualize the results .

Steps

1. Plan the activity, by defining the quiz and the target group.
2. Get familiar with the tool.
3. Create a free account for the teacher in Socrative (https://b.socrative.com/login/teacher/), if not done yet.
4. Login in and create a quiz.
5. Launch a "space race" by choosing the quiz and the race setting.
6. Ask students to enter into your public room and answer the questions Visualize the results.

Tips & tricks

This activity requires at least two distinct phases: the first one is the creation of the quiz (creation phase) and the second one is the competition delivery (launching phase) that takes place in the classroom during a face-to-face lesson.

It can be useful for you as a teacher to create a library of quizzes that can be used later in a race.

Before the real competition, in order to verify that everything works well, once you have launched the race, it is convenient to simulate at least two dummy students joining the teacher room (https://b.socrative.com/login/student/) from other devices in such a way that you can get familiar with monitoring the progresses in real time.

Notes & link to the tool

Socrative is available online at https://www.socrative.com/
There are two licensing options for teachers: free, with limited functionalities, and PRO, with complete functionalities.
For students it is always free.

Security & digital identity

To be able to use the Socrative services teachers need to get an account or connect with their Google account.

Students can use the service only if they are at least 13 years old, or if they are under this age, with the consent of the teacher or a legal parent, according to the COPPA Privacy Policy (https://www.masteryconnect.com/socrative/COPPA-policy.html).

For more information read "Terms & Conditions of Service" (https://www.socrative.com/terms.html).

07 Online open tools used in the training activities

This section includes the detailed description of online open tools used in the training activities presented in the previous chapter. After a brief presentation, each tool underlines its andragogical value, accessibility, requirements to use the tool, security and privacy concerns to be attentive to.

socrative

WordPress

mindmeister

Questionmark

ProjectLibre™

moodle

ProjectLibre

Description
ProjectLibre is a free and open-source project management software system intended as a standalone replacement for Microsoft Project.

Features include:
- Compatibility with Microsoft Project
- Gantt Chart
- Network Diagram
- WBS/RBS charts
- Earned Value Costing
- Resource Histograms

Domain
Planning and coordinating a training.

Andragogical value
The value of ProjectLibre is not as much andragogical as it is managerial as it allows trainers to plan all aspects of their training, including the use of other more specific software with andragogical value.

Andragogical value for the trainers using the programme is that they can also use it in other not only professional but also personal domains to plan and coordinate (life) projects.

Requirements
ProjectLibre is distributed under a Common Public Attribution License. More information about the tool can be found on https://www.projectlibre.com/. An email address is needed to install the software.

Accessibility
ProjectLibre is a free and open-source project management software system available under Common Public Attribution Licence. It can be installed on Linux, Windows and OS systems.

ProjectLibre has been translated into Arabic, Chinese (Simplified), Czech, Dutch, English, French, Finnish, Galician, German, Hindi, Italian, Japanese, Korean, Persian, Portuguese, Slovak, Spanish, Swedish, Russian and Ukrainian.

The documentation of ProjectLibre is a community wiki that is accessible by logging into the website.

Security and privacy
There are no known security issues with ProjectLibre. As the program runs standalone on a desktop, there are no digital identity issues.

ProjectLibre is available at http://www.projectlibre.com

Question Mark

Description
QuestionMark is a software tool which allows measuring knowledge, skills and attitudes. It enables to author, deliver, and report on tests, quizzes and surveys for pre-course test and needs evaluation (among others applications).

Domain
Assessing training needs.

Andragogical value
By using this tool you can create, deliver, and report on assessments: learning outcomes, certify knowledge, skills and abilities, demonstration of regulatory compliance. Its full range of possibilities are: Pre/post course tests; Practice tests; Placement tests; Course evaluations; Needs evaluations and so on.

Requirements
The recommended hardware for QuestionMark will depend on the environment you intend to install it in. For details about the recommended hardware requirements, please refer to the install guide available on the website.

Accessibility
Access subject to subscription (payment software). Necessary to register for a free trial (maximum 30 days). Can be used in different devices: PCs, Smart phones, tablets, and other multi-touch devices.

Security and privacy
It has high level of security and privacy. Perpeption QuestionMark Secure Software acts as a player to display assessments securely with the look and feel of a browser. It allows a secure online test and quiz delivery via Windows, Mac, or Apple iPad. It incorporates many security features to ensure that assessments can be run in a safe and secure environment at work or at home. It protects the contents, the scoring algorithms, reduces cheating, and ensures the validity, reliability, and defensibility of the quizzes.

Question Mark is available at https://www.questionmark.com/

Mindmeister

Description
MindMeister is an online mind mapping tool. It allows users to capture, develop and share ideas visually. The tool can be used for brainstorming, note taking, project planning and event managing. External elements (such as images, links, videos, etc.) can be added to enrich the mindmap and the idea to be presented.

It can be used alone or in a team and is completely web-based.

Domain
Designing training content.

Andragogical value
MindMeister is a tool which can be used by adult educators to plan the learning process in lessons, courses and activities. It allows to visually represent the steps to the learners or other adult educators and to include all materials planned to be used within the process.

Requirements
MindMeister is a web-based tool that runs on any standard web-browser, on Chromebooks, iOS and Android devices.

To create and manage content with Mindmeister it is necessary to register with an email account and a password.

Accessibility
The use of Mindmeister is free. Users need to sign up and can use the basic features of the tool. There are additional fees for the use of advanced features. It should be noted that it is possible to pay "Educational fees".

Security and privacy
All content and information published in Mindmeister is kept private until the user decides to make it public. Users can decide how to publish the mindmaps and with whom to share the information.

More information on security policy can be found at: https://www.mindmeister.com/content/security.

Mindmeister is available at https://www.mindmeister.com

Moodle

Description
A great way to organise and provide learning content online is Moodle (www.moodle.com). Moodle is a free and open-source software learning Management system developed on andragogical principles. It is largely used in blended learning, distance education and the flipped classroom approach. Moodle stands for "modular object-oriented dynamic learning environment". It allows for extending and tailoring of learning environments and is used by numerous universities. Using Moodle, the trainers can provide all kinds of materials, curricula and even assessments for their participants.

Domain
Developing training content.

Andragogical value
Moodle's mission is to empower educators with flexible and powerful tools – tools that can enhance collaborative learning and improve educational outcomes.
Moodle has an abundance of features that can remove mundane tasks from an educator's schedule and give them more time to focus on creating engaging courses and activities for their students.

Requirements
MoodleCloud is a web-based platform, which allows getting a free site for up to 50 users - participants of a learning activity. The prices of larger plans start at $80 AUD/year. For registration, a user needs HTML-5 compliant web browser, an internet-connected desktop, laptop, Chromebook, mobile device, or tablet.
The Moodle software is a free and open source. Installation of Moodle on the own server requires a web server with PHP and a database. Installation package can be downloaded or obtained at Moodle via Git.
Alternatively, there is a possibility of trying Moodle on a personal computer with an installer package that includes all other software required to run (Apache, MySQL and PHP).

Accessibility
In both, MoodleCloud and standard Moodle, cases teachers should have their account. Having an account, the teacher can register all students to the course in case the course is not open. Otherwise, for enrolling in a course, the students should know the login details and the name or address of the learning course. In addition to the web-based version, mobile apps for Android, Chrome-based OS, iOS are also available.

Security and privacy
Moodle is a company that values its users' data protection and privacy rights. The company follows EU's General Data Protection Regulation (GDPR).
The Privacy Policy describes how visitors' information is collected, used and disclosed. For more details see: https://moodle.org/mod/page/view.php?id=8148

Moodle is available at https://moodle.org

WordPress

Description
WordPress is an online tool that lets us create and manage a weblog. Similar to a website, this tool allows us to create and share information online. With this technology, it is possible to present ideas/content in various ways (text, image, sound, video) and make external connections with hyperlinks.
Weblogs can be created and maintained by a single individual (personal weblogs) or by a group of people who share common interests (collective weblogs). There is a huge variety of weblogs, depending on purpose, content and target public.
The vast majority of weblogs have two complementary tools: the comments tool, that allows readers to add comments to the content (posts) published by the author; and the trackback, that allows posts to be referenced on other weblogs, making it easier to share and exchange information.

Domain
Delivering a training.

Andragogical value
Blogs have been widely used as digital information sharing vehicles, enabling the disclosure of a variety of subjects. Becoming an online content producer is something that is available to anyone with ideas to share.
In an educational and training context, it is a useful tool for the construction of activities characterized by dialogue and reciprocity (collaborative learning). In this manner, it can be an adequate andragogical strategy to promote and foster the feeling of virtual community among the group of trainees.
It is also a good way to show and share the learning activities and the work done by the participants during a training course.

Requirements
To create and manage content with WordPress (authors' view) it is necessary to have an email account with which the user must make its registration first.
The weblog content can be viewed (readers' view) through any device with internet access (desktop computer, tablet or smartphone).

Accessibility
The use of WordPress is free. However, depending on the type of contract, payment may be required for the activation of certain features.
A mobile application is freely available in case we want to create and manage content with more flexibility.

Security and privacy
The user's personal account may be public or private. It is important to verify the Privacy and Security Policy of the WordPress service.
Published posts may be open to visitors' comments if the author allows it.
Images and other published content must be free of copyright and properly referenced. The user can always delete all the information published on the weblog.

The WordPress service is available at http://wordpress.org

Socrative

Description
Socrative is a tool for fun, effective classroom engagement. It allows the teacher to instantly connect with students as learning happens and assess them with prepared activities or on-the-fly questions to get an immediate insight into student understanding.
Different activity types are available:

- designing and editing your own library of quizzes specifically for your students; saving them to your Socrative account to use at a later time;
- creating virtual rooms where to launch activities to instantly engage your students, whether they're in class or learning remotely;
- engaging your students by launching a quiz, a competition, receiving exit tickets, or asking a quick question for instant student feedback;
- visualizing student understanding in real-time as student results populate your screen;
- reporting student understanding to the class or individual student; you can quickly download, email, or transfer reports to Google Drive anytime.

It works on computers, laptops, tablets, and mobile phones.

Domain
Evaluating a training.

Andragogical value
Socrative provides an easy way for teachers to create quizzes and use them as a part of their classroom activities to identify the levels of student understanding on a real-time basis.
The tool supports teachers in the process of quiz creation and reuse. If used in the classroom, it allows them to get timely information on the student learning progress, analyse it and provide feedback to students. It also promotes collaboration and interaction among students and increases students' engagement and motivation.

Requirements
Socrative is a web-based platform accessible on Macintosh, Windows, and Chrome-based operating systems. All you need is an HTML-5 compliant web browser and an internet-connected desktop, laptop, Chromebook, mobile device or tablet. (More details are available at https://help.socrative.com/hc/en-us/articles/219985468-Socrative-Requirements.)

Accessibility
Two licence plans: free or Pro. Teachers need to register and get an account, while students just have to know the room name to access. In addition to the web-based version, mobile apps for Android, Chrome-based OS, iOS are also available.

Security and privacy
Socrative values users' privacy. The Privacy Policy describes how visitors' information is collected, used and disclosed. To register, teachers must provide an email and password; they may also provide additional optional information including the first name, last name, primary role, what they teach and where. Students are not required to submit registration information. (https://www.masteryconnect.com/socrative/privacy.html)

Socrative is available at https://www.socrative.com/

08 Glossary

EPALE, the Electronic Platform for Adult Learning Europe, provides an extensive glossary of adult education related terms. You can access it (in your own language) at https://ec.europa.eu/epale/en/glossary.

In this section, we elaborate on some terms which are of particular interest to this project.

Andragogy

Andragogy refers to the practice (and the study) of teaching and educating adult learners. It includes learning in formal, non-formal as well as informal context and focusses on what is specific to adults at different stages of their development (from younger adults to seniors) in different settings (personal as well as vocation or professional).

Educator (adult)

An adult educator is anyone who is structurally involved in teaching and educating adults. While 'teacher' (or sometimes more specifically 'professor', 'lector'...) is typically used in a formal setting, 'adult educator' is a broader term.

Learner (adult)

"Adult learners" refer to the broad category of people 16 and older (although the lower age limit of '16' is open for debate) in every possible learning situation. In specific contexts, other terms may be used: student, apprentice, amateur...

Needs assessment

In general 'needs assessment' refers to assessing the different needs of adult learners: needs to acquire specific competences, needs for an adapted learning environment, needs for emotional or technical support...

Open Education Resources (OER)

According the oercommons.org, Open Educational Resources "are teaching and learning materials that you may freely use and reuse at no cost, and without needing to ask permission". Beyond that, the concept and practice of OER represents a social and an educational philosophy centred on participation, co-creation and sharing as the foundation of engaged teaching and learning for sustainable and inclusive development.

PROJECT PARTNERS

Training 2000 (coordinator)
Training 2000 is an adult training organization, which operates in the Marche Region in activities of Adult Education and Training (LLP – continuous and permanent education), consulting and promotion of training activities in companies, training of trainers and teachers in schools. It organizes training courses in various sectors for adults. Website: www.training2000.it

Institute for Knowledge Management (IKM)
IKM, established in 1990, is a Belgian non-profit organization. The institute focusses on education for a sustainable future (People, Planet, Prosperity, Peace and Policy). It does so through innovative online and F2F teaching, tutoring and mentoring of young people and adults and through teacher training, curriculum (re) design, consulting and participation in projects.

Klaipeda University Continuing Studies Institute
Continuing Studies Institute being a structural subdivision of Klaipeda University, provides a wide range of life long education activities for different professional and social groups. Besides of a number of in-service training courses, other non-degree study programs, there are offered the Bachelor and Master degree courses in Andragogy (Adult Education). Website: www.ku.lt/tsi

Asociacion Insituto Europeo de estudios para la formacion y el desarrollo (DOCUMENTA)
DOCUMENTA is a non profit organization working in the field of "applied social research" since 1996, whose main aim is the introduction of a model of sustainable local development in the areas where it operates. Website: www.documenta.es

Instituto de Educação da Universidade de Lisboa (IE-ULisboa)
IEUL is one of the 18 Faculties of the Universidade de Lisboa, carrying out research in education, teaching activities, and service to the community. Research activities are a central element of its activity, combining fundamental and applied research in key domains of education and training, with particular emphasis in History and Psychology of Education, Educational Policy, Administration and Evaluation, Adult and Teacher Education, ICT in Education, and Science and Mathematics Education. Website: www.ie.ulisboa.pt

The University of Applied Sciences and Arts of Southern Switzerland (SUPSI)
SUPSI is one of the nine professional universities recognised by the Swiss Confederation. Founded in 1997 under federal law, SUPSI offers more than 30 Bachelor's Degree and Master's Degree courses, characterised by cutting edge education which unites classical theoretical-scientific instruction with a professional orientation. Great care is given to research, carried out in key sectors on competitively acquired projects with large European and national agencies or mandated by organisations and institutions. Website: www.supsi.ch

ACKNOWLEDGEMENTS

We would like to give special thanks to all the adult educators who, in the different countries of the consortium, replied to the questionnaire used for this study. It was with your precious help that the work here presented was possible. We would also like to thank all the participants in the pilot course held in Fano, Italy, for their relevant inputs for the improvement of activities with technologies for adult educators.

ISBN: 978-989-8753-51-9

Co-funded by the
Erasmus+ Programme
of the European Union