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Article

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Abstract: This paper exposes the initial part of a research consisting in a need analysis carried out by the Romanian partner in the Erasmus+ "Media Education for Aware Adults" project, regarding digital competences and media education of adult educators or trainers. After a short introduction on the subject, in the paper are presented the main findings of the desk research, and two focus group sessions, first one for identifying the necessary digital competences of adult educators, and second one for identifying the elements that educators need in order to adequately support adults in their learning process, especially in relation to the digital environment. The results of the initial research will lead to the development of the main intellectual outputs, namely the digital competences framework, handbook, online platform and training material on digital and media education. In their development will be taken into account, on the one hand, the needs identified in the initial research, and, on the other hand, the need for a sustainable approach to all activities, resources and outputs produced, as well as education itself, this goal being assumed through the project.

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1. Introduction

On 24 July 2020, the OECD published a report on digital learning for adults based on the analysis of the educational policies implemented by the various countries during the pandemic, entitled "The potential of online learning for adults: Early lessons from the COVID-19 crisis" [1]. As such, the crisis provided a powerful test of the potential of online learning, but it has also revealed its key limitations, including the prerequisite of adequate digital skills, computer equipment, and an internet connection to undertake training online, the difficulty of delivering traditional work-based learning online, and the struggle of educators and teachers used to classroom instruction.

The Action Plan for Digital Education 2021-2027, adopted on 30 September 2020, under the slogan "Resetting education and training for the digital age", highlighted the need for Member States to activate improvement paths to facilitate lifelong learning through the use of the digital networks [2].

The crisis forced everyone to rethink the way education and training are designed and delivered to meet the needs of a rapidly changing and increasingly digital world and has highlighted the need to strengthen the digital skills of educators, who do not have the tools to support adults in this change process, and enable organizations working with adults to broaden their educational offer and have new open source digital tools.

Could be found a lot of definitions for digital education, but, all refers to the use of creative application of digital tools, technologies, and the infrastructure required, facilitating and enhancing teaching and learning. It is sometimes used synonymously with e-learning, online learning, and technology enhanced learning (TEL). There are a lot of rationales for adopting digital technologies in education, such as: social, accessibility, pedagogical, vocational, sustainability, quality of service, catalytic, economic, reactive, opportunistic [3], but we can say that it is a must nowadays.

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Media education refers to the educational process of teaching and learning about the media to develop competences (including knowledge, skills and attitudes) related to media literacy [4]. Media literacy is the ability to access the media, to understand and critically evaluate different aspects of the media and media contexts and to create communications in a variety of contexts [5]. There are identified five essential competences to support media literacy in education that support people's active participation in lifelong learning through the processes of both consuming and creating messages: access, action/agency, reflection, creation, and analysis and evaluation [6].

For an individual, becoming a media literate, therefore being able to access the media, understand and critically evaluate its different aspects and contents and establish communications in different contexts, is nowadays an important prerogative to benefit from the numerous opportunities offered by the media environment. Not being, not possessing these abilities, on the contrary, constitutes a serious prejudice for the full realization of the individual and professional paths of each of us. Overall, promoting media education for a country means allowing its citizens to consciously participate in public life.

2. Methods

Today, more than any when, the digital skills are needed in all spheres of life, social or personal, in reference to work or leisure, in public and private sectors. Nobody has to feel excluded from access to formal and non-formal education and training on digital and media literacy. It is necessary that all citizens to be helped, in special that at risk of exclusion, like poorly educated adults, to improve their digital skills with the aim of including them in modern societies that face digital transformation.

Given that, according to official statistics, adults represent a group at major risk of exclusion due to lack or insufficiency of digital skills, it is very important that they benefit from training adapted to them and to the current times. For this, adult educators need, first of all, a professional training adapted to the digital age, not only from a pedagogical point of view but, above all, from the point of view of digital skills, digital resources and tools, and media education.

In this context, the implementation of a project which aims to develop a common framework of the necessary skills for adult educators and trainers to effectively integrate digital tools and media education into their localized contexts, can only be welcome and very useful. This paper is the result of an initial research, a need analysis, carried out by the Romanian partner in the Erasmus+ "Media Education for Aware Adults" (MEAA) project to develop this competence framework [7]. The results of these research carried out in six European countries will lead to the development of an "Adult educators/trainers Digital Competences Framework", that will comprise a list of methodological and pedagogical key skills and competences, that will be the basis for developing the next result of the project, the "Handbook - Media Education for Aware Adults". The handbook will be a valid support tool for adult educators from all over Europe who work whit adults and will provide basic knowledge and practical tools to be used, from a technical and pedagogical point of view.

The need analysis comprises three parts: a desk research, a current state of the art in Romania regarding the digital skills and media literacy of adult educators or trainers, respectively two focus group sessions, first one for identifying the necessary digital competences of adult educators, and second one for identifying the elements that educators need in order to adequately support adults in their learning process, especially in relation to the digital environment.

The following section presents the results of the research carried out, as they emerged from the analyses.

3. Results and Discussion

3.1. Desk Research Findings

Several areas related to this subject were explored, such as the existence of a legal framework or other regulations in the field, the existence of trainings leading to obtaining such skills, examples of good practices, tools or methods used, or articles of research on this topic.

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3.1.1. Existing legal framework, strategies, reports or other documents regarding the competences needed by adult educators/trainers to effectively integrate digital tools and media education

According with 2021 Eurydice Report - Adult education and training in Europe: Building inclusive pathways to skills and qualifications, Romania is between the countries with a relatively low proportion of low-qualified adults and, at the same time, low rates of participation of low-qualified adults in education and training, and that are mostly characterised by lower policy coverage. If in EU-27 around 40 % of adults (aged 25-64) may be seen as a group at risk of digital exclusion, in Romania the percentage is 69%, from which 47% adults who have low or no digital skills, and 22% who have not used the internet in the past three months, in 2019 [8].

Although Romania has widespread internet connectivity, steps are still needed to provide all the resources and an integrated framework for access to quality education in digital age. Today, an integrated approach to all aspects of digitisation of public services, including in education, is ensured by the provisions of the National Strategy for the Digital Agenda Romania 2020, from 2014.

Even though in Romania, the digitization of the education and training system has been a priority topic since 2016, with the launch of the "Educated Romania" country project by the Presidential Administration, so far Romania does not have a national strategy on the digitization of the education and training system. The Ministry of Education launched for public consultation, on 18 December 2020, the STRATEGY FOR THE DIGITALIZATION OF EDUCATION IN ROMANIA, entitled "SMART-Edu, Modern, Accessible School, based on Digital Resources and Technologies", which, however, remained at that stage.

Through the Order no 4150 of 29 June 2022 [9], the Ministry of Education approves and regulates the digital competences framework of educators, according with European Framework for the Digital Competence of Educators: DigCompEdu, translated and adapted into Romanian by EOS Foundation Romania and Coalition for Digital Education in 2020.

According to DESI 2022 [10], Romania's Recovery and Resilience Plan has the objective to address most of the country's digital shortcomings, the most substantial budgetary allocation being under component 7 - Digital transformation, although all components include some measures related to digital. Within Component 15 (Education), a budget of 1 129.5 million is dedicated to reforms and investments for the digitalisation of education. This includes reforms to set out the digital competence profile of the teachers and to assess digital competence in school examinations, as well as to ensure standards for equipping schools with technological equipment and resources for educational purposes online. Although Romania does not yet have a digital skills strategy, there are cross-cutting measures within the RRP, such as the adoption of the legislative framework for the digitalisation of education; the reform has to be complete implemented by 30 June 2024.

3.1.2. Existing training programmes in digital competences for adult educators/trainers

In the course of this research, no courses or training programme specifically designed for digital competences or media education of adult educators were identified. Also, no regulation has been found in this area. However, some programmes have been identified on digital education for teachers in general, or only for pre-university teachers, some of which are presented below.

In November 2020, EOS Foundation, Certipro Education and Microsoft Romania, launched a new training program, equivalent to 15 ECTS, for the development of digital competences among teachers and produced the methodological guide Designing Learning in the 21st Century, a resource aligned to the European framework of digital competences for teachers (DigiCompEdu). The course is online and free of charge and certification is done by taking an exam for a fee. The certification obtained, generically called Microsoft Certified Educator - MCE, demonstrates teachers' abilities to integrate digital technology into classroom teaching. The methodological guide describes six criteria for learning in the 21st century, which are important competences that teachers should consider when designing learning activities using digital technology. These extremely important criteria are: collaboration, communication skills, knowledge building, real world problem solving and innovation, using ICT for learning, self-regulating learning [11].

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For teachers at university level, but not only, there are, within universities, Teacher Training Departments. Within these departments, various professional training programmes are organised and certain examinations, equivalences and certificates of competence are taken.

Instructional designer is a Postgraduate programme of continuous training and professional development, accredited under the occupational standard COR 235904 and developed by the University of Oradea. It takes place during 180 hours of teaching activities, in the form of lectures, seminars, projects, laboratory work and practical activities, as well as 195 hours of individual study, and is awarded 15 ECTS. The main competences to be acquired by the trainees are: use of computers or computer systems (including hardware and software); identifying the educational needs of others, developing educational or training programmes or courses; observing, receiving and obtaining from various sources the necessary information; developing, designing and creating new applications, ideas, relationships, systems or products.

In Romania, in each county, respectively in the municipality of Bucharest, there is a Teaching Staff House, a related unit of the Ministry of National Education. They are resource centers aimed at training and professional and personal development of employees of the school education system in Romania, at pre-university level. In the educational offer of these centres there are different types of courses for teachers, accredited or authorized, free or with participation fee, held in classical, traditional, blended learning or online, covering different topics. Among the courses in the field of digitization of the education process are: Digital educational resources: making, using, evaluating; Online educational platforms and assessment tools; Development of teaching skills ST(R)E(A)M; Smart teaching with interactive Smart Board; Google teacher Net-time - Following creative, useful and safe use of the Internet by children.

In the context of the need for rapid adaptation during the Covid19 pandemic, a series of courses were offered to teachers, at a basic level, as an urgent necessity at that time. Here are a few: Digital education for teachers, a four-week course with 10 hours of training in two interactive training sessions and access to the community's digital education resources [12]; Challenges and solutions in digital education, Responsible use of digital educational resources are few examples of free courses for teachers to increase their digital skills, developed of an online platform [13].

3.1.3. Existing good practices, tools and methods used for improving the digital competences of adult educators/trainers

In the desk research were found some good practices examples and tools, developed through the implementation of some projects with Romanian partners, which can be used for improving the digital competences of the adult educators or trainers.

Building the capacity of Adult Education Trainers to comply with the European Framework for the Digital Competence of Educators (DigCompEdu) (DIGITA) is an Erasmus+ Strategic Partnership for Adult Education which involves eight private and public entities from seven counties: Italy, Cyprus, Romania, Spain, Serbia, Denmark and Greece. The main aim of the project is to facilitate the development of digital competences of adult education trainers and other personnel who support adult learners in diverse sectors and activities, based on the EC's Digital Competencies Framework. The main results of the project are: Curriculum and Open Resource Toolbox; Online learning platform and mobile application, shared on the six DigCompEdu competencies: Professional Engagement, Digital resources, Teaching and Learning, Assessment, Empowering learners, Facilitating Learners' Digital Competences; Training and Policy Adaptation Guide [14].

The Handbook Innovative Pedagogies: ways into the Process of Learning Transformation developed under an Erasmus+ grant and published by CIVIS, an European Civic University formed by the alliance of 11 leading research higher education institutions across Europe (from France, Greece, Romania, Belgium, Spain, Italy, Sweden, Germany, United Kingdom, Austria and Switzerland), provides an in-depth analysis of the approaches by which teachers are prepared to address pedagogical innovations in the classroom, for an effective learning environment and covers topics such as online and blended learning, experimental learning, gamification and inclusive education [15].

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Digi4SME – Digital Competences of VET Trainers for SME is an Erasmus+ funded project that aims to extend the digital competences of VET trainers providing training to SMEs, by applying and promoting the DigCompEdu framework. Through the project, implemented by seven partners, from Italy, Poland, Greece, Romania and Spain,after applying a Training needs detector, was developed a Training e-course, in English and all partners' languages, with six elementary skills across four of areas of the DigCompEdu: professional collaboration; creating and modifying digital resources; managing, protecting and sharing digital resources; collaborative learning; self-regulated learning; assessment strategies [16].

MyDigiSkills, created by Educating for an Open Society (EOS Romania), under a Creative Commons Licence by ALL DIGITAL from the DigCompSAT project of the Joint Research Council of the European Commission. The MyDigiSkills is an online tool that allows citizens to self-reflect on their digital competence using the DigCompSat. MyDigiSkills helps to a better understand the level of digital skills based on knowledge, skills and attitude in each of the five areas of the DigComp: Information and Data Literacy, Communication and Collaboration, Digital Content Creation, Safety, Problem solving. It should take around 20 minutes to complete, and is get a report on the levels of digital skills at the end. The test is available in 11 languages: Dutch, English, French, German, Italian, Latvian, Lithuanian, Romanian, Russian, Spanish and Ukrainian. This tool is recognised like an important resource in DigComp 2.2: The Digital Competence Framework for Citizens, at the section regarding tools for self-reflection, monitoring and certification of digital competence [17].

Digital Resistance is a project funded by the Council of Europe and the European Commission Joint Programme Democratic and Inclusive School Culture in Operation (DISCO), implemented in five different European countries, Austria, Germany, Greece, Italy and Romania, with the goal to promote digital citizenship. Within the project, was developed a Digital Handbook that supports teachers in addressing in class, following an inquiry-based learning strategy, the issues as: recognise fake news, disinformation, discrimination or indoctrination found in the online environment. Additional material and tools are offered to teachers in order to support them on introducing activities in their classroom aiming to strengthen the digital citizenship [18].

3.1.4. Papers published concerning the research subject

Some scientific articles by Romanian authors on teachers' digital competences in general have been identified and are briefly presented below.

"Self-assessed digital competences of Romanian teachers during the COVID-19 Pandemic". Based on 3,419 responses at an online survey through questionnaires regarding self-assessment of the digital competences of Romanian teachers, the study concludes that teachers must be aware that digital competences will be integrated into professional competences, and they must proactively act and reflect on their development of this critical skill set and, also, it is necessary to develop technological resources, especially digital tools for education, and to prepare both students and teachers to be digitally adapted by utilizing ICT with efficiency and respect for ethical principles [19].

"Digital talent in a learning European Union". In this paper is presented an empirical analysis of digital competencies that emphasizes the necessity to develop digital competencies in all the EU countries and especially in Romania by modernizing the education and training systems. It also presents a comprehensive roadmap for enhancing successfully the digital competences in Romania. Between the key success factors could be developing the skills of teachers and encouraging all citizens to acquire and develop digital competencies [20].

"Improving digital competence in Romania: learning from the best". The paper provides a comparison among Romania and other three European countries, better positioned on the European ranking, namely Germany, Poland and Denmark, in the context in which Romania is constantly on the last places of the European digital rankings, especially at the Human Capital/Digital skills indicators, according with the Digital Economy and Society Index, 2017 [21].

"Educational resources and their use in the online environment" is a paper that presents several types of digital resources and other useful information available in the current online space, which can be used in online learning, according to needs and objectives of the educational process [22].

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"Aspects of the online assessment in the context of Covid 19 Pandemic" is a paper that presents the advantages and disadvantages of online assessment tools, now present in a wide range of variants, accompanied by standards and specifications for computer-assisted instruction. However, in order to have an accurate, online assessment, great care must be taken on the part of the assessor especially with regard to identity verification, especially in the case of free tools that do not use institutional accounts [23].

3.2. Focus Group on Digital Competences Findings

At the focus group sessions, 14 adult educators participated, including two experts in education, from the Department of Teacher Training, University of Oradea, and, also, a group of 11 students from the distance learning form. All this participants, and other 10 teachers or trainers, completed then online questionnaires. Respondents are people with diverse ages, qualification and position, providing from a wide range of institutions, public and private organizations, mainly universities and schools, but also associations or companies with activities in different sectors. Referring to the educational field of the respondents, they are experts in education, teachers or trainers in different teaching fields: engineering, economics, pedagogy, psychology, mathematics, biology, geography, literature, languages, law, and medicine. The questionnaires comprised five sections and the following is an overview of the responses received.

3.2.1. Personal benefit

In general, adult learners engage in a new stage of learning if it contributes to their personal and/or professional development, if it has an applied, measurable character, which constitutes a foundation on which they can build further along the learning/training experience, if it is oriented towards solving practical problems, towards achieving a well-defined goal.

Thus, they learn if learning:

- Is practical or related to practice and immediately applicable, has concrete applicability in their field of work;
- Is interesting, interactive and engaging, and the courses are logical and provides new knowledge;
- Motivates them, helps their personal development;
- Meets their needs and interests, responds to pressing needs in their work, is useful for the work they do or concerns their personal passions (hobbies), is beneficial for the future;
- Increases their chances of promotion, acquisition of skills, financial advantages, social position, increases their chances of finding a job or changing their existing one;
- Is pragmatic, structured and focused on skills and results;
- Is active, participative, with many concrete examples, with modeling;
- Is in line with market requirements;
- Is well structured, with content adapted to the social and age level;
- Is tailored to personal learning styles, particularly if it is adapted to their needs;
- Is as pleasant as possible and not stressful;
- Is face to face.

3.2.2. Experience

Adult learners are motivated to learn if the trainer demonstrates expertise, empathy, enthusiasm, clarity of teaching, which facilitates understanding and effective learning, and responsibility to respect the unique characteristics of adult learners. From their perspective, learning must have continuity, but also aspects of predominantly individual evolution and development, focusing on non-formal activities, which have developed autonomously recently. In specific forms, one can speak of an autonomous system of non-formal education, its most important functions being to complement the educational contribution of schools and to support the process of vocational retraining, given the dynamics of the current labour market and rapid technological change. The adult learner can and should, in fact, interpret the non-formal education system as a useful social

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mechanism that allows mobility on the labour market, adaptation on the fly and continuous adjustment between labour supply and demand.

From an experiential perspective, learning is motivating for adults if:

- Contributes to personal and professional development;
- Is in line with their sphere of interest, if it allows them to deepen an area of interest or expands other spheres of knowledge, contributing to the consolidation of professional experience;
- Has a precise aim and target which matches their needs;
- Involves constructive development based on the personal experiences gained;
- Completes their world of knowledge, leads to the enrichment of knowledge and skills;
- Completes their knowledge and at the same time takes them out of their personal comfort zone, giving them the opportunity to respond to new challenges;
- Is accessible, based on knowledge and skills with which they are already familiar, so that the transition to a new set of skills is facilitated;
- Is well structured, focused, logical and easily accessible, up-to-date and relevant to the technology applied in today's working environments;
- Is interactive, it comes with novelties, especially in the IT field;
- Is engaging, interesting, useful, applied, with concrete examples.

3.2.3. Application and action

Learning consists, besides the acquisition of knowledge, mainly in the formation or development of skills (action patterns) useful in everyday life. For adults, however, learning means constructing and attributing personal meaning to the knowledge acquired, relating to it reflectively, critically and constructively through real personal involvement, transforming and enriching oneself cognitively and spiritually. Learning sessions should therefore be designed to facilitate and build on these aspects.

Adult learners learn best when:

- Are motivated by the novelty and usefulness of the topics covered;
- The subject matter is well structured, theory is harmoniously combined with practice, putting theoretical notions into practice;
- They have the opportunity to apply in practice the knowledge acquired at a theoretical level, when learning takes place at their own pace and is adapted to the particularities or specificities of their job;
- The courses are presented synthetically, make reference to the applied part of the theory, can be followed according to a flexible program;
- Examples of good practice are presented, learning is done by simulating reality;
- The tasks are clear and can be completed in a relatively short time;
- Application develops new knowledge and personal satisfaction.

3.2.4. Learning styles

It is important to know from the beginning what the learners' learning styles are, so that the educational activities to be carried out with them meet the needs of all those present. Alternating the types of activities (individual, pair, group), alternating the way of teaching knowledge (auditory, visual, centred on questioning, debate, brainstorming, role-playing, etc.), creating contexts in which learners have to reorganise their personal cognitive schemes that will allow them to apply what they know in an original, personal way - these are aspects that a trainer must take into account.

Other responses to this chapter argue that, in terms of learning styles, adult learners learn best when:

- The trainer adapts teaching strategies appropriately to respond to the learners' affective, cognitive, psychological particularities;
- The teaching style matches the learners' learning style;
- Teaching is logical and visual;
- They see and hear practical, concrete things;
- There is a visual or audio support of the content to be learned;

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- There are concrete examples, models and types of practical lessons;
- They put the known theory into practice, or all the information they receive is directly translated into practice, practical applications being the essence of discovery learning;
- Information is repeated more often;
- They have a good mentor around them;
- Active and interactive methods are applied.
- Learning is practical and involves logic;
- Several learning modes are combined;
- What they learn fits their needs and what they learn makes their lives easier;
- Learning engages as many receptors as possible and is delivered with consideration for intelligence types;
- Learning contributes to personal and professional development.

3.2.5. DigComp: The European Digital Competence Framework

Concerning the need for adult educators/trainers to acquire certain digital competences, out of the 21 listed in DigComp, three respondents answered that all of them are needed, while the others specified only certain competences, presented below, in order of frequency of nomination, as well as the hierarchy occupied in the selections.

- Browsing, searching and filtering data, information and digital content;
- Collaborating through digital technologies;
- Evaluating data, information and digital content;
- Managing digital identity;
- Protecting devices;
- Identifying needs and technological responses;
- Managing data, information and digital content;
- Developing digital content;
- Protecting personal data and privacy;
- Creatively using digital technologies;
- Programming;
- Interacting through digital technologies;
- Integrating and re-elaborating digital content;
- Protecting health and well-being;
- Sharing information and content through digital technologies;
- Engaging in citizenship through digital technologies;
- Netiquette;
- Solving technical problems;
- Identifying digital competence gaps.

Two of the DigComp competencies are not found at all in the respondents' selections, namely:

- Copyright and licences;
- Protecting environment.

3.3. Focus Group on Media Education Findings

The outline used to conduct the focus group for this need analysis includes 4 thematic areas, and a summary of the participants' responses is presented below.

3.3.1. How much importance do teachers/educators give to the use of technologies in teaching

In recent years, teachers/educators are placing increasing emphasis on the use of technology in teaching. This is due to the need to meet the demands of pupils/students - digital natives - for whom access to information requires speed, interest, surprise and as little monotony as possible. There are numerous studies on this subject among Generation Z students. The findings focused on several issues:

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- 100% of Generation Z students believe they have better digital skills than their teachers;
- Daily online connection has led to a habit of accessing information quickly;
- The students surveyed are calling for greater use of technology in teaching;
- Have an increased interest in online exams and study materials available online;
- Being born in the digital age, they do not understand a different perspective.

That is why teachers believe they are more aware of the need for a different approach, anchored in the 21st century reality of the whole educational environment. And many of them prove it, especially in the wake of the pandemic, when we were forced to harness digital resources.

Among the answers of the participants on this topic are:

- It is known that there is a basic limitation in the possibilities of ICT use by teachers at present which can only be overcome by maintaining an important role for the teacher in the acquisition, processing and use of information, in the training of practical skills and abilities in the use of technology in teaching. This is why the interest in developing technological competence should go beyond the initial training stage in the profession and be embedded throughout the teaching career, requiring a continuous redefinition of training objectives. This would ensure an effective and continuous use of technologies in teaching, which is currently not permanently reflected in the act of teaching.
- Opinions are divided on the use of technology in teaching. Some teachers/educators are reluctant to use new technologies in the teaching process, sometimes needing both intrinsic and extrinsic motivation, such as career benefits, knowledge enrichment, etc. On the other hand, there are teachers who attach great importance to the use of technologies in the teaching process because they have realized that it facilitates the efficient transmission of information thus helping students to process the information received more easily using various media tools, and last but not least the fact that the world is constantly changing and in order to keep up with it, you have to evolve constantly.
- The importance given by teachers/educators to the use of technology in teaching can vary depending on several factors, such as school context, level of access to technology, professional training and individual preferences. Some teachers may be very open and enthusiastic about using technology in the classroom, while others may be more reticent or have limited access to technology resources.
- Nowadays I can no longer conceive of any teaching activity that is not accompanied by the support of technologies (whether it is teaching, laboratory or seminar activities). Moreover, the assessment of students is much easier and more accurate with the help of technologies. Last but not least, communication and transmission of teaching materials are also much easier through technologies.
- Some teachers and educators are reluctant to use new technologies for teaching. On the other hand, there are teachers who attach great importance to these teaching methods because they have noticed that they add value to the information that can be assimilated, but also because they keep up with the modernization and evolution of today, both for themselves and for their students.
- As a student of the Faculty of Informatics and Science I can say that the teachers there use some supporting technologies in the delivery of the courses, such as e-learning platforms, digital materials, smart-boards and video projectors as well as online resources. As an employee, on-the-job trainings are quite rare. When they do exist they are focused on the subject matter and do not specifically focus on the use of technology in the learning process.
- Some more, some less. However, every teacher will in a relatively short time have to use different technologies in their teaching activities.
- Based on personal experience, the importance of using technology lately has become a necessity and is used very often.

3.3.2. Strengths and possible weaknesses of the use of technologies for learning, according to the participants' experience

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Strengths:

- The ability to learn at a fast pace, processing information with associated visual and dynamic elements can lead them to make multiple connections between knowledge;
- If discovery learning is valued, it gives the opportunity to build knowledge, use creativity and actively engage in the learning process;
- There are subjects who by their nature involve greater contact with technology, and its use in different ways is an advantage today;
- More and more companies, even after the pandemic, are offering digitized learning resources. In addition to interactive platforms and educational games, textbooks, which until now we only had on paper, are now available in digital format. This facilitates the teaching process because teachers can access hundreds of resources from anywhere, provided they have an internet connection. On the other hand, technology in education can also be used without internet access. Many of the resources we find online can be downloaded to a computer, so they can be used at any time by teachers. Teachers can also use programmes that are already on the computer, for example PowerPoint, to create animations and interactive teaching moments, etc. I believe that technology in education can easily become an integral part of teaching and learning. Using simple and accessible applications, teachers can use technology in education to make lessons more interesting and attractive;
- Access to extensive information and resources: technology provides the ability to access a wide range of information and educational resources, including text, images, videos, simulations and interactive applications;
- Personalization of learning: technology can be used to create personalized learning environments tailored to the needs and pace of each learner. This can help create a more effective and engaging learning process;
- Improved collaboration and communication: technology facilitates collaboration between students and teachers, allowing them to work together on projects, communicate and share ideas more quickly and easily;
- The wealth of information, speed of information transmission, quick access to information, easy communication, easy and impartiality of evaluating results;
- Permanent access to information taught on digital learning platforms;
- Instant feedback and creation of a feedback history;
- Easier and more interesting teaching;
- Diversity of content types: written, images, video, audio;
- Less paper is used and therefore there will be fewer trees cut;
- Some of the strengths of using technology in learning that I have observed over time are those related to better preparing the student for the world beyond the school environment. Specifically, if in school we teach using various media tools, videos, online platforms, various programs (software), applications, the student will not only process the information more easily (some learn better visually, others aurally, etc.), but will also know how to use technological tools in everyday life, at work, etc.
- Adaptation to the requirements of new generations, attractiveness, flexibility, remote use;
- The use of different technologies for learning is beneficial because of the following possibilities: efficient structuring of information; highlighting the essence of the information to be transmitted; competitiveness in learning (organizing a course in the form of a game in which for each piece of information assimilated a score is given, a form of reward for the effort made); checking the knowledge acquired along the way (intermediate quizzes); increasing the motivation of both the learner and the teacher, by concretely measuring the results; continuous individual learning outside the classroom.

Possible weaknesses:

- Digital natives use far fewer digital tools for educational purposes than one might think. Most of the time, students prefer to limit themselves to the information they have accessed most quickly, without studying a subject in depth. So the lack of structuring of information on the

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web, not knowing relevant information from less relevant information, the temptation to get distracted by technology are just some of the weaknesses I am referring to. In this respect, teachers can support learners using the online environment: they can give them a conceptual structure on which to build their subsequent knowledge and assist them in developing the skills needed to exploit web resources in depth;

- As a weak point I could mention the lack of digital skills among both teachers and students;
- Another disadvantage for technology in education is that in this context children/students work with some abstract notions;
- If pupils or students were to use their personal phones to solve tasks, they might be distracted. As they are used to using the phone for other games and relaxing activities, there is a good chance that they will forget that they need to pay attention and start playing with the phone or doing something else completely. The solution to this problem would be to use phones or other devices only during class time;
- Technology addiction, overuse or over-reliance on technology can lead to reduced face-to-face communication skills, dependence on devices and decreased attention and concentration;
- Limited access to technology: not all students or educational institutions have access to appropriate technology equipment and resources. Disparities in access to technology can create inequalities in learning;
- Difficulties for some to access different teaching technologies, internet access in some areas or signal interruptions;
- A lot of false or erroneous information, does not help to acquire practical skills;
- Not everyone has access to technology and certain learning platforms;
- It requires knowledge to use these technologies;
- It requires willingness on the part of those who apply them or should apply them;
- Difficult adaptation to current adult technology without some training involved;
- The information created can be copied and passed on in other forms, not all learners know how to use it and then ask others to help them. On the other hand, the flip side of the coin, if we may say so, some of the weaknesses might be: the fact that some technologies can be addictive; the fact that students no longer use their minds so intensively to retain information, because it will always be a click away, sometimes this is not seen as an evolution, but as a step backwards. However, there may be negative sides that should be pointed out, this facilitation in finding information quickly, without a major effort on the part of the learner, will lead in time to a decrease in attention and concentration power of the learner and, at the same time, to a superficial, momentary learning. Such information, without immediate deepening and practical application, will be lost, creating inefficient learning.

3.3.3. Practical tools to be used, from a technical and pedagogical point of view in education that works for adults

- Almost any technology, from phones to robots, can be used in education today. Laptops, video projectors, TVs, SMART interactive whiteboards and related software are used most in Romanian schools. But there are also institutions that have state-of-the-art technology labs where students and teachers can use various digital resources. Speaking of adult education, where they are already motivated and give learning the time they each have available, e-learning platforms are proving to be extremely effective.
- The practical tools that should be used in education from a technical and pedagogical point of view are multiple. I will mention just a few that I consider effective in working with adults: video materials available online; applications/software specific to each field of activity; suggestive images for different moments of the training activity; articles, online bibliographic sources; dynamic learning media (Google Maps, Earth, Street View) - online exploration of skies, forests, oceans, works of art, etc.; the possibility to initiate joint online projects of adults who can work anytime and from anywhere to encourage teamwork; ability to communicate online via Gmail, Hangouts, Chat, video call, etc.; efficient planning of proposed activities and sharing them with

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those involved via Google Calendar; ability for multiple people to view/edit/comment on a document (via Google Docs); the possibility to apply surveys, questionnaires / submit them online, questionnaires that are centralised in a spreadsheet document (via Google Forms); the possibility to view/edit/comment on a spreadsheet by several people (via Google Sheets); the ability for multiple people to view/edit/comment on a presentation (via Google Presentations); ability to create sites using the predefined templates available with Google Sites; use of Google Chrome, Google Drive, Google Translate, Google+, Youtube, Picassa Web Albums, Google Places, etc.

- On the pedagogical side, adults benefit from learning methods and strategies that are relevant to them and that allow them to apply their knowledge in practical contexts. Andragogical pedagogy, which focuses on adult learning, emphasises the importance of autonomy, prior experience and the relevance of practice in the learning process. Thus, approaches such as problem-based learning, experiential learning and collaborative learning can be effective for adults.
- Also from a pedagogical point of view we could say that the motivation (both of the teacher and of the student), the way of teaching, speaking and explaining lessons using the above tools can make a big difference.
- Online learning platforms can include course-based learning platforms, such as Moodle or Blackboard, which provide an organized structure for delivering educational content, managing assignments and facilitating interaction between participants.
- Collaboration and communication tools: applications such as Zoom or Microsoft teams allow effective collaboration and communication between adults, including file sharing, group discussions and video conferencing.
- Interactive multimedia materials: technology enables the creation and use of interactive multimedia materials, such as educational videos, interactive presentations, simulations and educational games, to increase adult engagement and participation in the learning process.
- These tools, not limited to the list below, are: hardware tools: laptops, computers, tablets, e-ink devices, projectors, monitors, smartboards, etc.; software tools: e-learning platforms, games/educational applications, social platforms (discord, telegram), audio-visual content for learning, etc. All these tools are useful but it must be emphasized that they are only tools, they cannot replace a skilled teacher, they can only help teacher.

3.3.4. Most useful topics for educators to support adults' learning

The majority of respondents consider three of the proposed topics, in order, to be useful to some extent for educators to support adult learning:

- Online video games;
- Grooming;
- Risks associated with e-commerce.

Some participants expressed some views on the usefulness of such topics in the adult education process, such as:

- As for the above topics, they are not relevant in the learning process, but it is good to keep them in mind because they are the less visible and desired parts and effects of technology, and it is good to know about them in order to anticipate/avoid them. Instead some topics that could be addressed and useful are those of personal development, positive online conduct, awareness, mindfulness (or the ability to be with the mind in the present, to focus on what needs to be done in that moment without letting the mind run away to future or past problems), this skill helps one to solve each problem/lesson, in its own time.
- There are adults for whom these topics are not interesting at all, as they are not interested in e-commerce or the other topics listed! For educating adults, there are interesting topics in science, new things, interesting documentaries about beautiful places worth visiting, interesting things about flora and fauna in different parts of the world, then interesting medical discoveries.

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- The most of the above options are not relevant or applicable in an effective learning process, but they are important topics for anyone to know, especially in our country, where a very large percentage of adults have not thought or heard of their existence. It's good to know how we identify and process information online, and how we manage and use information from the online environment.
- The risks associated with e-commerce can be useful for learning in a narrow range of activities (web-shop application development, or online payment applications). These risks are also important for everyone to be aware of because online commerce is extremely present in everyone's lives.
- Certain games designed for educational purposes are very useful in the learning process.
- All social media platforms, because they are the first used by every adult.
- How to avoid the multitude of online frauds/ scammers.
- Emotional Intelligence would be a topic that should be addressed in adult education using digital technologies.
- Content creation, presentation design, methods of attracting and keeping the audience's attention.

4. Conclusions

Even though in Romania, the digitization of the education and training system has been considered a priority from many years, in present a strategy is under public consultation, from 2020. The European Framework for the Digital Competence of Educators: DigCompEdu, was translated, approves and regulates through a ministerial order. The adoption of the legislative framework for the digitalisation of education is provided in Romania's Recovery and Resilience Plan, has the most substantial budgetary allocation and has to be complete implemented by 30 June 2024.

One solution that could help Romanians move up the digitization rankings, thus reducing the gap with top-ranked countries, could be digital skills certification. The Digital Skills Standard ICDL (ECDL in Romania) it is self-recommended as a reliable and trustworthy measure of digital skills that is fully compatible with DigComp and with DigCompEdu too, being the most widely used global IT skills certification standard, applied in over 100 countries [24].

Unfortunately, the result of the study shows the lack of a specific legislative framework for the digital education of adult educators or trainers, the non-existence of special training programs for them, of methods or tools that could be used, as well as of certain research articles in field. Not even the digital education of educators, in general, is not very well regulated, eloquent and pragmatic, there are only beginnings or intentions, at the government level, or some achievements and examples of good practice made in the private environment or through some public institutions and non-governmental associations.

The successful implementation of projects such as MEAA, the partnerships and the exchanges of best practices at EU level in the fields of education and training, as well as raising awareness, will ultimately lead to the reduction of the existing digital and media literacy gap between different countries and European regions.

The results of the initial research, developed at the level of the six partner countries in the MEAA project, will lead to the development of the main intellectual outputs, namely the digital competences framework, handbook, online platform and training material on digital and media education. In their development will be taken into account, on the one hand, the needs identified in the initial research, and, on the other hand, the need for a sustainable approach to all activities, resources and outputs produced, as well as education itself, this goal being assumed through the project.

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