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Handbook

Positive Emotional Life for Active Aging

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Summary

Abstract

The handbook titled “Positive Emotional Life for Active Aging” is a comprehensive guide designed to enhance the well-being and quality of life for seniors through a focus on positive emotional experiences and active engagement. The first section explores essential competencies for adult educators working with seniors, emphasizing the importance of fostering a supportive learning environment.

The second section provides practical advice on staying safe online, covering topics such as secure browsing, online payments, and digital safety for seniors.

The third section delves into the global demographic landscape, highlighting the significance of digital competencies as a means to prevent the exclusion of older individuals from society. It addresses digital competence as a human right, explores potential risks, and discusses responsible, ethical, and legal usage of technology. Theoretical perspectives on assistive technologies and considerations for designing technology for the elderly are also examined.

The fourth section focuses on assessing seniors’ skills and competence, particularly in the realm of emotional well-being. It emphasizes the importance of providing evaluations on exercises geared towards developing emotional competence and outlines strategies for fostering positive emotions in the elderly. Various activities, such as lifestyle choices, interaction with pets, physical exercise, and engagement in games, are suggested to promote emotional well-being.

The fifth and final section explores communication and other soft skills for adult educators, offering insights into communicative leadership and providing practical training games for trainers. The handbook is a valuable resource for educators, caregivers, and individuals interested in promoting active aging by cultivating positive emotions and enhancing communication skills among the elderly.


SENIOR

1. BASIC COMPETENCIES FOR ADULT EDUCATOR WORKING WITH SENIORS

Due to the increasing importance given to lifelong and intergenerational learning, adult educators are taking on new roles and their work is gaining greater impact, especially in a general context of financial and social crisis (Patrício & Osório, 2013). Therefore, it is important to respond to the educational challenge of an ageing population and to help in the provision of pathways to improve adults' knowledge, competences, culture and education. Involving a rich assortment of actors and contexts, adult education has a heterogeneous nature, engaging people, working with adults in exploring issues of intergenerational competence. In addition, such professionals (or volunteers!) ought to identify the competences required for adult education and to find ways in which their performance may be developed. The improvement of these skills and competences will help increasing seniors access and in widening participation and motivation in adult education, thus making the learning experience of adults more relevant, enjoyable and fun (Patrício & Osório, 2013).

On the one hand, the recognition and feedback given by participants and the experience of working is decisive for the development of specific skills and competences for professionals in the adult learning sector; on the other hand, competence profile of adult educators is complex and involves a multi-dimensional set of skills, personal attitudes and values as well as knowledge and understanding. The need for more information on adult education justifies more action research and action learning in this field. Therefore, the aim of this research is to present some experiences and basic competencies for adult educators in adult education, in the context of non-formal and intergenerational learning, focused on various and different aspects of the teaching and learning process and also on how to improve the skills and competences of adult educators in their actual practice. Trying to find a fine answer to the question "What is the importance of learning experience with adult citizens and its contribution for professional development, as well as what competencies are needed by adult educators in facilitating effective teaching?"

The study intends to describe, analyze and reflect different training intergenerational contexts in non-formal adult education and identify the factors that influence teacher and learning work that can contribute to professional development. The need for a proper emphasis on diversity and on motivating adults, using different learning methods, styles and techniques assuming the expertise and background of the learners is being taken into suitable consideration. The role of fun and enjoyment has been identified as important in the learning for older adults. Lightfoot & Brady (2005) found that older 'people talked about the new and exciting ideas they were learning and the joy it provided' (p. 230) when describing their learning experiences.

In particular a woman in her late 70's reported, "The first word that comes to mind is fun" (Lightfoot & Brady, 2005, p 230). Bowman and Kearns (2007), when investigating E learning for the mature age worker, support this as they found that using a variety of approaches to learning helps to make learning interesting and fun. Davis (2001) also recommends that a focus on creating programs that emphasize fun in learning is needed for older adults. Armstrong (2002) has identified the lack of literature on the use of humor in adult learning or the process of making adult learning fun. He quotes Cathro's (1995) argument that 'humor has often been unrecorded, and perhaps silenced, within and by academic disciplines' (p 2). Armstrong considered the use of humor in the curriculum (comedy, creative writing, drama), in teaching and learning and in research (Armstrong 2002).

He identifies humor as a key teaching quality and quotes Stock's (1970) research into teaching styles and learning. Stock (1970) found that student evaluations rated teacher characteristics 'warmth, humor and responsiveness, concern' (p. 3) as higher than learning gain. Humor and fun are linked with laughter and play and do affect us as human beings. Panksepp (2000) tells us that human laughter is a primitive reaction but it is also psychologically sophisticated. The ancestral antecedents of social joy are within the human brain and laughter is fundamentally a social phenomenon. Joy lowers the neural threshold for perceiving life events as being positive and hopeful, while raising the threshold for perceiving events as negative and hopeless.

Fun and enjoyment can be, and perhaps has been, perceived as frivolous and entertainment rather than as essential to an ideal learning experience. But the experience of fun does not necessarily mean that it is an easy or comfortable experience. Barrett (2005) explored problem-based learning (PBL) and hard fun. Barrett's central


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argument is that 'hard fun is an illuminative threshold concept for understanding learning in PBL' (2005, p 113). For Papert, (1996) learning is not fun in spite of being hard, but because it is hard. He defines hardness as level of difficulty and that with a high level of activity learning can take on a transformative nature and produce attitudinal change. 'Fun without hardness is frivolity; hardness without fun is drudgery' (Barrett, 2005, p. 121).

The notion of hardness and challenge has also been applied to the concept of joy. Montuori (2008) views joy as a complex phenomenon and that it does not come easy. It arrives through hard work and requires psychological risk (Montuori, 2008). While fun has had limited attention in the literature on adult learning there has been some focus on the role of enjoyment. Adults, who have not experienced success in education and are returning to learning do gain a range of benefits from participation, such as increased confidence and new friendships (Clemens, Hartley, & Macrae, 2003). They also identify that they enjoy the experience.

Preston and Hammond (2002) found that 'Students who have experienced failure previously in the education system often described as "second chancer's" benefit particularly in terms of esteem and efficacy' (p 22). Research by Bassett-Grundy (2002), into family learning support Preston and Hammond's findings, where participants identified few disadvantages and 'the overall feeling was incredibly positive with participants enjoying it very much indeed' (p. 26). The reports from research into the Wider Benefits of Learning in the United Kingdom identify a number of areas where enjoyment is produced: the social focus; the range of activities; and the supportive and friendly atmosphere (Preston & Hammond, 2002).

Those who reported enjoyment most often were those who were in basic education classes and were returning to education. The results were not skewed by previous experience in education as research has shown that in initial education there was a weaker relationship between success at school and enjoyment, with 'some people enjoying school in spite of not achieving qualifications, others achieving qualifications but leaving with a distaste for education' (Schuller et al., 2002, p. III). A number of key concepts have emerged from the literature that help to illuminate why fun and enjoyment may have an impact on an adult's learning. Firstly, the role that motivation plays in adult learning (Wlodkowksi, 1997). Fun and importance are considered classic motivation variables and fun is proposed to increase motivation, with importance underlying intrinsic motivation and goal

directed activities (Sheldon & Elliot, 1999). Secondly the influence of emotions on how adults experience positive educational experiences through positive emotions (Dirkx, 2001). The final concept, that of well-being, that proposes that adults who feel happy, 'tend to function better in life' (Oishi & Diener, 2001). According to Bernhardsson, N., & Lattke, S. (2011), the following is a transnational catalog of the essential basic competences of adult educators:

1. Communication and Group Management

Providing and receiving messages to numerous group members is known as "group communication" (Indeed Editorial Team, 2021). Groups frequently use this communication technique to share ideas, set realistic goals, establish priorities and inspire other participants in an adult learning setting. Group sizes can vary, but they often have three or more people and as many as twenty. Smaller focus groups and entire departments can both benefit from effective group communication. Effective group communication enables members to share information that is required for achieving common objectives. The ability to accurately communicate, manage group dynamics, and resolve disagreements are among the skills that adult educators should possess.

2. Subject Competence

Definitions in adult education should presumably go beyond rating teachers based solely on how well their adult students score on standardized examinations. Helping students advance in achieving life goals, such as acquiring a better career, reading to the learners or reading for leisure, browsing the web, navigating the healthcare system, or even learning how to send a text message on a mobile phone, should be included in these activities. The leadership of the program, class size, instructional intensity, time on task, and student characteristics are all aspects that affect student learning in adult education, therefore a competent instructor is important but insufficient for high student accomplishment. Teachers are expected to possess expertise in their field of instruction and utilize the expert didactics in your area of instruction.

3. Supporting Learning

Learning supports are the resources, tactics, and techniques that offer physical, social, emotional, and intellectual supports to all students in order to provide them an equal chance for success at school by removing obstacles to and encouraging involvement in learning and teaching. Educators are also to encourage learners to take an active role in their learning by supporting informal learning, have a diverse set of methods at their disposal, and in the instructional exercises, make advantage of the participants' personal experiences.

4. Efficient Teaching

To be an effective and productive adult educator, you must understand both what your students are learning and what they are dealing with. Assessing their learning early and frequently helps you to address any issues or misunderstandings as they develop, prior to them becoming barriers to future learning. More than simply competence in an academic topic is required for effective teaching. You must be able to communicate with others and assist them in understanding a fresh perspective on the world. This is not a simple task!

Although there are several approaches to effective teaching, outstanding teachers have some characteristics. Effective teachers may simplify complicated concepts. It is easy to overlook that students may have no prior understanding of essential principles that you take for granted when you gain proficiency in an academic discipline. Assist students in understanding and applying new terms so that they can become proficient in the language of your subject. Many topics may be conveyed more successfully using visual aids such as diagrams, drawings, charts, presentations, and so on. Make sure they're big enough to read, nice enough to look at, and don't get in the way! Consider the importance that body language may play. Having your instruction observed (or, even better, recorded) by someone else might reveal behaviors that you would never see on your own.

5. Personal Professional Development

Adult Teachers need to:

- Orientate themselves to the requirements of participants
- Utilize their own life experience in the learning environment
- Utilize their own life experience in the educational environment
- Set their own learning objectives. Be imaginative. Be adaptable
- Reflect on their own professional role
- Assess their own performance
- Be self-assured and devoted to their own professional growth
- Deal with criticism
- View things from a new angles

6. Stimulating learning

An engaging classroom atmosphere may help students engage in the learning process and improve their educational experience. A stimulated classroom setting combines all of these elements; it refers to how students' thoughts are stimulated while in their learning environment (Creating a Stimulating Classroom Environment: Definition & Strategies, 2019). This can result from:

- Visuals are used throughout the course. Hands-on activities that include physical mobility
- Each new topic may be learned in a variety of ways.
- Possibilities for higher-order thinking and inquiry.
- Teachers who are both exciting and stimulating.
- Motivate.
- Inspire.


ON Time

7. Learning Process Analysis

The educators must be able to:

- Monitor the process of learning.
- Evaluate the learning results.
- Use iterative evaluation and learner/teacher discussions on a regular basis.
  Assess the learners' starting point.

8. Self-competence

- Be emotionally steady and resistant to stress.
- Analyze the learner's learning hurdles.
- Be genuine
- Continue in a systematic manner.
- Maintain an open mined.

9. Assistance of learners

- Make a secure learning environment (not intimidating).
- Allow learners to put what they've learned into practice.
- Encourage learners to take ownership of their future learning processes.
- Be sympathetic.
- Promoting collaborative learning among students.
- Provide assistance to the particular learner.
- Actively listening.
- Make yourself available to students.
- Determine the learner's requirements.

10. Positivism

Maintain a positive attitude with your students. When students are driven to learn rather than by grades or degree requirements, teaching is most successful. Many first-time teachers are perplexed by their newfound power and misinterpret intimidation for respect. Consider your learners to be partners, not opponents. Learning and teaching are both difficult tasks, but that doesn't mean you can't have fun in the classroom. Maintain attention while still being creative and imaginative. Allow yourself to be excited and discover methods to show pupils what makes your topic exciting.

11. Prepared

Educators should be familiar with the course material. It seems natural that you would attend lectures and read assignments if students are compelled to do so. Most instructors want graduate teaching assistants to attend lectures, especially if they have never taken or taught the course before. Review important concepts and ideas if you are unsure, especially if you have not dealt with the topics you will be presenting in a long time. Consider how the topic may be conveyed most effectively and devise a method. Prepare your overheads, diagrams, pamphlets, and other materials well in advance, and write an outline or take notes to follow throughout a presentation. Don't put it off until the morning of class!

12. Organized

Plan out what you want to teach. Your duty is to highlight key themes and crucial context, assisting the seniors in integrating all of their course work (reading, laboratories, examinations, papers, lectures, etc.). Given that there is never enough time to cover everything, pick the most significant topics and demonstrate how they are linked. Explain concepts so that students may build on content they have previously learned, whether from your course or earlier classes. Don't only concentrate on what you're teaching today. Demonstrate to the seniors how what they are studying now relates to topics presented later in the course. Keep your long term goals in mind, pace yourself so that you don't run out of time at the end, and try to end every class with a conclusion.

13. Clear

Effective teachers can explain complex ideas in simple ways. As you develop expertise in an academic field, it is easy to forget that students may have no prior knowledge of fundamental concepts that you take for granted. Help students understand and use new terminology, so they can become fluent in the language of your discipline. Many concepts can be more effectively demonstrated with visual aids such as diagrams, drawings, charts, slides, etc. Make sure that they are large enough to see, neat enough to read, and don't stand in the way! Think about the role body language can play. Having your teaching observed by someone else (or even better, having it video-taped) can reveal habits that you would never notice on your own.

14. Active

Maintain your students' attention. Most students will retain just a tiny portion of what you teach unless they actively apply the topics you teach. A lecture is an effective technique to transmit information to large groups of people, but it is ineffective for providing pupils with long-term knowledge and skills. Consider utilizing at least some of your classroom time for activities other than standard lectures, discussions, and question-and-answer sessions. Problem-solving activities in small groups may be completed in a matter of minutes while still allowing students to connect with the content being taught.

15. Patience

Remember how it felt the first time you learned something new. Give students time to comprehend material and respond to inquiries. It is OK for students to make errors if they can learn from them. Understand that learning may be difficult, even for the most dedicated pupils. Rather than criticizing students when things go wrong, think about how you might adjust your approach to reach them more successfully. Concepts, background knowledge, or conclusions that appear obvious to you may be obscure to someone unfamiliar with the subject. Be patient with yourself as well. Teaching may be challenging and unpleasant at times. Allow yourself the same chance to make errors and learn from them.

16. Fair

Consider how you would feel if you were one of your students. You'd probably prefer an educator who set clear standards, followed them consistently, and could confess when they were incorrect. You should be prepared to explain why you marked off points on a test question, gave a bad grade on a paper, or penalized someone for a late assignment. Of course, it helps if you've previously established clear regulations for the entire course as well as for each task. Once you've established standards, it's critical to implement them consistently and evenly; otherwise, you'll lose credibility. On the other hand, if you make a mistake or don't know the answer to a question, it is much better to acknowledge rather than ignore it.

1.1. Conclusion

More than simply competence in an academic topic is required for effective teaching. You must be able to communicate with your students and assist them in understanding a fresh perspective on the world. This is not a simple task! Although there are several approaches to effective teaching, outstanding teachers have some characteristics. They are prepared, establish clear and fair standards, have a pleasant attitude, are patient with students, and regularly assess their teaching. They can adapt their teaching tactics to match both the students and the topic, as they recognize that different students learn in various ways. The research has found that certain roles and principles, as well as fun and enjoyment does play a role in adult learning programs.

The research also found that both adult learners and their teachers believed that fun and enjoyment impacted on adults learning and they were able to articulate the role that fun and enjoyment plays in adult learning programs. You are a role model who sets the tone for the class as a teacher. Your students are more likely to respond if you demonstrate excitement and devotion. Conversely, if you are unpleasant, unprepared, or impatient, your students will mirror similar characteristics. Make your class stand out as a crucial component of their educational journey. Both having fun and experiencing enjoyment were perceived by both learners and teachers as a motivator to attend classes and learn the knowledge and skills, they were also considered a mechanism that encouraged concentration by learners and helped in the absorption of learning. Finally having fun and experiencing enjoyment were identified as a proven way to build a socially connected learning environment.

2. HOW TO STAY ONLINE AND BE SAFE – PAYING, SHOPPING, BANKING WITHOUT FEAR: A GUIDE FOR SAFE BROWSING AND MANAGING OF ONLINE PAYMENTS FOR SENIORS

There is no doubt that computers have played a huge role in our civilization for the past decades and have developed enormously through the past ten years to include almost every aspect of our lives. From the basic daily tasks to the most complicated machinery all has improved by using computers. The internet is considered the blood vessels that connect all this knowledge through online servers where you can access any piece of information in a frank of a second. Nowadays, and after the corona virus pandemic, the internet has even expanded more to aid people to access their needs without getting out; from online shopping to zoom meetings and online servers for remote working. This also opened the door for many scammers and hackers. In this research we will learn how to be safe online and how to shop and pay online with confidence.

Protecting yourself from any online fraud is highly important in your daily online browsing and specially when dealing with payments online or through shopping websites. Internet users encounter several types of threats, from viruses, malware, to identity theft and endangering their financial information. Despite the use of many protection systems like built-in firewalls, antiviruses and antimalware, the feeling of insecurity about being exposed online remains. However, due to the lake of experience, many internet users don not take enough pre-

cautions while surfing online. Moreover, they may become involved in some actions that may lead to jeopardizing their online security. Here we will explore important theories, precautions, some tips, and tricks to make your online browsing secured.

ONLINE SAFETY THEORIES

1. The Protection Motivation Theory (PMT)

We must study our enemy in order to defeat them. To decrease the gap between recognizing the threats and make necessary precautions, the Protection Motivation Theory (PMT) helps to understand what motives online security in our daily bases. The Protection Motivation Theory encounters a commonly ignored factor by internet users which is previous experience with safety precautions along with some other variables like received security support and personal responsibility. Previous online security investigations are studied to integrate updated models of online safety protection. The Protection Motivation Theory describes the ways and motives behind individuals' decisions to protect themselves from cybercrimes. It suggests that protective mechanisms are induced by threat appraisals and coping appraisals. Also, subjective norm has proved to be a vital predictor of online security related policies and software integration. Subjective norm is how the individual think others who are important to him expect him to behave. The most effective predictor of security intentions is online security habit strength as well as response efficiency and personal responsibility.

Thus, in order to increase individuals' security intentions and also exposing the severity of online threats, it is of highly important to teach them about the effectiveness of taking security actions and provoke their responsibility towards protecting themselves online. Governments can also help to build a constructive habit of taking necessary protective actions by sending reminding messages every now and then.

2. Theory of Planned Behavior

Another theory of behavior prediction models for cybersecurity is known as the Theory of Planned Behavior. The Theory of Planned Behavior is a widely implemented model that states that attitudes and subjective norms widely affects individual's behavior intention that influences actual human behavior. Factors affecting the intensity of this intention behavior relationship are the extend to which measures of behavior and intention correspond, the extend of stability of this interaction and whether the behavior is premediated or not. The Theory of planned Behavior also states that Perceived Behavioral Control may affect behaviors. Perceived Behavioral Control (PBC) have a significant role in predicting online security behavior where knowledge of cyber security majors to protect individual's identity and financials vary among the internet using individuals. In this theory, it was found also that the subjective norm has a strong relationship with intention, suggesting that third parties effect has a strong influence on whether the individual tends to engage in a protective behavior or not. This research also found that there is a gender discrepancy between males and females protective behavior as it shows that females are more willing to take precautions actions regarding their privacy. It also gave an important insight about the least likely protection behavior to be engaged in is reading the privacy policies, terms, conditions in addition to license agreements before agreeing to them or signing personal information. Research shows that most people do not give this matter extra concern and do not intend to in the future. This is due to the complexity and difficulty of reading all the terms and agreements pages. Thus, it is suggested to make improvements to the way privacy policies are presented to costumers, to be shorter and more engaging.

PRACTICAL EXERCISE FOR ONLINE SAFETY

Just as the real world, online security is of highly importance while surfing the internet. That includes websites, web applications, mobile applications and also games. Hackers are always on a lookout for any confidential information or an access to your bank and cards information. Compromised surfing can always lead to some embarrassing moments like embarrassing comments on social media or accidently sharing of personal photos or notes and once a document is shared online specially on a social media website it is nearly impossible to be removed. Therefore, here are some practical exercises for safe online surfing and shopping:

Customize Strong Passwords

One of the most vulnerable spots of cybersecurity are passwords and there is no way around them. People often urged to pick an easy password like ("password" and "123456789" etc.) in order not to forget but easy passwords are also easy for hackers to guess. Customize a strong password that is related to you every time you sign up to a new website. Strong passwords should be at least fifteen character and include numbers, letters, and special characters. There are some embedded softwares in your browser to remember all your passwords upon permission to help you if you forget one of them. However, you know the common saying "do

not put all the eggs in one basket." As helpful as these softwares are as dangerous as they are if your browser was compromised or hacked by a malware. Choose your passwords wisely by relating them to you to make them easy to remember.

Sharing personal information

Always think twice about what kind of personal information you share on social media in addition to professional hiring websites. Do not leave your personal contacting information like your address, phone number, mobile number, or your private email address there in public. Hackers have their ways to use all this public information to have control on your accounts and furthermore can reach your financials. As for hiring websites, recruiters do not need your address or your personal information to contact you. They need to know more about your expertise and professional background and can make their contacts through trusted hiring websites like LinkedIn. Do not sign up in untrusted websites. In addition to never share your passwords or private security codes to anyone specially online. In case of necessity, when your password or private security code is shared with someone never do it online and also never forget to change them afterwards. Always know what kind of information to share, when to share them and with whom you share them.

Beware of what you share

The internet doe not actually have an undo bottom. Once a picture or a post has been shared you cannot ensure that removing the original document means it was fully deleted. Anything can be copied, screenshotted, and saved on other people's devices. It is quite common to share a funny post or video and find out that they went viral in a couple of minutes. The more people see what you share the more it become impossible to erase the content. Always think twice before posting or sharing, it may become the next trend online!

Beware of whom you know online

Expanding your social circle is great only if they are real people. The social media is a wide field for fake characters to pop in. People you know online may not be whom they claim to be, in fact they might not be real at all! Social media have impowered everyone to appear as they want others to see them. Anyone can be anything online! Hackers have been using this advantage very well in the last decades, using fake profiles to get to know people online and get cozy up with unwary web users to pick their pockets or even using their secrets to bully them or extorting them for money. Always be cautious of whom you meet online and never share your personal life with online acquaintance.

Secure online browsing

As you never choose to pass through a dangerous neighborhood, do not access unsafe online websites. Never press on unknown website address and always be ware of pop out advertisements. Always be cautious where you click. It is pretty widespread practice that many hijackers use infected website addresses as bait to have control over your computer. Do not open any shady link even if it was sent by a friend or a family member, their devices may be infected already, and their accounts may be hacked. Beware of online advertisements links, always open only commonly known websites. Never ever put your credit or debit cards information on an unknown website. Another common type of baits hackers use is fake infected downloadable links. Never allow access to download anything from any untrusted websites. Search for unknown websites reviews before using them. Give access to your firewall and antivirus and allow them to give you warnings about untrusted websites.

Always Enable your Privacy Settings

Marketing agencies pay million to know your online surfing habits, what you search for, common websites you visit, what is your interests and habits in order to customize their advertisements according to the above mentioned specifications. Thus, their advertisements appear more related to your lifestyle thus more engaging. And so does hackers too! They search for every tiny pit of information that can lead them to an access to your accounts. Both web browsers and mobile systems have available privacy system to protect your private browsing information. Also, famous websites have their own privacy protecting system. Thought these settings can be sometimes intentionally hard to find for corporates to use and sell your privileged information for their marketing values, it is of essential important to check and enable all these browsing privacy systems on regular bases – in case of any update -. Better safe than sorry!

Always Update Your Antivirus

Antiviruses acts as the first defensive wall against all cyber security attacks. They protect us against varies viruses, malwares and trojans. They show necessary notification alerts in case of any threat. They can also scan your device and clean any threat. In order for antiviruses to maintain their function they have to be updated. Make sure to update your antivirus once in a while and also scan your device for threats on monthly bases.

Always investigate what you download

Just as untrusted links, hackers can temp you to download infected applications or games that contains malwares to control your device or steal your information. Always disable auto download from your devices and double check on every website before your get anything downloaded. Make sure that the download extension matches what you are downloading; as an example, when you download an excel file the downloaded extension should end with (.xlsx). You can find file extensions abbreviations online. And off course, never download from a shady or untrusted websites.

Ensure That Your Connection is Safe

Using public Wi-Fi connections can compromise your security. Cyber security experts show concerns about connections end-points where your private network connects to the online server. Your local internet connection can function as a vulnerable endpoint. In case of doubt, do not connect to untrusted Wi-Fi Connections specially when shopping or paying online and inserting your cards details and your account number. For more protection while browsing online, use a secured (Virtual Private Network) VPN connection. The concept of VPN is having a secured connection between your device and the internet server where no one can access or monitor the exchanged data.

Shop From Secured Websites

Whenever you shop online where your bank account or credit cards are needed, always make sure that this website is safe and secured. You can ensure the security of the payment website page by searching for https: in the website address, where the S stands for secured connection. If you find that the website address only starts with http: that means that this connection is not secured, and you are advised not to endanger your personal banking information on it. In general, it is preferred to choose to pay upon delivery or to purchase online from a well-known website or application.

SOME TIPS FOR ONLINE SECURITY

Dealing with Online Spam

Spams emails can be really annoying and sometimes they can include untrusted links. Spams can include many forms, from promotions to news to applications update to some companies brochures to even some scam emails. Here are some tips to manage spam emails:

In general, there is a good reason why they are categorized as spam so do not tap on any links unless it is from a worldwide known website as Google or Yahoo, etc.

Make sure to use a spam filter on popular emailing services as Gmail and Yahoo.

In case of news and updates you can simply unsubscribe to those emails; you can usually find the unsubscribing bottom at the end of the email.

Abuse Report

In the recent times, it became common to hear about children being cyberbullied. However, this can happen to seniors too. Whenever you get a message or an email including bulling, threatening or any abusive form, please ask for help from any adult and report this to the website help center. All the famous websites have a 24/7 available to help you with this matter. Also, whenever you see someone being bullied online you can help them by filing a report.

Beware of Scams

Fraudsters use many forms of scamming mails to trick people and pick pocketing their money. If an offer or promotion email sounds too good to be true follow your instinct and double check it before taking an action. Frauds come in many forms, here are some of them:

Personal emergency scam: if you get an email or see a post from a friend says they are in trouble and that they need money right away find another way to make sure that this is true, either by contacting this person in direct or ask them about something only you both know. Most probably you will find that their account or email was hacked and that the criminal is the one asking for money.

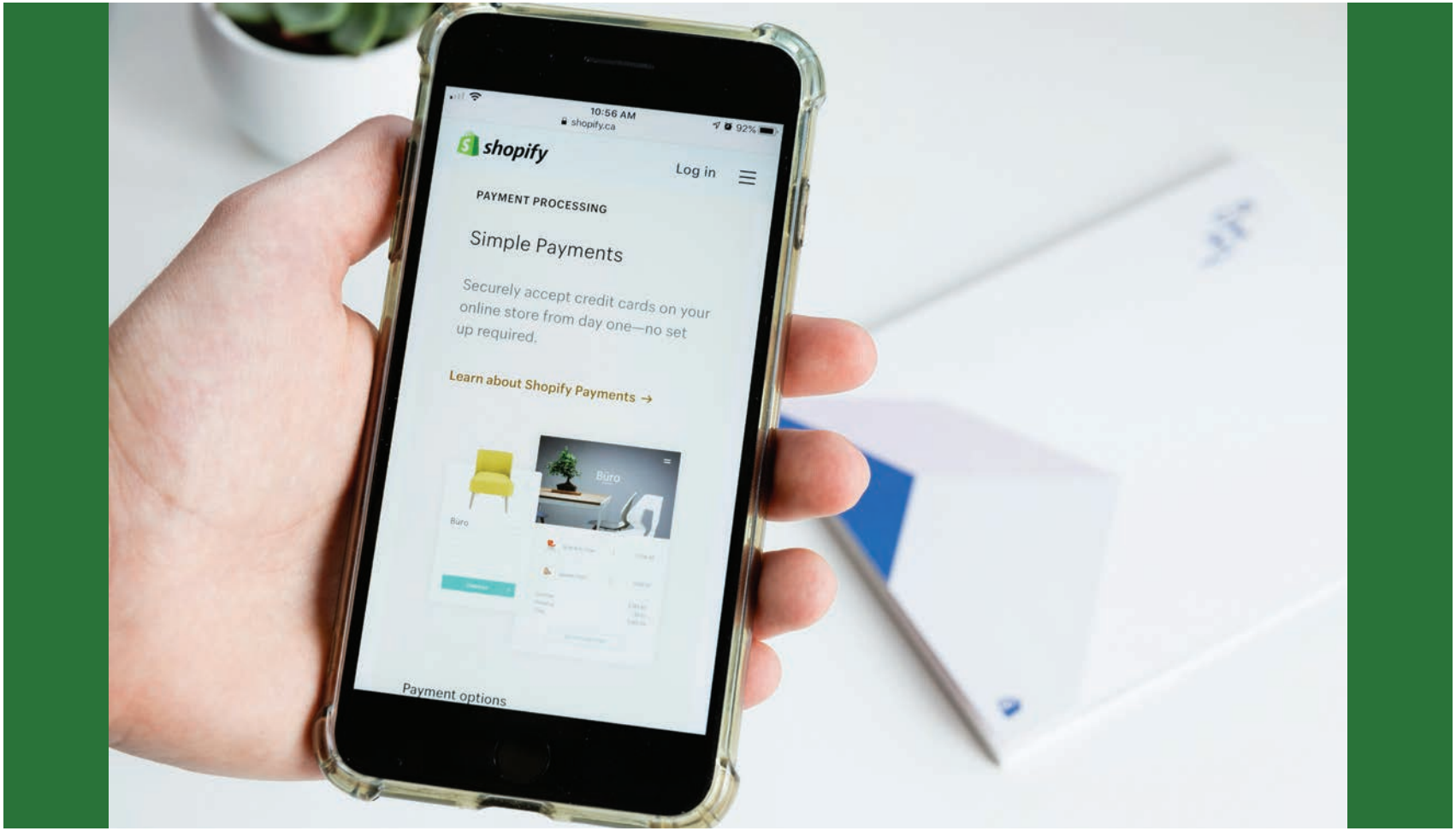
You Owe Money Scam: if you ever got an email claiming that you owe money from a bill collector or a government agency, it is probably a scam. Always make sure that this bill is legitimate before taking an action.

Online dating Scam: as we mentioned before always be careful with who you meet online. Online dating websites and applications are considered one of the most hospitable websites for fraud. Try not to share your personal information with strangers till you get to know them in person.

Computer Infected Scam: whenever you see a notification or email saying that your computer is infected, and Microsoft will fix it for you it is probably a scam. You have all the right to be worried about your device's safety. Consult an expert or run your already existing antivirus or antimalware but do not download any programs from untrusted sources.

Online Shopping

Shopping and banking have developed enormously in the past couple of years because of the internet. It became possible for people to buy their need, do their banking, follow up their investments, plan for travelling and even pay their taxes with a mouse click. Most of the processes go smoothly and without any complains. People can find all their groceries online and save their time and effort to go to the local shops themselves. This also been so much help to people with limited mobility. You can also get gifts and souvenirs online, get anything delivered at your doorstep, pay your bills, and manage your investments while you sit on your favorite chair. Off course there are some risks associated with online shopping and banking that can be managed. Here are some hints and tips for secured shopping:


10:56 AM
shopify.ca
92%
shopify
Log in
PAYMENT PROCESSING
Simple Payments
Securely accept credit cards on your online store from day one—no set up required.
Learn about Shopify Payments →
Büro
Büro
Payment options

Use unique passwords: again and again, strong passwords play an essential role in your defense line just like they do to your social media accounts. Never share your passwords and if you had to share a password with someone to manage your account do not forget to change your password afterwards. Make sure your password is long enough with minimum of eight characters including letters, numbers, and special characters. You can add an extra layer of protection by adding capital letters. Make your password unique and relevant to you to be easy for you to remember but not too easy for hackers to guess.

Two factor authentication: enabling two factor authentication gives you an extra strong layer of protection. Two factor authentication means that at every log in or online purchase the website will have to confirm that this is really you. Two factor authentication have many forms, it is either by asking for another special password or lock code, face lock or fingerprint lock. Other forms of two factor authentication are sending code message that can only be used once to your verified phone number for you to enter before completing the purchase or calling to inform you with the required one time password for each process. Most websites now, specially who deal with payments and purchase, and even social media websites have two factor authentication security system. You can simply enable it by following the instructions on every website. There are also many videos online on how to enable two factor authentication for each application.

Do not tap on untrusted links: do not click on any links sent through emails or on social media claiming to be from banks, government agencies, famous corporates, or credit cards companies even if the company's name is included in the web address. It is a common form of scam called phishing and its aim is to steal your private log in details. No bank will ask you about your cards' numbers or the cards' security code (CSC) written on the back of your visa or Master Card. Unless you are completely sure about the legitimate of these emails, you can access their web addresses by typing them in your browser as you normally do. When in doubt, it is preferred to call the organization.

Too good to be true offers: be extra cautious when it come to incredibly amazing offers sent to you through emails, like that you won a contest you never participated in or you won a very expensive gift or there is a huge discount on a very expensive item that you never expected you could afford. It can also be in a form of winning a

lottery or a vacation trip to Hawaii! The most dangerous type come in form of winning a low cost medication or a full medical coverage. All these scams want to steal your personal and financial information.

Do your online shopping through well-known merchants: be careful from unknown merchants or online shopping applications. Always do your shopping from a trusted reputable application. Ask about new applications and merchants' policies, comments, and reviews from your trusted circle before using them. Always search for the return and refund policies before making any purchase.

Ensure a secured website: when paying anything online, always check the website address if it starts with https: then it is a secured connection, the S stands for secure. Hen using mobile applications always make sure that you are using the official verifies ones. Otherwise, search for websites or applications' reviews before using them

It is better to use credit cards: when making online payments it is better to use credit cards, otherwise use debit cards or secured online payment methods like Paypal. Never send cash or checks or money orders through delivery applications. Although using cards may have some risk, it is minimal when compared to sending cash or checks through a transportation application. When using cards if something went wrong you can raise a claim and refund your money back. Debit cards take more time to refund the money than credit cards. Online payment services like Paypal and Skrill have their own privacy and refund policies.

Check twice before you pay: always check and review the specifications of the item you want to purchase. Also carefully read the website's return, refund, and cancelation policies. You may find yourself booking the wrong hotel or mistakenly agreeing to a non-refundable return policy. If anything goes wrong, try to contact the service provider to undo the change. Many websites have a cancelation free policy that let you undo the purchase, but you must act fast. As once the item is shipped the order cannot be cancelled. Usually, you can return your purchased item in case anything was wrong but you will have to pay the delivery fee. Always go through the buying policies before confirming your purchase, that includes calculating all the charges, knowing the shipping fee and adding also taxes and handling fees, in order not to be surprised with the deducted amount from your card once the purchase is confirmed.

Investigate before you donate: there are many well-known reputable funding websites where you can donate your money safely to provide financial support for people or to help those who are in need, but you should always proceed with caution. Investigate the case thoroughly, read the fine print for the donation and know where will your donation go to. Try to find out the real reason for money collection and when in doubt, go forward.

Beware of identity theft: never ever register your social security number online unless you are one hundred precent sure that this website is legitimate and have a strong real reason for such information, like establishing a new bank account, credit card or applying for a loan. If you are not sure about the legitimacy of the website avoid sharing personal information like your birth date or your birthplace. Also be extremely cautious about sharing your home address or phone number or any social media accounts. Famous social media accounts may require you to enter your personal information like your date of birth while registering, after that you can change your privacy settings to hide that information from others. When in doubt, check for other people's reviews.

Always keep an eye on your online financial accounts: regularly check your accounts for any unauthorized activity. Always check if there are any extra charges applied to your credit or debit cards or your banking accounts. If you find anything fishy, report it immediately to the fraud department of your bank or credit card. Make this a regular activity to check your account every once in a while even if you do not do any online shopping or banking as there is still a slight chance you may be a victim of fraud.

Charity frauds: most charities have their official online website for donations and that is safe as long as you are totally sure you are on the right website, and it is legitimate. Watch out for emails claiming to be a charity organization and asking for donations. If you do not know the organization, make up your search about it before you donate. You can check all the registered charities at CharityNavigator.org. Once you decided that you will make your donation online make sure that you are on the charity legitimate website. When doubt access the website by writing its address in your website browser as you normally do.

When it comes to taxes filing, only use legitimate sites or software: you can file your federal taxes online for free. You can even prepare them through a smart phone. Always ensure the legitimacy of the website you are using while filing your taxes.


HARDENED

SECURITY PRECAUTIONS HINTS:

Beware of your smart phone

Smartphones can store all your privileged information, in addition to, tracking your location. Always beware of what you download and from where. Only download applications from trusted websites. Also use passwords to protect your phone.

Secure your internet connection

Internet router is a small device at your home, it has its own username and password. Routers' default passwords are typically easy to guess. When in doubt, contact your service provider on how to change the password.

Secure your device

In case of smartphones, apply a strong password to protect your phone. As for computers and laptops, make sure to always enable your firewall security system and install a good antivirus. If you need help, reach our for family or friends or any server provider around you.

Keep your devices personal

It is always advisable not to use public devices or even anyone's device when you are required to sign in or when you make a purchase. You cannot guarantee that their devices are safe and free from any malwares or trojans. And if in any case of necessity, you had to sign in from a public computer never save passwords on this device and never leave your account signed in. Always make sure to sign out from any untrusted device. Also, never leave your private device unlocked and unprotected. Take an extra safety step and log out from any website after you are done using it.

Pay extra attention to attachments

Never download email attachments from strangers. In addition to, always checking if the downloaded file extension matches the required file type or not. If not cancel the download immediately.

Curiosity kills the cat

Beware of fishy links and websites. Always check twice before responding to any online offer or promotion. Do not get temped to buy what you do not need and do not let any merchant affect your decision. Always ask and investigate before making a purchase. When in doubt, move forward.

Set backups

Even by using the latest antiviruses software, unfortunately, there is always a new kind of attack that is not yet known. You can still get infected and be threatened by losing all your data. Keeping a backup for all your data limit your losses. You can set backups easily for your mobile either on a hard disk or on a cloud server. Similarly, you can store your computer data safely in a backup for any case of emergency. Try to execute your backups on a regular interval. Windows and MacOS have their own backup operating systems that you can restore anytime easily.

Ask for help

Never get embarrassed from asking for help. You can always reach our for family, friends or even neighbors. There are many senior centers, community, or religious groups and even some schools that offer low-cost or free classes. Apple and Microsoft's stores offer free support regarding the products they sell. You can also reach out to your local computer or electronic store. Mobile networks also offer free help through their call center or at their customer support centers.

2.1. Conclusion

The aim of this research is not to intimidate you from going online but to give you enough confidence and support while browsing. The internet is a great place to find new opportunities and discover new world.

However, you should be cautious while surfing online. Always follow your instinct and common sense while using the internet. Do not get over excited as some things are “too good to be true” and will mostly be scam in the end. Always think critically and wisely before executing any action online. Follow the above mentioned tips and hints for safe browsing and always remember that practice make it perfect! Stay safe and see you online!

3. POPULATION WORLD AND ELDERLY POPULATION

The growth in the use of Internet networks in different educational contexts is undeniable. Its consumption is much more prominent in all university entities in developing countries. Therefore, digital illiteracy is reduced by every minute in this population. Although social networks as a means of professional training have been used very little in the elderly population.

Digital competences are complex conceptual constructions that attempt to define the knowledge and skills to carry out actions in the academic, labor or vital field for social development. In this regard, they agree to consider these competencies as potentialities of the human being to adapt to the virtual demands that predominate in the coexistence of digital communities. Digital competences are basic and advanced skills for the achievement of human interrelationships, learning and teaching to achieve human communication. If we add to this concept the benefits of virtual teaching, both in the university environment and in the school context, we can understand digital competences or skills as the primary capacities to respond to the requirements of the curriculum [1-6], in turn, to solve the conjunctural problems of societies, in which the visionary powers of the country's universities and schools are immersed. Therefore, the attitudinal aspect is considered in this set of competences, although some proposals do not consider its inclusion in digital theory.

Adopting digital technology is becoming imperative for all areas of service and business including health care. In the era of global aging, digital technology is viewed as a new opportunity to overcome various challenges associated with aging, such as reduced physical and cognitive function, multiple chronic conditions, and altered social networking [1]. Consistent with this trend, the proportion of older populations using digital technology has increased exponentially [2], although this proportion is still smaller than that of younger generations. According to the latest Digital Economy Outlook Report from the Organization for Economic Cooper-

ation and Development (OECD), 62.8% of 55–74-year-olds are now connected to the internet, as are 96.5% of 16–24-year-olds [3].

Improving the inclusion and engagement of older adults in digital technology is becoming increasingly important for the promotion of their health and function [4]. While numerous studies have measured the digital literacy of younger generations [5,6], few have examined the inclusion of older adults in the research and design of digital technologies. Moreover, existing measures of digital literacy for older adults are generally focused on acceptance models and barriers to adoption [7-9], which fail to consider heterogeneity in user ability. As emphasized by Mannheim et al [10], designs that focus heavily on barriers may be marginalizing older adults by assuming that they are less capable of utilizing digital technologies than their younger counterparts.

For health care professionals, the rapid digitalization of social and health care services has various implications for providing older adults with improved access, knowledge, and behavior [11]. Telehealth platforms are a solution for frailer, older adults to receive medical support remotely [12], while GPS can be used to mine personalized data to locate older patients and track or predict their needs [13]. Internet use is associated with reduced likelihood of depression among the retired, and social networking sites represent an opportunity for older adults to reduce feelings of loneliness through online interactions with family and friends [14]. The increasing number of Alzheimer's disease forums on the microblogging system, Twitter, for example, shows how social networking systems serve as a platform for older individuals to share the latest health-related information with others [13].

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3.1. Older people's digital competencies are a means to minimise their possible risks for being excluded from society

When the Internet first appeared, early scholars tended to oversimplify the phenomenon of the digital divide by proposing a dichotomic division between those who access the Internet and those who are excluded (Hoffman and Novak, 1999; Katz and Aspden, 1997). They focused on inequalities in accessing the Internet as dependent upon socioeconomic and cultural differences (DiMaggio et al., 2001), what is today known as the first level of the digital divide (Attewell, 2001). Accordingly, these preliminary findings showed how the most socially advantaged people were the first to acquire technologies and access to information and communication technologies (ICTs; DiMaggio et al., 2004). However, with the diffusion of ICTs and the spread of the Internet, some scholars expanded this definition by including the different uses of the Internet and the possession of different grades of digital skills, what is today known as the second level of digital divide (Hargittai, 2002). This second level showed a digital 'stratification' (Peter and Valkenburg, 2006) and inequalities in terms of both Internet usage (Van Dijk, 2006) and online participation. Finally, researchers have also identified the third level of digital divide (Ragnedda, 2017; Wei et al., 2011) that refers to inequalities in terms of the benefits and concrete outcomes that users can gain from ICT usage (Van Deursen et al., 2015). From different perspectives and angles, these studies showed how inequalities in terms of Internet access (first digital digital divide), digital skills (second digital digital divide) and benefits and opportunities based on access and use of ICTs (third digital digital divide) are strongly intertwined with social inequalities. The literature shows how the uneven distribution of resources and capitals (not only economic but also social and cultural capital) among the population (Van Deursen et al., 2015) is at the base of digital inequalities. However, while looking at the sociocultural and

economic background of the population is vital when analysing inequalities in accessing and using ICTs (Blank and Groselj, 2015), this does not fully consider the multidimensionality of digital inequalities (Anthias, 2013). Recently, in an attempt to better understand digital inequalities, scholars have underlined the necessity to conceptualise a new capital, namely Digital Capital, able to capture the 'set of dispositions' that individuals develop to engage with new technologies (Park, 2017) and the internalised ability and aptitude as well as externalised resources that can be accumulated by the individual and used to gain benefits from using ICTs (Ragnedda, 2018). What is missing in the literature is an attempt to concretely measure and empirically test this specific capital. In fact, as mentioned earlier, no one has tried to measure Digital Capital and test it with sociodemographic and socioeconomic variables. As such, there is no literature in this regard. However, digital inequalities studies have repeatedly pointed out a marked relation between sociodemographic and socioeconomic patterns and inequalities in accessing, using and gaining benefits from ICTs (DiMaggio et al., 2004; Robinson et al., 2015; Zillien and Hargittai, 2009). Literature has, indeed, shown how these variables influence how people access the Internet (Tsatsou, 2011), their Digital skills (Jones-Kavalier and Flannigan, 2008) and their online activities (Hargittai and Hinnant, 2008; Zickuhr and

Smith, 2012). Although Digital Capital is a newly developed concept and has never been measured as a specific capital, we assume that it is interrelated with these five variables, which are in turn connected to the main axes of social inequalities. This general assumption is split into five different hypotheses as follows.

H1. Digital Capital is positively related to income Income is one of the main features taken into consideration by digital inequalities studies (Mardis, 2013; Ragnedda and Muschert, 2013; Talukdar and Gauri, 2011; Witte and Mannon, 2010). Inequalities in accessing and using ICTs are related to socioeconomic groups and these differences affect people's online and offline welfare (Van Deursen et al., 2017). Furthermore, several authors pointed out how traditional social structures, including income, at the base of social inequalities also influence digital inequalities (Ragnedda and Muschert, 2015; Robinson et al., 2015). Following this line of research, we hypothesise that higher incomes positively influence the level of Digital Capital.

H2. Digital Capital is negatively related to age Previous findings showed how age influences both access (Dutton and Blank, 2013) and the types of online activities (Blank and Groselj, 2014; Lee et al., 2011), thus affecting the constitutive elements of Digital Capital. Therefore, in line with several studies that showed a negative effect of age on the level and types of digital engagement and activities (Fox, 2004; Hargittai and Hinnant, 2008; Niehaves and Plattfaut, 2014), we expect that age negatively contributes to the level of Digital Capital.

H3. Men are more likely than women to have a higher level of Digital Capital Earlier research on the digital divide focused on several sociodemographic patterns, including gender (Katz and Rice, 2002; Norris, 2001; Wilson et al., 2003). More recently, some studies have shown how, in developed countries such as the United Kingdom, the gap between men and women in accessing the Internet has been bridged (Blank and Groselj, 2014). This suggests that, with regard to gender, the first level of the digital divide (based on inequalities in accessing ICTs) no longer exists in those countries characterised by a higher level of Internet penetration. However, some forms of digital inequalities can be still identified between men and women in terms of intensity (Hargittai, 2010), frequency of use (Wasserman and Richmond-Abbott, 2005), range of online activities (Haight et al., 2014) and self-assessment of digital skills (Hargittai and Shaw, 2015). Therefore, consistent with these studies, we expect that gender is related to the level of Digital Capital.

Digital Capital is positively related to educational level The literature shows that level of education strongly and positively influences access (Attewell, 2001; Clark and Gorski, 2001, 2002), the level of digital engagement (Mossberger et al., 2007; Shelley, 2009) and type of online activities (Blank and Groselj, 2014; Van Deursen and Van Dijk, 2013; White and Selwyn, 2013). Since these three features (access–engagement–activities) are captured by the DCI, we assume that higher levels of education positively influence the level of Digital Capital. H5. Urban users are more likely to have higher Digital Capital than rural users This hypothesis is supported by research that found that Internet penetration is higher in urban areas than in rural areas (Crang et al., 2006;

Townsend et al., 2013) and that the lack of broadband connection in some rural areas has negative effects on several social issues (Ashmore et al., 2015; Philip et al., 2017). We, therefore, expect to observe a higher level of Digital Capital among those living in urban areas, compared to those living in small towns or rural areas.

3.2. Digital Competence as a human right

Digital Competence is both a requirement and a right of citizens, if they are to be functional in today's society. However, it has been shown that citizens are not necessarily keeping up with the evolving needs derived from rapid technological change and uptake. The concept of Digital Competence is a multi-faceted moving target, covering many areas and literacies and rapidly evolving as new technologies appear. Digital Competence is at the convergence of multiple fields. Being digitally competent today implies the ability to understand media (as most media have been/are being digitalized), to search for information and be critical about what is retrieved (given the wide uptake of the Internet) and to be able to communicate with others using a variety of digital tools and applications (mobile, internet). All these abilities belong to different disciplines: media studies, information sciences, and communication theories. Analysing the repertoire of competences related to digital literacy requires an understanding of all these underlying conceptualisations. Moreover, other additional aspects have emerged as new requisites for being functional in a digital environment, such as for example the ability to peruse hyperlinked texts (http://www.ifap.ru/library/book522.pdf).

However, modern realities, namely the pandemic caused by the spread of COVID-19, has become a litmus test of the current level of digitalization of the domestic economy and formulated a clear research and applied problem that is to study crisis phenomena at the intersection of many research areas. First of all, this crisis is difficult to classify, since it numerous manifestations, from biological (emergence of a new strain of influenza capable of rapid mutation) to socioeconomic and political (at all levels from personal to macroeconomic) ones.

Today's crisis has non-economic origins, but leads, among other things, to economic consequences on a macro scale. Assessing these consequences will be possible only after the end of the pandemic. However, today it is possible and necessary to draw the first conclusions about the readiness of the country and the world to resist such global crises from the standpoint of mass transition to digital platforms in most spheres of society and socio-economic processes. in the world and in the country

Technologies are increasingly being used in society and the economy, and this is transforming ways of working, studying, communicating, accessing information and spending leisure time, among others. Being able to benefit from digital tools and media can support all the spheres of life in society today. The Internet and especially social technologies are increasingly used by all groups of citizens. However, how citizens use these technologies and what benefits they gain as a result may vary a lot. Research shows that digital usage does not lead to improvement or development of advanced digital competence as such. Furthermore, not all groups of people have enough interest, confidence, social support or opportunity to begin developing their digital competence. People without sufficient digital competence are at risk of becoming excluded from important activities, not being able to take full advantage of the opportunities available, and they may even endanger themselves in their usage of digital tools and media. Digital competence divides have a tendency to coincide with and possibly increase other social and economic divides. Therefore, actions for encouraging digital competence development for all citizens, regardless of their age, profession or current ICT use, are needed.

The aspects of digital competence are so varied that no common concept or globally-agreed definition exists. The fact that there are many and various concepts relating to digital competence reflects its importance. Research and literature on different concepts highlight the different aspects of digital competence that people need in order to benefit from digital tools and media. This report reviews the main concepts used: ICT literacy, Internet literacy, media literacy, information literacy and digital literacy. These overlap in various ways, and the report elaborates a mapping of their relationships. All of them include aspects which should be considered in cultivating overall digital competence. This report suggests that it is not useful to focus on elaborating an all-compassing definition, but rather concentrate on the aspects and elements which are needed to learn the necessary competence for current and future digital environments. This is the basis for the conceptual model developed in the report.

European policies have taken several approaches to digital competence. The policy approaches emphasize different perspectives and often have elaborated their own specific concepts and definitions to highlight the desired aspects. DG Information Society and Media (INFSO) emphasizes inclusion to the digital society,

DG Enterprise and Industry (ENTR) promotes ICT skills as necessary for innovation and industry, DG Education and Culture (EAC) highlights digital competence as a key to lifelong learning, and DG Employment, Social Affairs and Inclusion (EMPL) recognizes digital competence among the necessary new skills for new jobs. All these perspectives complement each other. Furthermore, all of them highlight that the main issue today is no longer access to and use of technologies, but the capability to benefit from them in meaningful ways for life, work and learning. European measurements currently concentrate more on measuring access and use than skills (i.e. measure quality of use) or competence (i.e. measure attitudes and strategies for use). However, work on improving measurements to support competence objectives is underway. The report proposes a conceptual model of digital competence considering following main areas: 1) Instrumental knowledge and skills for digital tool and media usage; 2) Advanced skills and knowledge for communication and collaboration, information management, learning and problem-solving, and meaningful participation; 3) Attitudes to strategic skills usage in intercultural, critical, creative, responsible and autonomous ways. Instrumental knowledge and skills are a precondition for developing or using more advanced skills.

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Social benefits. Internet provides new opportunities for people to connect with the people they know, with the communities they are interested in, or to create new connections based on their interests. Traditional location-based communities are losing significance for many individuals who have created their personal mobile community through networks (Ala-Mutka, 2010).

Health benefits. As already mentioned, the internet increases social quality of life for those far away from their social circles, or those who belong to specific groups. The rise of various communities also provides new support systems for patients with rare diseases, parents with children with diseases, or people in rehabilita-

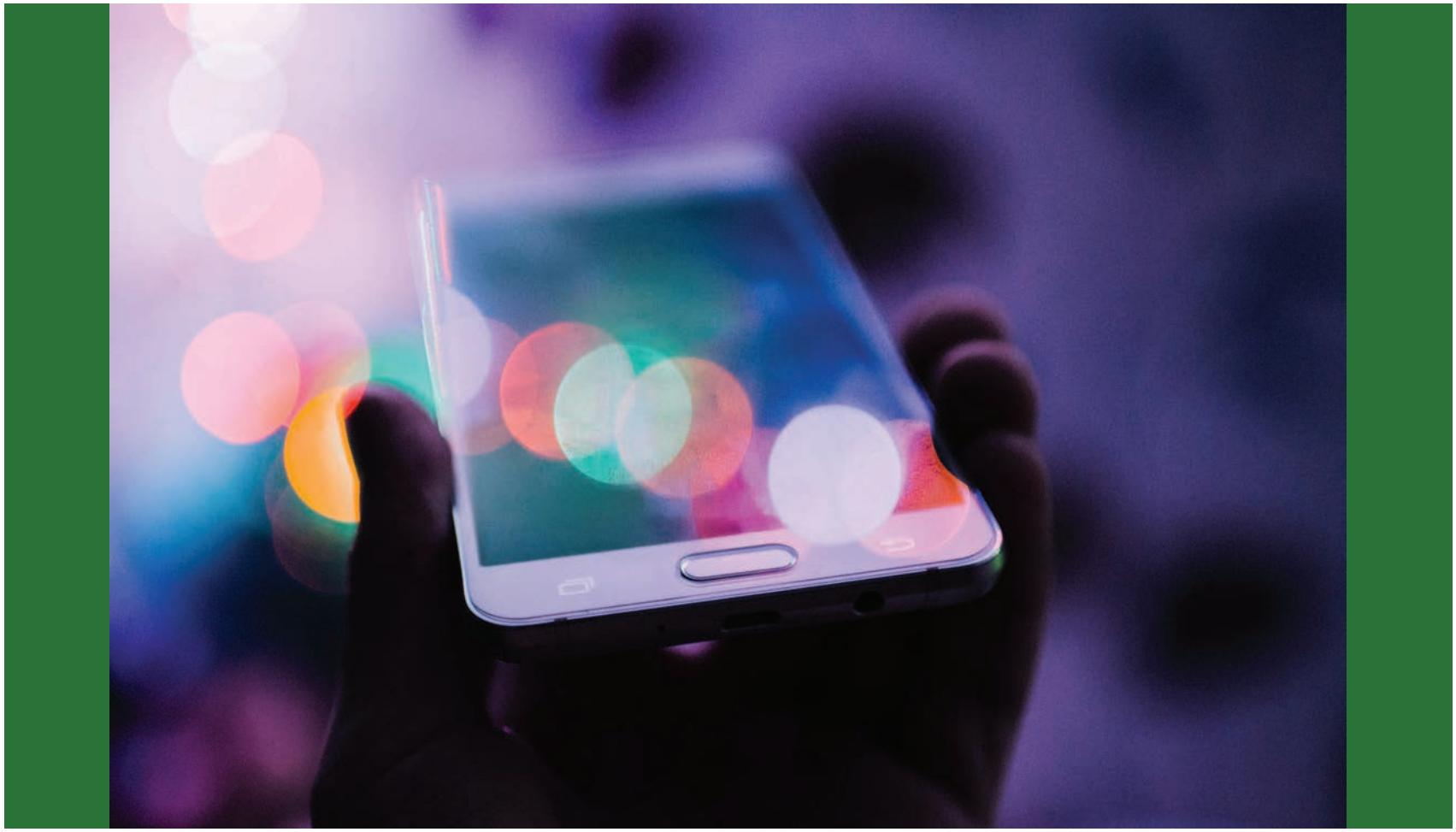
tion after operations. There are resources created by individuals but also by professionals and sometimes with professional editorial control.5 Overall, plenty of health information and community resources are available online, and their usage is high. For example, Pew/Internet found that 61% of adults (83% of internet users) in the US look online for health information (Fox & Jones, 2009). According to Pew/Internet, internet is the third most common option to look for health information, after asking health professionals (86%), or friend or family member (68%). 52% of online health inquiries are on behalf of someone other than the person doing the online search. The ComScore survey found that women claimed to turn more often to the internet and web sites (60%) for health information than to friends, family and significant others (51%), although they still relied heavily on professionals (82%). 6 Economic benefits. Digital competence has become a major issue for employability, because of the need for ICT professionals in all sectors and also because ICT is now used in all types of tasks. Employers perceive that in five years, 95% of all jobs will require ICT skills (Proofpoint, 2007). In 2010 in EU27, 52% of people employed used computers, and 94% of enterprises had internet access and 96% used computers (Eurostat data). Van Deursen (2010) reviewed research examples and found that workers with internet skills have better access to desirable jobs and workers using computers get better pay than those who do not. Digital competence also has other economic effects for the general consumers, as the better digitally equipped ones are able to search for lower prices and buy or sell products and services through various channels. The ability to benefit from ICT is important for any entrepreneur, as it provides easily set up platforms for innovative businesses even if they have a very narrow target group (Lindmark, 2008), making new products and services possible, and supporting crowdsourcing models for product development. Civic benefits. Digital tools and media provide a vast range of resources, which enables people to access up-to-date information from various sources and therefore be better informed of ongoing events in their country and the world. These tools also empower people to express their concerns and ideas, or report issues more visibly.

Furthermore, citizens with digital competence can use digital environments for setting up platforms for social innovations, such as launching collective actions for a local community or for helping victims of disasters (Ala-Mutka, 2008). Examples show how internet has been used to launch collaborative applications for increasing

the transparency of organizations through the information released by the citizens7 (Osimo, 2008). Governments and public organizations are also developing online public services and experimenting with participative approaches where citizens can contribute to improving the services and governance for themselves and for others8 (Ala-Mutka, 2008; Osimo, 2008). Cultural benefits. Internet and various social platforms also provide a new stage for people to share their personal expressions and interact with the audience if they so wish. For example, the reasons given by US bloggers for blogging were creative expression (77% of respondents), sharing personal experiences (76%), and sharing practical knowledge (64%) (Lenhart & Fox, 2006). People can also show their professional or artistic competence through online portfolios and showcases, thereby developing their professional identity and credibility. Digital tools and media also provide new dimension for lifelong learning opportunities. They provide a means of developing innovative learning and teaching with student-centred approaches and of connecting schools in organized education approaches (Redecker, Ala-Mutka, Bacigalupo, Ferrari, & Punie, 2009). Furthermore, the various communities and networks where knowledge is developed and exchanged provide people with informal and non-formal learning as part of their personal activities, even when they do not set out to learn (Ala-Mutka, 2008, 2010). Workers and professionals have a new and effective means of supporting tasks and developing knowledge with other professionals all over the world through internet-based communities of practice. Societal benefits. ICT usage has penetrated all areas of work, business and services. Previous paragraphs demonstrate how digital competence and access to ICT can benefit people in different ways. The transform survey found that 66% of people considered that internet had helped them to enjoy leisure time, get good education (60%), find a good job (58%), engage in lifelong learning (55%), improve conditions for setting up their own business (53%) and enjoy quality of life (51%). These benefit the society and economy as a whole. Furthermore, ICT has a special role in encouraging innovation and developing new solutions to societal challenges such as sustainability. ICT professionals are needed in all sectors and according to recent estimations by eSkills monitor project, this need is increasing more than the availability of respectively skilled people in the upcoming years. Already, 55% of ICT workers are outside the ICT industry. Ensuring digital competence for ICT workers and the people benefiting from the services is crucial for the growth and recovery of the European economy.

3.4. Risks to be considered

In 2010 in EU27, 69% of individuals had used internet in the last 3 months, and 26% had never used it. However, 93% of the 16-24 age group were among internet users, while 54% of the 55-74 age group had never used it. Another divide has an educational basis: only 47% of people with low education used internet in the last few months, while 92% of those with high education had done so. This highlights the need to ensure that everybody has the opportunity from early on in their education to see the value of digital tools and media and acquire the skills to use them. Another lesson from the statistics is the necessity to develop learning opportunities for those who have already finished with formal education, but who need digital competence to participate in society and for their work and personal lives. Furthermore, parents need an understanding of digital competence in order to protect, support and educate their young children in digital usage. For example, recent data shows that currently 77% of 13-16 year olds and 38% of 9-12 year olds in Europe use social networking sites, and not all of them are aware of the privacy settings.11 Personal safety and privacy. Internet creates additional new risks to those of traditional media or offline discussions with friends. Publicly disclosing personal contributions often builds a permanent visible trail, which may even affect employability later. For example, the Careerbuilder survey in 2009 showed that 45% of US employers use social networking sites to research job candidates, and 35% of them had found content that caused them not to hire the candidate (e.g. inappropriate photographs or information, content about drinking or using drugs, badmouthing colleagues). As the usage of social networking sites increases, it is crucial that users understand that those sites (without the appropriate privacy settings and critical skills) can lead to loss of control of personal data, and to having it delivered to third parties for commercial purposes. Publishing personal data online can also expose users to identity theft, harassment or other unwanted results. A recent US consumer report (ConsumerReports.org, 2011) found that 15% of Facebook users had posted



their current location or travel plans, and roughly one in five had not used Facebook's privacy controls. In addition to the risks people create for themselves in computer environments, they can be exposed to various technical risks such as malware and also to malicious people. In 2010, 31% of people in EU27) who had used the internet in the previous 12 months had experienced security problems (Eurostat data).

3.5. Responsible, ethical and legal usage

Through online contributions, people can cause harm not only to themselves but also to others. For example, 21.4% of US companies have detected exposure of sensitive information in blogs or similar tools by employees, and this has often led to disciplinary actions towards the employee (Proofpoint, 2007). People also often post sensitive information about their friends and colleagues, regardless of the 'harm' this may do them (Get Safe Online, 2007). The US consumer report (ConsumerReports.org, 2011) found that 21% of those with children at home had posted these children's names and photos, which may expose them to harassment. In schools, cyberbullying via social computing is a concern for both students and teachers and as many as 43% of students may have experienced online bullying (Palfrey, Sacco, boyd, DeBonis, & Tatlock, 2008). People are also often unaware of the IPR norms and rules. For example, Chou et al. (2007) found in their survey that only

66% of 244 students answered correctly about acceptable uses and, furthermore, only 37% could choose the correct reason for their answer. Critical understanding of the digital media. Online content affects people's decisions and activities, and therefore it is crucial that they understand its nature as a resource, where the validity of information has not necessarily been verified. Van Deursen and Van Dijk (2009) reported that in the performance test of internet skills, with participants from different target groups and educational levels, nobody really evaluated the information found. On the internet, the responsibility for evaluating the trustworthiness and value of information is for the reader and receiver, and it is important that they understand this. Studies show that for example, 34% of European internet users have decided, b ased on a b log, not to b uy a product (Deere, 2006; E. Hargittai, 2009). Even more worrying is that 7.9% of respondents in an eUser study decided not to follow a doctor's advice, and 19.5% not to go to a doctor, because of online information. Educational institutes have been banning Wikipedia usage, as students have not shown they have the skills to use it critically and responsibly (Ala-Mutka, 2008).

Inequalities

A major challenge is to ensure that all users learn to benefit from the various digital opportunities available, and at the same time are aware of and able to deal with possible risks that come with digital global media usage. Digital competence is critical for both people and organizations, for keeping up with developments and innovating new products and processes. Special attention is needed to avoid further divides between people who use digital tools and media, and those who do not. Those who have no access and skills to benefit from digital tools and media are also excluded from the new possibilities they provide. van Deursen (2010) suggests, based on his research, that the Internet strengthens traditional forms of social inequality. The economic, social, health, cultural, and civic benefits are more available for those who are already in a better position in this regard, and less available to those most in need, such as the low-skilled, unemployed, or the elderly without social support. DiMaggio et al. (2004) make the following observation: "... Internet competence is related to the satisfaction users derive from their experience, the extent to which they find it stressful or rewarding and therefore the extent to which they persist in Internet use and acquire additional skills.... Based on these observations we might expect inequality in competence to deepen inexorably, as skilful users find the Internet rewarding and acquire greater skill; and less able users grow frustrated and turn away." (DiMaggio et al., 2004, p. 378)

Although computer and internet use is increasing among all groups of people, this does not imply that they develop the strategic skills needed to benefit from it in different aspects of life. They may simply remain at the level of using some specific (gaming, communication) applications, as suggested by the findings of van Deursen (2010). Therefore, internet use as such should not be considered as proof of digital competence, and policies and educational approaches should aim to provide awareness and learning opportunities about digital competence for all.

Digital competence in social work practice and education: experiences from Norway

Since 2006, digital competence has been considered one of the eight key competences for lifelong learning for all European citizens (European Commission 2006). Several attempts have been made to develop a consensus about defining the term' digital competence'. This article adopts the Norwegian government's definition, which suggests that digital competence is 'the ability to relate to and use digital tools and media in a safe, critical and creative way. It is about knowledge, skills and attitudes. It is about being able to perform practical tasks, communicate, obtain or process information. Digital judgement, such as privacy, source criticism and information security, is also an important part of digital competence' (Government.no 2012). As the above definition suggests, digital competence is far more than technical skills. Instead, it should encompass different competence areas that are essential for a well-functioning digital environment (see Table 1). These areas can include information, communication, content creation, safety and problem solving, which together are referred to as the European Digital Competence Framework (DigComp) (Ferrari 2013). Digital competences are often a requirement for frontline social workers in Norway or other European countries since ICT is increasingly used in the field for service delivery, communication and corporation, case management and administration (e.g. Antonio, Raquel, and Victoria 2018; Goldkind, Wolf, and Freddolino 2018; Zhu and Andersen 2020). Social workers today are professionally obligated to improve their digital competence to enhance their service quality and fulfil people's expectations in a digital society (Berzin and Coulton 2017; Hill and Shaw 2011; Zhu and Andersen 2020). Besides, social workers need the competence to support service users' human rights through digital inclusion and access to e-government services, safeguard individuals from online and digitally-related abuse and risk, and advocate for marginalized groups and promote social equality via different digital tools (Arnesen 2019; C. Chan and Holosko 2016; Goldkind, Wolf, and Freddolino 2018). Nevertheless, there are very few discussions in social work research about what explicit knowledge and skills our professionals need to develop a digital competence that meets today's requirements, such as those specified by the DigComp. Due to the lack of consensus in our field, we hope to use DigComp as a starting point for developing a systematic model that will provide sufficient

detail to map the knowledge areas of digital competence in the social work domain. There are several reasons for selecting the DigComp framework in this study. Firstly, it is a framework that is initially developed basing on a review of other 15 well-known digital competence frameworks (Ferrari 2012; Janssen et al. 2013). Secondly, as a European Economic Area member, Norway understands digital competence largely coincides with the DigComp framework. The Directorate of Education uses the term 'digital skills' instead of 'digital competence', but the content otherwise corresponds well (NOU 2019). Thirdly, the DigComp has been widely adopted to detail a conceptual understanding of digital competence for high education (e.g. Engen, Giæver, and Mifsud 2015; Siddiq 2018).

3.6. Digital content creation

Content creation in the DigComp refers to the ability to create and edit new digital content, integrate and re-elaborate previous content, produce creative expressions, media outputs and programming, and deal with and apply intellectual property rights and licences (Carretero, Vuorikari, and Punie, 2017). According to previous studies, digital content creation can be an essential and competitive competence for today's social workers regarding advocacy, raising public awareness, communicating and delivering information, and supporting group and community engagement (e.g. C. Chan and Holosko 2016; Goldkind, Wolf, and Freddolino 2018). Nevertheless, in both the case study of NAV and the document analysis of curricula, we found that digital content creation competence is relatively less emphasized than other digital competence knowledge areas.

Safety

Safety knowledge includes knowledge about personal protection, data protection, digital identity protection, security measures and safe and sustainable use of technologies (Carretero, Vuorikari, and Punie 2017). In the social work field, to know about safety and security issues related to technology-use is one of the most important goals of digital competence development (e.g. López Peláez, Pérez García, and Aguilar-Tablada Massó 2018; Reamer 2015; Zhu and Andersen 2020). In the case of NAV, participants pointed out that there has been increased discussion about two main areas of safety issues related to ICT use in their practice. Firstly, as members of an 'information-intensive profession', the participants need the knowledge and skills to protect service users' personal data and privacy in a digital environment. NAV has many relevant strict regulation and policies to ensure that breaches are reduced. For example, data containing sensitive information such as personal health and financial information can only be shared via particular digital contact channels. Work PCs and mobiles used for information management are required to be protected by a password. Besides, sharing digital information across welfare sectors can help develop a unified welfare solution for service users. Such a process also raises

concerns, including the loss of users' privacy, the elision of informed consent, or the risk of labelling some clients and targeting them for scrutiny or intervention against their will and autonomy (Kingsley et al. 2018; Steiner 2020). Therefore, social workers must recognize such challenges and become informed advocates who promote ethical data collection and sharing across welfare sectors. Also, professionals are well placed to ensure that their service users understand how their data may be used and the purpose of such usage (Fitch 2019; Zhu and Andersen 2018). Secondly, safety knowledge also needs to address health risks and threats to physical and psychological well-being posed using digital technologies. Many participants

highlighted the importance of balancing the benefits of technology and the health-risks related to it, such as digital eyestrain and musculoskeletal problems in the neck, shoulder, back, spine, fingers and wrists, and emotional problems including stress. They also noted the positive and negative aspects of digital solutions in society generally. Some participants discussed how to mitigate risks related to technology-use, such as online sexual exploitation, grooming and cyberbullying, although none of them had encountered such risks in their practice. Safety as a knowledge area of digital competence is emphasized explicitly in the Regulation on National Guideline for Social Work Education (2019). However, the guideline only mentions that social work candidates should have knowledge regarding digital security, and have a good understanding of the possibilities and limitations of technology-use. It offers no detailed descriptions or examples of what constitutes digital security in practice or what kind of safety challenges are posed by technology-use. Similar formulations related to safety knowledge can be found in the social work curricula (e.g. N1, N3, N5, N6 and N9). In particular, N5 points out that their students are expected to 'know about digital security at the workplace' during their placement. N1, in its fourth-semester course Interdisciplinary Specialization, specifies that students will learn 'knowledge of digital security and can apply digital competence in the development of good services'. N3's second-semester course Social Work with Child and Family mentions that students should 'master digital tools, have knowledge of digital security and know about their possibilities and limitation in social work'. N11 states that its selective course BVV3050 Child Welfare, Media and Public will help students to develop 'digital expertise, including the knowledge of digital security in work with children, young people and families'. As we can see, the two main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safety knowledge areas identified in the case study of NAV, digital privacy and health issues/ threats related to technology-use are not highlighted as essential aspects of digital competence by current social work curricula. According to our educators, awareness of safety-related issues related to technology-use has been increasing in their institution. Although the programme descriptions do not significantly address this area, educators have tried to include the relevant topics in lectures and seminars in the actual teaching of their courses. For example, one educator addressed cyberbullying in her lecture related to school social work, while another addressed privacy challenges related to assistive technologies in recording service users' personal data. Besides, due to the COVID-19 crisis, most courses in autumn 2020 have been digitalized. This accelerated a heated discussion amongst both teachers and students in respect of the safety challenges of technology-use. These challenges include: 1) data security and privacy issues related to using different software to support online interactive learning; and 2) digital overload and pressures on physical and psychological health.

Problem-solving Problem-solving in DigComp means a capacity to solve particular technical problems, identify digital needs and resources, creatively use technology, identify digital competence gaps and update one's own and others' competence (see Table 1) (Carretero, Vuorikari, and Punie 2017). This competence area has been well reflected in the case of NAV. For instance, many of our participants need to have basic competence in dealing with technical failures, since they have to handle various digital systems and tools daily, and some of these systems have relatively weak user interfaces. These technical failures include system freezing, data loss and failure of automatic updating procedures. Many task requests on NAV data management systems overlapped because of failures to integrate and synchronize relevant information. Practitioners often have to perform the same tasks, such as data input, multiple times to ensure that all users of these systems (in or outside of NAV) have equal access to critical data. Hence many participants express frustration with the design and accessibility of case management systems that are time-consuming for data registration and sharing. Although most participants received relevant training before a new system or solution was implemented, some consider current institutional training that is operated by PPTs and videos to be 'anti-interactive', 'incomprehensible' and 'time-consuming'. Participants are also on different points of the digital transformation spectrum. While some

are super technology users who are dedicated to exploring the possibilities of various digital solutions in fitting their practice reality, some are resistant to system upgrading and complain about the rapid rate of digitalization. Those super technology users are also more likely to consciously improve their competence via digital means and help other colleagues who are prone to technical problems. As the literature confirms, those who are not technology super users tend to learn and evolve less in a technology-rich environment, and eventually become unable to use digital tools creatively for professional purposes (Hill and Shaw 2011; Baker et al. 2014; Antonio, Raquel, and Victoria 2018).

Participants also noticed that digital competence amongst their service users could be an essential factor in shaping these individuals' experience with NAV digital services and technologymediated practice. Service users who lack relevant resources and digital competence can encounter challenges or even exclusion from NAV technology-mediated services and practice. Examples of such users include individuals who lack BankID and other authenticated online identification tools needed to access the NAV digital platform or cannot afford smartphones, personal computers and Wi-Fi. They can also be those who lack digital competence at the instrumental and structural level, i.e. they may not know how to use a keyboard or navigate a computer system. Individuals who are sceptical of technology or lack trust in NAV digital solutions' ability to protect their privacy and personal data can also be resistant to, or have an overall negative experience with, digital practice in the institution. As concluded by previous literature, service users' diverse digital literacy levels and uneven access to ICT can inhibit equality. Defining inequalities in the new era of digital welfare and identifying critical resources for improving disadvantaged groups' digital competence are essential components to promote digital inclusion (Goldkind, Wolf, and Freddolino 2018; Olsson, Samuelsson, and Viscovi 2019; Zhu and Andersen 2020).

3.7. Elderly in the Digital Era. Theoretical Perspectives on Assistive Technologies

First, there is an accelerated pace of aging and of increased life expectancy at both the European and national level [1]. The main implication of these phenomena is linked with both a substantial pressure on the healthcare system [2] and with a progressively greater need for self-care of the elderly. Moreover, the world today is increasing technologically. Considering these two realities, the main question is how can technology be used as an efficient tool for helping the elderly to live an independent life. Starting from the international context, this paper offers a theoretical overview on the way the literature is considering the assistive technology issue.

Starting from the digital divide issue and from presenting the way human abilities weaken over a lifespan, the paper focuses on the concept of assistive technology, as a possible solution to improve the elderly's lives. As this is a very complex notion, after defining assistive technology, a state-of-the-art perspective is given. Assistive technology acceptance models and technology design recommendations are described in order to provide an in-depth overview of the most important variables that can influence the decision of elders to accept the use of technology.

In a context in which the elderly, people over 65 years old [3], are considered to have accumulated a large amount of knowledge and experiences [4], eliminating them from social life, especially through retirement, and considering the aging issue of the population, can bring an important social capital deficit. Thus, the new technologies (devices that can help with communication and in monitoring certain behavioral or medical issues) can help (re)integrate the older persons within the natural process of life. Technology has the capacity of improving the quality of life especially for the elderly, mainly by monitoring their health conditions through remotely con-

trolled technologies, by increasing self-esteem through not being dependent any longer on other people, by integrating them into specific online communities, thus reducing loneliness levels, or by keeping the elderly active through the possibility of online communication [4].

Although technology is omnipresent (from banks where the bills should almost exclusively be paid at an automatic machine, to bus stations where bus tickets can be bought from an automatic machine as well), for the elderly, the motivation to work with the new devices is usually reduced. In a context in which, by aging, there is a decline in sensory and cognitive abilities, it is likely that older people consider the need for learning new abilities as a barrier in the process of using the new technologies, such as ATMs, computers and online navigation [5].

The aging process is considered to be the result of social evolution (medicine, life quality, social protection, etc.) and it is due to the decline in mortality among old people, the increase of life expectancy, and to the significant decrease in the birth rate [1]. Aging is a global phenomenon which, currently, affects all countries. Thus, the decrease of the number of children at the same time as the increase in the number of old people is generating a change in the equilibrium between the generations. Being a long-term and irreversible

phenomenon, there is a high probability that it will have the same effect during the entire 21st century. It is believed that in 2050, the elderly will be around 22% of the total population of the world [1], and, based on the United Nations Department of Economic and Social Affairs [6], growth rate for people over 65 is 2,4 per cent annually worldwide. In 2047 estimations show there will be higher number of old people compared to the number of children [3].

At the European level, the average age has increased on average by 0.3 years every year from 2004 to 2014 [7]. The European Union's average for people between 65 and 84 years of old is 6.8% of the total population [8]. Men of the age of 65 are expected to live, on average, 17.9 years more, while for women this is 21.3 years [8]. In this latter case, the intervention of public policies is required. Since there is a growing number of people incapable of self-sustaining, the pressure on the medical assistance system is higher than ever [9].

Based on the data provided by Eurostat [3], the internet activities of seniors aged 65–74 in selected European countries in 2012 were diverse. Thus, more than 55% were not interested in the internet, 27% declared that

they do not need the internet, 19% did not own a computer, 16% considered computers as being too expensive, 15% did not know how to use a computer, and 12% claimed that no training was available.

Hence, considering the alarming predisposition for aging, the low level of use of the internet and new technologies by the older population, and the capacity of new technology to improve the quality of life for the elderly, there is the need to accustom older people with technology use, for their advantage.

The Digital Divide

In 1977, the sociologist Daniel Bell, the first sociologist to describe the social impact of digital media communication, considered that technology has major social consequences [10]. Besides the political and economic benefits of the internet, the literature emphasizes the social benefits of computer networks. Thus, the internet can be perceived as a new form of socialization, of community creation, or as a form of meetings in the "electronic town" [11].

The degree to which a community adopts something innovative depends, in the first place, on the compatibility level (the existing values, the past experiences, the existing needs of the individuals) and, in the second place, on the relative advantages of that particular technology [12]. Besides the issue of intimacy, inequality is a problem that is being debated within the technological development process. Inequality, in the digital language, is named the digital divide [10].

Olphert et al. [13] underline that there are different types of digital divide. The first one is the global divide that refers to the internet access differences between industrialized and developing countries. Second, there is the social divide that emphasizes the gap between the people rich in information and the people poor in information in every nation. Finally, he talks about a democratic divide that implies differences between those who do and those who do not use technology in order to engage and participate in public life [13].

More specifically, in the online context, the digital divide means unequal internet access from the point of view of the knowledge involved, of the quality of connection, or of the ability to evaluate information. Studies

and reports developed in the United States by the National Telecommunications and Information Administration claim that internet access is encouraged for individuals with high education, with average and above average incomes, under 55 years old, mainly men from urban areas. Interestingly, the studies underline that two discrepancies (the advantage of men over women and of young over old) are not valid any longer, especially in the context in which technology is becoming more and more user friendly and widely used [10].

Another study indicates that the effects of using the internet vary based on the competencies of the user. Hence, a novice is likely to have difficulties in finding the needed information and, therefore, to develop contradictory feelings on technology, such as frustration and incapacity [10].

Impact of Aging

Knowing how elders perceive technology and understanding their profile are vital aspects that need to be taken into account by businesses, government and social service stakeholders that provide services, products or programs aimed at the elderly. Thus, the elderly are considered a sensitive community characterized by medium and sometimes low income, fewer financial demands and plenty of leisure time. However, they need social integration [14].

The changes are present at the physical, emotional and social level as well. Hence, in respect to sensory changes, both visual and hearing acuity is diminished and can affect the way the information is perceived [14]. The elderly are likely to show a reduction in the width of the visual field, in light sensitivity, in color perception, in resistance to glare, in acuity, in contrast sensitivity, in visual search and processing, and in pattern recognition [15]. Aging people need more light for both reading and writing, the speed of processing information declines, and the field of vision become smaller [3] (p. 18). Vision problems are also related to reading small text, seeing in dim light, locating objects visually, and seeing objects or people located closely. Although, these problems are usually present for around 15–20% of the adult population, almost all adults over 55 years of age need glasses [16] pp. 4–5). In the same respect, it is believed that hearing loss is the third most common chronic condition re-

ported by the elderly, approximately 30–35% of the people over 65 having this problem, especially men [16] (pp. 4–5). At the acoustic level, the impairments are related to decreased hearing, a worsening of correct perception and the localization of sound [3] (p. 18). Caused especially by the lifetime exposure to noise, hearing problems result in a decrease in the ability to hear certain speech sounds or high-pitched sounds (e.g., the chirping of a bird, the ringing of a phone, etc.) [16] (pp. 4–5). Due to a decrease in hearing, in the design of an interface or website, sound should be in lower frequency ranges than usual [15].

Table 1 provides an overview of the way some of the human abilities evolve over time. For instance, starting with 35 or 40 years age, vision abilities (related to light intensity and spatial features) and some hearing abilities (related to the physical aspects of the ears and to external variables) start to deteriorate [3].

At the physical level, the elderly tend to have problems with flexibility, strength, speed of execution, hand-eye coordination, mobility and agility [14]. Regarding the motor skills, the main changes refer to a decrease in speed of movement, a decline in strength and endurance, a decline in balance and coordination, and the likelihood of involuntary movements [17].

It is believed that up to 65 years old, a person has already lost one-third of his/her muscular mass. Therefore, not only balance and standing up worsen, but the coordination, precision and fine motor skills diminish over time. Thus, when using technology, issues can appear in a context of a fast input required (e.g., double click) or in the situation of pressing more than one button at the same time [3] (p. 18).

At the cognitive level, the main affected elements, especially for elders, are memory, reasoning and abstract thinking [14]. Some of the most common manifestations are memory loss, confusion, "disorganized thinking, impaired judgment, trouble expressing themselves, difficulty recognizing familiar people, and disorientation to time, space, and location" [16] (pp. 4–5). In addition, due to the fact that focused attention becomes a challenge, the amount of provided information should be reduced and presented in a simple and recognizable way [3] (p. 18).

Considering the context of an aging population, of the heterogeneity of the population over 65 years of age, and of the normal health problems associated with this age, effective communication with the elderly, especially

from health care professionals, becomes a challenge [16] (p. 3). Loss of language comprehension is usually attributed to a decline in working memory, "the brain system that provides temporary storage and manipulation of the information necessary for complex cognitive tasks" [16] (pp. 4–5). However, the existing research has not found evidence regarding the elderly's decline in language ability (language sound, meaningful combination of words, or verbal comprehension). On the contrary, considering that long-term memory is not affected (knowledge, vocabulary, family history), it is believed that vocabulary improves with age and intelligence remains stable [16] (p. 4).

Social changes can include the decrease of income, the loss of pre-existing social networks, and isolation. Based on the above changes, emotional shifts can include the appearance of loneliness, tension, anxiety of becoming dependent on others, and fears about safety [14].

Assistive Technology for Elderly

Technology can help elders to stay in touch with their families and friends, develop a safer environment in the house, facilitate medical care, introduce new motivations in a person's life, generate a larger access to information, and increase the level of social interaction, self-esteem, life satisfaction and autonomy [4] (p. 287). Thus, by having access to technology, the elderly can be more independent and more socially involved.

The literature talks about advanced sensors and networks of technologies that can improve the quality of life. Examples include intelligent houses equipped with lighting intelligent systems, intelligent kitchens (systems for the detection of dangers from kitchen devices), supervision of energy use, security systems, etc. These technologies are useful especially for elderly people that aim to live independently in their own homes and, at the same time, to have the control over their medical status [2]. Moreover, the human-robot or human-device interaction can be beneficial in an emergency situation as, for instance, in the detection of a fallen person in the kitchen. An intelligent house can recognize this abnormal situation and can send the robot-device to that person in order to give first aid [18].

Assistive technology is defined as equipment that can be personalized and that can maintain or improve the capacities of a person with medical problems [4] (p. 288). Wireless communication systems can facilitate medical examinations, data collection about the patient, control the environment in which the individual is living in order to prevent sickness, maintain physical and cognitive functions and active involvement [4].

Gamberini et al. [4] (pp. 287–288) talk about several sets of objectives that link the elderly to technology. First, mainly to avoid sickness, technology can become a bond between medical specialists and the elderly that can receive advice (tele-health technology) or that can be remotely supervised [2]. Second, the technology can help with the cognitive and physical supervision of the individual through sensors that constantly collect data related to the location of the person and the activities he/she has completed. This is the case for individuals with physical disabilities (e.g., who cannot leave the house), cognitive disabilities, individuals that suffer from isolation, frustration or depression and that can communicate with persons who have a similar disease [4] (pp. 287–288).

The literature discusses two concepts related to assisting the activities of daily living (ADLs), namely personal assistance and technological assistance. While personal assistance implies help given to a disabled person from others (e.g., spouse, child, friend, paid caregiver etc.), technological assistance implies using equipment (e.g., wheelchair, walkers, raised toilet seats etc.) in the daily activities of the enabled person. Technological assistance creates more independence than personal assistance [19] (p. 330).

There are two main arguments for the need for assistive technology in the elderly's daily life. The first one refers to the expectation of a shortage on staff and qualified healthcare personnel in the near future. The second refers to the fact that people tend to increasingly prefer to live in their own houses instead of being institutionalized in sheltered homes when it is the case [20].

In this context, there are many attempts to create the most efficient robots that can be used in healthcare. There are two directions for health-care technology development. The first direction refers to physical assistive technology (rehabilitation robots) that are not primarily communicative and social, such as wheelchairs, artificial limbs, exoskeletons, etc. The second direction refers to health-care technologies that imply commu-

nication and that can be considered social robots or social entities that communicate with the user (assistive social robots) [20] (p. 95).

Within the assistive social robot field, the literature talks about service type robots and companion type robots. Service type robots support the basic activities (e.g., eating, bathing, using the toilet, getting dressed), enhance the mobility level (e.g., navigation), provide household maintenance, and monitor individuals that need permanent attention. Examples of this type of robot are the nursebot Pearl, the Dutch iCat, and the German Care-obot [20] (p. 95). Companion type robots have the main function of enhancing the wellbeing of the user. Several examples provided in the literature are the Japanese seal-shaped robot Paro, the Huggable, and the Aibo developed by Sony. Equally importantly, the literature emphasizes that there are robots that are both assistive and companion technologies (e.g., Aibo) [20]. Table 2 provides insights on some of the above mentioned assistive robots.

3.8. Adoption vs. Acceptance of Technology

Renaud and Van Biljon [27] make the distinction between adoption and acceptance of technology. While technology adoption implies a process (from becoming aware of the technology to using the technology as a way of life), acceptance is defined as an attitude towards technology. The example given by the two authors refers to a user that purchases a device but who needs time until adoption per se. Full adoption happens only after full acceptance [27].

Interestingly, while the information system domain talks, at the micro-level, about technology acceptance models without considering the process of full adoption, sociologists underline a macro-level approach by considering a purchasing decision (acceptance or rejection) as part of the adoption process [27].

The technology adoption process is described by Renaud and Van Biljon [27] as a set of five stages: the knowledge stage (the individual gets to know about the product), the persuasion phase (the individual becomes persuaded of a need for the product), the decision stage (that leads to purchase), the implementation stage (the product is being used), and the confirmation stage (the need to confirm the decision taken to buy the product). In the same respect, Renaud and Van Biljon [27] talk about the domestication of technology, in which users are considered social actors and in which the main focus is on the way technological innovations change and are changed by the social context.

The most important model related to technology acceptance is the technology acceptance model (TAM). This model was introduced by Fred Davis in 1986 and it helps explain and predict user behavior for information technology [28]. In other words, TAM can explain why a user accepts or rejects information technology and it is based on two cognitive beliefs: perceived usefulness and perceived ease of use [28] (p. 151).

The technology acceptance process is translated into TAM by relying on six variables: external variables (demographic variables, perceived usefulness, perceived ease of use), perceived usefulness (the degree to which the technology is enhancing performance), perceived ease of use (the degree to which an individual considers

the technology as being free of effort to use), attitude towards use (the desirability of using the system), behavioral intention (predicted by attitude towards use and perceived usefulness), and actual use (predicted by behavioral intention) [27]. However, this model does not take into account the social influence [27].

The main description of TAM refers to the fact that the use of technology is influenced, directly or indirectly, by the user's behavioral intention, attitude, the perceived usefulness of the system, and the perceived ease of using it. At the same time, external factors can affect intention and use through the perceived usefulness and ease of use [28].

3.9. Designing Technology for Elderly

When it comes to assistive technology for the elderly, there are two major issues raised by the literature. First, technology is perceived as being unfamiliar and is associated with anxiety of use. Second, the investment cost in technology is usually perceived as being too high [31]. Starting from the hypothesis that age alone does not predict technology acceptance, Nedopil et al. [3] talk about a distinction between the factors that influence technology acceptance and the factors that influence the need for technology. Thus, the factors influencing technology acceptance are cost, compliance with individual needs, personal experience with technology usage, and accessibility barriers (physiological, cognitive). At the same time, the factors influencing the need for technology are user generation, housekeeping style, number and type of inhabitants in household, and personal attitude towards technology [3].

The literature [3] considers that the elderly are motivated to use technology especially in certain situations. Hence they are more open when the technology is compatible with their routine and when they can assess that the technology benefits outweigh the effort of learning to use it. Moreover, it is important to notice that, as expected, the numbers of elders that use information and communications technology (ICT) are constantly increasing [3].

A large amount of applications and products available for the elderly, although accessible, are not specially created for their needs, and thus do not sufficiently generate familiarity [31]. Regardless of its utility, technology is frightening and is perceived as a sensitive issue for the majority of elders, mainly if it is too intrusive, complex, embarrassing, or environmentally disruptive [32] (p. 1703). In this respect, the familiarity of the design and the interface is considered a very meaningful issue that should be addressed for the e-inclusion of the elderly [31]. As Wakefield [33] emphasizes, there is a gap between the way mainstream technology works and the abilities of elders. For instance, while the response time for an icon on an Apple device is 0.7 s, the response time for a person over 65 years old might be about one second. While the existing touch screens are not suitable for a

person with less sensitive nerves in the fingers and thus with a heavier touch, a slight tremor of the hand might be interpreted but the device as a swipe rather than as a touch [33]. Therefore, the existing technology should be completely adapted for the needs and abilities of the elderly.

There are a large number of companies trying to create the most suitable device for elders and their needs. However, there are studies emphasizing that assistive technological solutions must be aware that the elderly do not want to be perceived as needy and frail [3].

Considering that the issues related to the use of technology by the elderly can be solved through the improvement of the design and through training, Gamberini et al. [4] (p. 289) talk about five characteristics of using technology: the difficulty level of learning (the needed time to complete an activity), efficiency (the degree to which the applications fulfill the needs of the individual, thus avoiding lost time and frustration), errors (the degree to which certain applications give errors and the degree to which the individual is capable of solving them), and satisfaction (the satisfaction related to the use of a certain device or application).

At the same time, while the elderly tend to perceive monitoring technology in a positive manner, their acceptance depends on its usefulness in supporting independent living, and on the level of intrusion into private life [32] (p. 1704), especially considering their concern for the privacy of space and not of information [32] (p. 1704). Leonardi et al. [31] propose an interaction modality that is based on known and natural gestures that are familiar to the elderly. For instance, they propose scrubbing an object with a finger instead of the "erase" command, the avoidance of the standard menu and tools, representing a discussion forum as a town square, and using a classic style instead of stunning shapes and colors.

In the same respect, there are studies showing that internet access can increase social interaction and cognitive performance among the elderly, mainly because browsing the internet implies cognitive and motor abilities [34]. In a neuroimaging study, involving 24 elderly and mature adults, Small et al. showed that both while reading a book and while searching the internet, similar brain areas are activated [34]. The only difference is that the internet search activates the prefrontal cortex more intensively, an area responsible for quick decisions and complex information assessment. Hence it can be claimed that digital inclusion enhances the cognitive abilities

of the elders, contributes to their physical and mental health, and provides an opportunity for them to have an independent life [34]. In the context of progressive physical, cognitive and psychological difficulties, technology can be a valuable component for improving independent home living for the elderly [32] (p. 1703). The main situations in which technology can be helpful are the following: simplification of domestic duties and safety (e.g., task reminders, gas, fire and intrusion alarms, fall detectors, visual and acoustic monitoring systems), and maintaining communication and social networking (e.g., video-communication systems) [32] (p. 1703).

Nedopil et al. [3] (pp. 21–22) provide several elements one should be aware of when designing a product for the elderly. First, one should provide additional value, value related to a perceived future advantage, such as safety and comfort. Importantly, what it is promised should be delivered. Second, the technology should be an adaptable support. This means that it should generate help for those tasks that help the elderly become independent, not for those tasks he/she can easily manage. Third, the product should be designed in a very simple and understandable manner. Although an appealing design remains an important component for the elderly as well, the functionality should take into account that concentration and memory decrease with age. Finally, the device should enable a joyful experience, be easy to use and to generate positive emotional practices [3] (pp. 21–22).

There are three main stages within the process of designing suitable products that fit the needs of the elderly: understanding, conceptualizing, and testing. The first step, understanding, refers to the phase in which the information related to the behavior and needs of an elderly person is gathered (self-documentation, interviews, market research, literature). The second step, conceptualization, is the stage of generating ideas, of developing concepts that should properly satisfy the users' needs. Finally, testing is the phase in which the new concepts and products are tested in order to receive valuable feedback for improving the final item [35].

Based on the elders' characteristics, the devices should include large buttons, be more suitable for shaky hands, provide alerts in the case of a detected emergency, be easy to clean, have a waterproof display, display good contrast, have a glare-free display, have compatibility with other interfaces/applications, have an easy-to-read manual with pictures and step-by-step instructions, have large data storage, etc. [35].

The way a mobile interface is organized can strongly influence the way it is perceived by individuals. The perceived quality of an interface depends on the level of entertainment, navigation difficulties, and how informative it is. While navigation difficulties or accessibility regard timeliness, convenience, interpretability, and completeness, being informative implies accuracy, relevance, comprehensiveness, recentness, and credibility [36].

4. ASSESSING LEARNERS SKILLS AND COMPETENCE

4.1. Emotions in seniors

Getting older brings with it a series of changes at physical-sensory, cognitive, social and emotional- motivational levels as well as a strong heterogeneity: not all older people are the same, but there is considerable intra- and inter-individual variability determined by life experiences, educational opportunities, family context, type of job (De Beni & Borella, 2015).

Aging is therefore that multidirectional and multidimensional phenomenon that, despite seeing the deterioration of the person involved, is able to control emotions: preferring the positive ones and reworking the negative ones in a positive key is important in order to improve one's well-being. A lot of studies show how emotions positively affect various constructs such as, for example, memory, perception and learning, as well as the reenactment of memories in which emotion plays a reinforcing role.

Often the recollection is more related to the emotion felt than to the actual event. We can refer to classical theories by quoting some authors. James and Lange intended to debunk the common-sense theory's belief that sensations produce physiological aspects of emotions, arguing that emotion is the sensation of physiological changes: emotion would thus be determined at the conscious level by the perception of the body's responses to the stimuli that cause fear, anger, sadness or joy.

Instead, Cannon and Bard proposed a so-called central theory: according to this theory, emotion does not occur at the visceral level, but at the cerebral level in the circuits of the paleoencephalon (particularly the thalamus and hypothalamus), which would activate cortical and, later, visceral functions. In this theory, therefore, the flow of

events proceeds from the emotional event to the Nervous System, and from it simultaneously to both the viscera and cortical areas for a cognitive processing of the event.

Aging brings greater modulation of emotion, which explains greater mood stability, decreased psychophysiological response, and reduced emotion seeking. The elderly person carries with them a large store of emotions, whether they are of joys or sorrows experienced in one's life and which shape character and thinking. Not only that, emotions are also identified as the basis of social and cultural relationships. The older we get, the more social interactions are reduced, the circle of friendships is tightened and we rely more and more on family and affections. This phenomenon has been confirmed by studies and research, featuring Carstensen's psychological theory, developed in the 1990s: "Socioemotional selectivity theory." According to this theory, the elderly bring into play the "positivity effect," an emotion regulation mechanism that focuses on emotional rather than cognitive goals, aiming to eliminate negative experiences thus reducing emotional risks such as tension, stress and conflict and preferring fulfilling emotions that stimulate well-being.

The perception of time is another important aspect of this theory, realizing that one has little time available pushes the elderly person to focus on short-term goals instead of long-term ones, such as creating new knowledge that takes time and energy. The desire is to live in the present and enjoy it to the fullest.

However, this focus just on the positive aspects of life can lead to negative consequences. The elderly person trying to avoid information that tends to be negative and to delegate third parties in difficult and unpleasant decisions, will tend to misbehavior related to failure to process information. Trying to address this issue in a recent study, participants (both young and old) were asked whether they preferred to request free, reliable and anonymous information about their personal susceptibility to various diseases and environmental threats. Half of the participants were told they could know the "risk" (negative instructional framing); the other half were told they could know "protection" from threats (positive instructional framing). In conclusion, it was seen that older adults were more likely to request the information when presented in the protection frame than in the risk frame.

This leads one to think how health professionals need to tailor the message they want to communicate to the older patient according to their preferences and goals. The role of the educator, which has found its employment

since the 1960s, is seeing an evolution in its employment. If in the early days the profession focused on the educational and animative side of groups of the elderly, today the figure of the professional educator also carries out the employment of rehabilitation and care of the same, basing their work in the relationship with the elderly. The goal is that of the maintenance and enhancement of skills through the design and management of activities related to daily life, which are intended to be a conduit to achieve the educational goals set. These discoveries have led our society to a revolution in thinking about and managing the elderly. Much attention is given to their well-being and future life perspective.

Research in the field shows that with the help of psycho-physical activities and games, one can improve the aging phase and reduce the onset of illness by managing to live longer; mindfulness sessions can help one live in the "here and now," processing what has been and enjoying the present, leading the elderly to better manage and express emotions. Therefore, to improve emotional experience, it is necessary to do targeted work on emotions that will lead to simultaneously stimulating emotional contact and the perception of different emotional states, enhancing the recollection of emotions, stimulating the verbal expression of felt emotions, and urging their sharing and well-being, stimulating both direct and indirect emotions.

4.2. The importance of providing evaluation on exercises for the development of emotional competence

The role of professional educators is a decisive role in the lives of the elderly, accompanying their journey and influencing their outcomes. To address this specific issue, it is useful to make a general overview of emotions by being able to say that: "The emotional content of information and events in daily life conditions the organization of a lasting memory; if the information or event has a rich emotional content, the memory will be stronger and last longer; this is called emotional enhancement (Neurobiol Aging 2004; 25: 1117- 24)", and the amygdala is the centre of the emotional memory system, where the comparison of different stimuli received with past experiences takes place. It is what gives color to life.

Important, at the educational level, is to be able to distinguish what are primary emotions such as joy, sadness, fear, anger, surprise, disgust, from secondary emotions, including shame, guilt, embarrassment, shyness, contempt.

Aging leads to modification, not only physically, but also emotionally. Social roles change, physical appearance is altered, precariousness of health and life is often compounded by economic precariousness, not to mention the reduction of social relationships, as one is often left alone. The problem is that if all this is experienced only as loss, the risk of becoming overwhelmed by anger and negative emotions is very high.

Negative emotions test the immune system and facilitate many diseases such as vascular damage and increased cholesterol. Decreased tolerance and forbearance, sedentary living and attachment to habits incentivize the risk of developing depressive states resulting in alexithymia, that disorder that impairs the awareness and descriptive ability of experienced emotional states, making the communicative style sterile and colorless (Treccani, 2010).

It was 1990 when Salovey and Majer wrote the first definition of Emotional Intelligence (EI). It was born to investigate the domain of emotions and understand its role in human well-being and behavior. Emotional intelligence involves the ability to accurately perceive, evaluate and express emotions, to understand and/or experience feelings, to understand emotions and to regulate them to promote one's emotional and intellectual growth (Salovey, Mayer, n. d.). It also influences individuals' ability to cope successfully with the demands and pressures of the environment (Martinez, 1997).

Later, to better explain their idea of emotional intelligence, they divided it into four basic skill levels:

Perceiving and expressing emotions;

Using emotions to facilitate thinking;

Understanding emotions;

Managing emotions.

Daniel Goleman, on the other hand, defines it as "the ability to motivate oneself, to persist in pursuing a goal despite frustrations, to control impulses and postpone gratification, to modulate one's moods by preventing suffering from preventing us from thinking, to be empathetic and hopeful," and distinguishes personal skills from social skills. The former refer, in general, to the ability to grasp different aspects of emotional life, while the latter refer to how one understands others and relates to them.

Goleman believes that emotional intelligence is a group of five skills:

Knowledge of one's emotions: It concerns the ability to recognize a feeling as it arises, self- awareness, understood as continuous reflective attention to one's experience. Constructive element of another very important aspect of emotional intelligence, which is the ability to get rid of a negative state of mind.

Control and regulation of one's emotions: Refers to the ability to control feelings, so that they are appropriate to the situation. Difficult moments, as well as positive ones, give flavor to life, but in order to do so they must be in balance; in fact, it is the relationship between positive and negative emotions that determines an individual's well-being.

Self-motivation: The ability to master emotions is a prerequisite for being able to focus, to find motivation and self-control. It is a prerequisite for motivating oneself to achieve a certain goal and to persist in commitment when situations become highly frustrating. Motivation is the internal engine that drives the implementation of a whole series of behaviors that enable goal achievement.

Recognition of other people's emotions: Empathy: This ability allows one to know how another human being is feeling, and it comes into play in many situations, from those typical of professional life to private life, from romantic relationships to parent-child relationships. The key to understanding others' feelings and emotions lies in the ability to read the messages that are manifested by nonverbal communication. As Watzlawick (1980) stated, individuals not only communicate through various codes, but they metacommunicate (metacommunication: a communication about how an information is interpreted) by making explicit to the other what is behind the message sent. Empathic people are more sensitive to subtle social signals that indicate the needs, wants or desires of others, while "the inability to register the feelings of others is regarded as a very serious deficit in emotional intelligence." (Goleman, n. d.)

Relationship management: The ability to manage others' emotions is a fundamental skill in the art of dealing with interpersonal relationships. To be able to manage others' emotions and to connect with others, it is basic to have developed good self-mastery, inner calm, and a good understanding of one's own feelings. Managing interpersonal relationships effectively can be defined as "a fine art of relationships" that requires the maturity of two other emotional skills, self-control and empathy." These two skills emerge around the age of two and then develop in later years.

Based on what we have said and as professional educators it is appropriate to increase your skills in emotional education by approaching new technological methods of learning.

Such tools positively affect motivation and make teaching more interesting. The power of technology increases greatly side by side with your ability to empathize and communicate, which remains as a staple of your profession.

Alongside the animative and playful activities, it is essential that you go to meet the needs of socialization, relationships, enhancement and maintenance of cognitive and expressive skills as well as recovery of memory and personal and family history. The multiple activities offered should recreate a welcoming and familiar climate that can

enhance the user's habits and knowledge, respecting his or her rhythms. This first step is fundamental in laying the foundation of the elderly person's predisposition to the new reality and emotional approach. As seen earlier, stimulating the emotional experience by taking it to a more heterogeneous level is one of the focal points.

You will have to stimulate the elderly person in a targeted way by having them do exercises that activate them on specific emotional aspects through different modes of expression.

In fact, people in old age tend to reenact almost always the same experiences, which in turn are connected to a narrow group of emotions. Often, the elderly person expresses primary emotions of grief, joy, fear, anger through linking to certain experiences they had in the past; they are unlikely to talk about the events by verbalizing more complex emotions such as those of embarrassment, hope, resignation, offense, disappointment, and if it is talked about, it will be in a minor way or without even fully contacting that emotion so much as the other is preponderant. An example of an exercise, to better understand the topic, is to ask people to color the name of some emotions and then to explain the reason for that pairing.

The exercise can be deepened by asking to relate each emotion to a memory. This exercise will allow you to investigate personal memories and expand the patient's emotional vocabulary. What has just been expressed helps to understand that facilitating heterogeneous emotional contact in the elderly person is an integral part of the work of stimulating residual cognitive abilities.

4.3. How to foster positive emotions in the elderly?

As stated in the previous pages, it is important not only to give emotional and physical support to the elderly, but it is equally important to help and teach them to foster the growth of positive emotions. Many times the elderly tend to isolate themselves from the outside world, experience anxiety and depression because of the time passing and the modern world, which can be almost foreign to them. Well-structured emotional intelligence can have a positive impact on their social, psychological and physical health.

Theoretical insights

As previously stated, psychologist Daniel Goleman has identified the main personal and interpresonal skills involved in emotional intelligence, explaining why emotional intelligence is as important as IQ when it comes to success (The Institute of Chartered Accountants in England and Wales [ICAEW], 2021):

- Self-awareness, which consists of recognizing and understanding one's emotions, is our moral compass, and recognizes our strengths and weaknesses.
- Self-regulation, which consists of managing our emotions, both positive and negative, which can be done with relaxation and breathing exercises.
- Motivation, which is about the drive to improve and achieve one's goals.
- Empathy, is a fundamental skill, the ability to see the situation from another person's perspective, and respect for diversity and inclusion is a key aspect of this.
- Social skills, people with these skills are good in dealing with others, they can be leaders, handling conflict and motivate other people.

Positive emotions are those emotions that we find pleasant to experience. According to the Oxford Handbook of Positive Psychology, positive emotions are "pleasant or desirable situational responses, as distinct from pleasant feelings and undifferentiated positive affect" (Cohn & Fredrickson, 2009, as cited in Ackerman, 2019). Positive emotions can be (Ackerman, 2019):

- serenity,
- interest,
- satisfaction,
- joy,
- love.

Negative emotions are those emotions that we find unpleasant to experience. They can be defined as "an unpleasant or unhappy emotion that is evoked in individuals to express a negative affect toward an event or person" (Pam, 2013, as cited in Ackerman, 2019).

Among the negative emotions we can find (Ackerman, 2019):

- fear,
- anger,
- disgust,
- loneliness,
- sadness.

Both negative and positive emotions play an important role in function of the brain (Ackerman, 2019).

As we already know, emotions reside in the "limbic system," also known as the "emotional brain," and the first to discuss it was Paul Broca. Later, to further study it were Papez (1939, as cited in Biviano, 2019) and MacLean (1949, as cited in Biviano, 2019). The limbic system consists of several brain structures that coordinate perception, awareness, memory and emotions: the hippocampus (seat of emotional memory), amygdala (where fear originates, the center of emotions), hypothalamus (mammillary bodies transfer impulses from the amygdala and hippocampus to the thalamus), fornix (transmits emotional information) and limbic cortex. In addition to the limbic system, the autonomic nervous system also has an important task in emotion responses, as it coordinates physiological reactions to fear stimuli (Biviano, 2019). (Figure 1. - The limbic system).

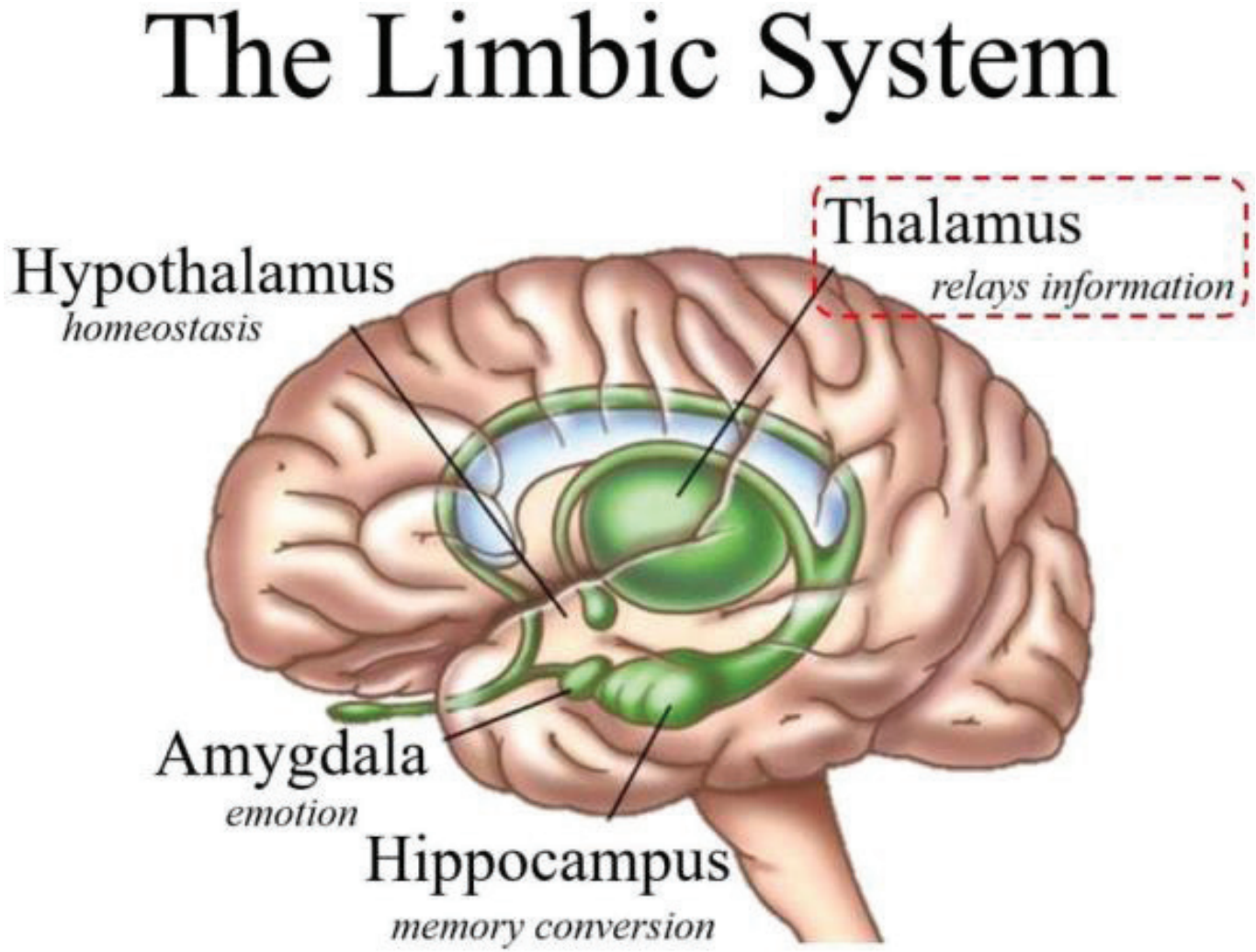

Figure 1.
The Limbic System – Thalamus Note. From The Limbic System Thalamus [Image], by E. Pan, 2020, (www.thereignofthe-brain.com/resourc-es/thelimbic system thalamus)

Regarding positive emotions, they can have different im-pacts on the brain (Ackerman, 2019):

Positive emotions can increase our performance on a cognitive task, lifting our morale, without distracting us as in the case of negative emotions (Iordan & Dolcos, 2017, as cited in Ackerman, 2019). They can start reward pathways, helping to reduce cortisol levels and increase well-being (Ricard et al., 2014, as cited in Ackerman, 2019). They can help us broaden our horizons and expand our brain's range of action (Fredrickson, 2001, as cited in Ackerman, 2019).

Despite being unpleasant, negative emotions are also necessary for the growth of the individual. According to the "theory of broaden-and-build" elaborated by Fredrickson (1998, as cited in Micieli, 2019), positive emotions, on par with negative emotions, serve an adaptive function in that they motivate humans to perform activities that are evolutionarily adaptive. In fact, Barbara Fredrickson (1998, as cited in Micieli, 2019) was the first to study positive emotions, and she identified four types: joy, contentment, interest and love. But we will focus on how to foster positive emotions in the elderly.

Negative emotions, in particular anger, tend to decline with age (except in the case of illness), while positive emotions remain fairly stable (Carstensen et al., 2000; Charles et al., 2001, as cited in Ong et al., 2011). As the elderly age, they may feel sidelined by society and being a burden to their family, and they may engage in negative health and health behaviors, such as a poor diet and sedentary lifestyle (Ong et al., 2011).

4.4. Strategies

4.4.1. Lifestyle

It is recommended that the elderly try to maintain an active and healthy lifestyle that is not too strenuous, that they have a healthy sleep-wake routine, as aging is associated with impairments in sleep quality (Bloom et al., 2009, as cited in Ong et al., 2011), while positive emotions can promote adaptive sleep patterns (Steptoe et al., 2008, as cited in Ong et al., 2011).

Some of the strategies to foster positive emotions in the elderly may be (Davis, n. d.):

- mindfulness meditation exercises,
- breathing exercises,
- focusing on one's positive qualities,
- learning to use positive affirmations (I am happy; I always try to see the positive side of things; all my feelings are valid and helpful; I treat myself with kindness and compassion; I am loved/ loved by my family),
- increase self-confidence,
- practice acceptance

4.4.2. Pet

In case the senior feels lonely, in addition to the attention and affection given by caregivers and family members, should they live in their own apartment or home, it might help to give them a pet to take care of: in fact, it might give seniors a sense of purpose and self-actualization, which increases self-esteem and reduces the risk of illnesses, such as depression (Maccarone, 2018).

4.4.3. Encourage physical exercise

Exercise should be encouraged: it is essential for maintaining mind and body health, in fact "mens sana in corpore sano." Walking in the company of a family member, friend, healthcare technician in a park, or participating in aerobics groups for the elderly in a recreation center can be encouraged. In the case of mobility problems, sedentary exercises can be encouraged; in fact, activity can keep the elderly alert and ward off depression (Maccarone, 2018).

4.4.4. Encourage reading books

It is a fact that reading helps keep the mind active, and we know that keeping the mind active helps us have a sense of self-awareness. Reading books with positive stories and narratives, travel journals or autobiographies can help the elderly person pass the time and keep up with the imagination and keep interest in knowledge and activities high. In addition, solving crossword puzzles, sudoku puzzles, and rebuses can help keep the mind stay young (Maccarone, 2018).

4.4.5. Cooking

Eating healthy, especially with advancing age is important to avoid diseases such as high cholesterol levels and diabetes. Not eating enough can cause irritability, fatigue and sadness. Taking cooking classes can help the elderly to be more peaceful and feel part of a group, can help them understand the importance of healthy cooking, with healthy meals that nourish the brain, body and positive feelings (Maccarone, 2018).

4.4.6. Games

As previously mentioned, solving crosswords and assembling puzzles can help keep the brain active, stimulated, and healthy. It can help to accompany the elderly person to join a board game club or book club, where they can play cards, bridge, scrabble, and take advantage of the opportunity to make new friends and conversations with other elders (Maccarone, 2018).

4.4.7. Improving confidence

Especially in elderly ladies, seeing one's figure in the mirror can cause sadness and distress, so it is important to make sure the elderly person washes regularly and properly. It can also help the elderly woman feel better and more attractive wearing makeup, so it is advisable to have her participate in workshops and drama groups. Feeling attractive and groomed can increase the elderly person's self-confidence and outlook on life (Maccarone, 2018).

4.4.8. Volunteering

Work and volunteer opportunities exist for older people, which can give them purpose and meaning in life (Maccarone, 2018).

4.4.9. Conversation

Conversation and the awareness of being heard is a very important point in every individual's life. The group most sidelined by society is the elderly, as they are often seen as useless. Listening, conversing, asking questions and showing interest in the elderly is important to make them feel happy, motivated and important (Maccarone, 2018).

4.4.10. Support groups

To foster positive emotions, the elderly person can join support groups, where they will learn different relaxation techniques, mindfulness, and where they can find support that family members cannot give. It can also help to advise the elderly person to see a psychologist who specializes in positive psychology, so that he or she can offer interventions for the purpose of fostering positive emotions. The next chapter will show possible exercises that can be implemented without the help of a psychologist.

4.5. Set of exercises to foster positive emotions and emotional intelligence

Let's color the emotions

As previously mentioned in Chapter 2, we know an exercise that aims to investigate personal memories and expand the elder's emotional vocabulary.
The elder will be asked to match a color to the name of some emotions, and explain the reason for the matching.
The exercise can be deepened by asking to match the color with a memory.

Example: Emotion-Love. Color-Red

Emotion	Color
Fun	
Surprise	
Joy	
Trust	
Love	
Interest	
Serenity	

Where do I feel the emotions?

The senior will be asked to match a body part to emotions. This exercise can be matched with physical activity. The exercise can be deepened by asking to match a physiological sensation to an emotion. The purpose of this exercise is to keep mind-body awareness high.

Example: Love - Chest ; Love - Heat

Emotion	Body part / feeling
Fun	
Surprise	
Joy	
Trust	
Love	
Interest	
Serenity	

Let's give a meaning to emotions

Similar to the previous exercise, the senior will be asked to give a brief explanation of positive and negative emotions.
The exercise can be deepened by asking them to describe an anecdote paired with the positive emotions.
The exercise aims to give meaning to the emotions experienced.

Examples: Fun - feeling contentment in doing something; Fun - cooking a new recipe

Emotion	Meaning
Fun	
Surprise	
Joy	
Trust	
Love	
Interest	
Serenity	

Emotions journal

A highly used exercise especially in cognitive-behavioral therapy is to keep a diary of the emotions experienced.
The elderly person will be given a diary, and asked to try to compile the emotions experienced during the day by matching it with an anecdote. This exercise is intended to enable the elder to learn more about their emotions and to enact more behaviors that lead to positive emotions.
Ex: Today I went out for a walk with my family. I felt happiness.

Emotions and music

The goal of this exercise is to make people understand emotions by listening to the proposed songs.
The elderly person will be offered songs, and at the end of the song will be asked to match one or more positive emotions to the song. In case the emotion should be negative (melancholy, sadness, fear, anger,...) the elder will be asked to argue the choice.
The exercise can be deepened by asking the elder to elaborate on the chosen positive emotion as well (Casetta, n. d.).

Proposed tracks:

Saint-Saëns: The swan https://www.youtube.com/watch?v=3qrKjywjo7Q
Chopin: Revolutionary etude (Op.10 no.12) https://www.youtube.com/watch?v=ZpuROwy_8mg
Antonio Vivaldi: La stravaganza (tempo allegro) https://www.youtube.com/watch?v=1k4hoTdO5hs
Bach: Preludio no.1 in G major https://www.youtube.com/watch?v=1prweT95Mo0

PRIDE	TENDERNESS	HAPPINESS
Fullfillment	Love	Fun
Satisfaction	Care	Happiness
Bliss	Tenderness	Humor
Ecstasy	Union	Cheerfulness
Grace	Gratitude	Pleasure
Pride	Protection	Playfulness
Majesty	Sweetness	Vitality
Solemnity	Compassion	Contentment
	Kindness	Delight

Emotions and art

The goal of this exercise is to make people understand emotions by matching them with pictures of famous paintings.

The elderly person will be shown pictures of paintings, and will be asked to describe at least two emotions felt at the sight of the painting. Should the emotions be negative, the elder will be asked to elaborate on it.

Image 1: Monet, Poppy Field near Argenteuil; Image 2: Van Gogh, Café Terrace in the Evening; Image 3: Klimt, The Kiss; Image 4: Bouguerau, Cupid and Psyche

Painting	Emotion
	
	

	
	

5. COMMUNICATION AND OTHER SOFT SKILLS FOR ADULT EDUCATORS

Communication is an essential element in human activity. It is an intrinsic part of social needs for personal development, and as a means of interaction, it is one of the key issues in understanding between people.

In the training of older people, it is important to convey ideas and knowledge that are of value to the individual, and to this end, attention must be paid to communication. Interests, attitudes, ways of valuing life, experiences, etc. are all different in the education of older people than in the education of adolescents or children, so one should not make the mistake of working in the same way and expecting the same results.

A training programme, manual or educational activity must focus on the target audience and maintain a dialogue that allows the right flow of information to capture the attention and provide value to the recipients. Therefore, the communication channel must be the right one.

COMMUNICATION THEORY

Within the communication and soft skills that trainers must apply in adult education, the strategy of meaningful learning must be present. This is a theory proposed and developed by Ausubel (1968). The idea is to use the knowledge and experiences attained and stored by older learners as a basis for learning.

Adults, unlike children or younger learners, have greater experience and accumulation of knowledge due to the time they have lived. However, the natural tendency is to accommodate to the application of this knowledge, so that by not going further and exploring new fields of knowledge, experiences, etc. the real limit of one's own knowledge is not determined.

In this sense, communication can be the meeting point between different perspectives, knowledge, and experiences. Thus, on the one hand, the communication of older learners with the trainer must be differentiated from the communication of older learners with other learners, or even with themselves from introspection.

ACTORS IN THE COMMUNICATIVE PROCESS

From the learner-learner communicative focus.

Adult trainers should bear in mind the importance of encouraging this resource. The relationship established between prior knowledge and new learning creates a unique way of interpreting, understanding, and valuing it. Value points may also differ among other adult learners. Here communication acts as a connector between different ideas, values, and experiences, and facilitates the recognition of one's own limits of knowledge.

However, recognising the limits of one's own knowledge does not guarantee the merging of these limits or learning, understood as the absorption of knowledge. It is through communication and expression that the creation of dialogues and arguments takes place, which can create a way to broaden and consolidate knowledge. From Ausubel's (1968) theory, a passive receiver would not be able to gain knowledge. In contrast, older learners must be active in communication. For this, they must have solid knowledge or experience on the subject, and soft skills that solidify their position, such as self-confidence in their ideas or values, communication, desire to learn, etc.

From the learner-adult educator communicative focus

Educators must take into account that the older learners have already acquired knowledge and experience. In this situation the educator must communicate and act sensitively so as not to create an environment where the learner feels incompetent, or that their values are challenged.

The facilitator or teacher must value the learner's knowledge, but at the same time create interest or curiosity in the learner to want to continue learning. Seeing the need to learn or deepen knowledge is fundamental for them to be able to attribute meaning to learning and acquire a personal commitment.

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In the communicative act the relationship between facilitator and learner is fundamental. The relationship is based on a dual system in which the exchange of information is carried out by both parties, and the role of teacher-student dissolves, becoming a mutual learning process, as everyone learns from everyone else (Calivá, 2009). This makes it a process of shared responsibility between the student and the teacher.

EDUCATIONAL COMMUNICATIVE STYLES

In teaching, there are strategies and communicative styles that the trainer uses with his or her students to achieve the objectives.
Along these lines, three main styles of leadership are recognised:

- Democratic
- Authoritarian
- Transformational

DEMOCRATIC LEADERSHIP

The facilitator creates enthusiasm in the students by encouraging the participation of all. Collective participation, teamwork and an eye for group well-being are sought. The facilitator promotes the role of creating an environment of communication and group participation, encouraging dialogue and the contribution of opinions, which will be taken into account and will be fundamental in making decisions. However, he/she is ultimately responsible for them (García-Allen, 2022).

AUTHORITARIAN LEADERSHIP

The trainer makes decisions without consultation and without considering the opinion of the group. He assigns the work system, the tasks and establishes the organisation to be followed. Everything is controlled and determined by the trainer. There is no self-sufficiency in knowledge, nor decision-making on the part of the students; a relationship of dependence is created (El Formador, 2014).


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TRANSFORMATIONAL LEADERSHIP

Facilitators who adhere to a transformational leadership and communication system employ high levels of communication to achieve goals. They try to develop a shared vision of goals. Flexibility and motivation of the learners is a priority. Facilitators will work to develop full motivation in learners. They have a vision of the training they impart to their learners and can therefore bring about changes in expectations, perceptions, and motivations in the group. Through their communication they build trust, respect, and gain the admiration of the learners.

They do not work with incentives or norms but with intangible qualities, such as ideas, motivations, etc. with the purpose of creating relationships, and giving more meaning to independent activities (García-Allen, 2022).

In general, pure leadership does not exist, nor is it advisable to apply it. One of the characteristics that will be discussed later in the soft skills of facilitators is that they must be self-sufficient. Within the application of a communicative leadership system, it must be flexible enough to adapt activities, classes and tasks to the profile of the learners and not the other way around. It starts from a base to build a pyramid, but it does not mean that all pyramids must have the same shape.


THE NEW YORKER

THE FACILITATOR AS A COMMUNICATIVE LEADER

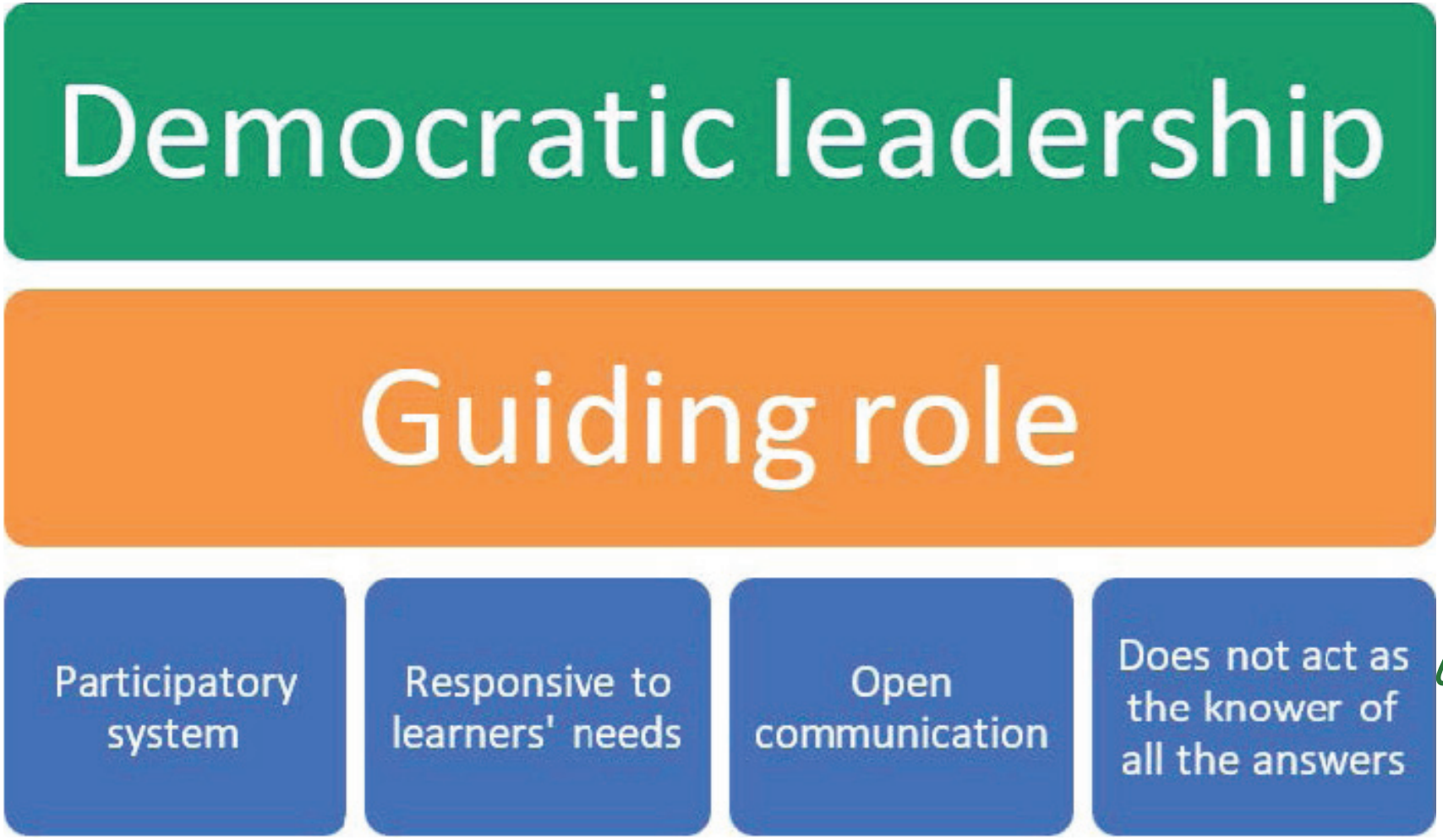
There are different types of leaders, however, not all leaderships are suitable or effective in adult education.

From the point of view of andragogy, the communicative model marks a differentiating line between the system of the teacher and that of the facilitator. Thus, the role of the facilitator must avoid authoritarianism, opting for a democratic and participative leadership, and adjust learning to the needs of learners in order to encourage motivation.

In other words, the facilitator is a facilitator who cedes leadership at certain times, but not completely. He/she has the capacity and responsibility to make decisions, but also listens to others and thinks about the working group.

But as Fiedler (2001) points out, even in the face of generally recommended trends and systems of communication and leadership, contextual realities must be taken into account. Interpersonal relationships and reactions between the participants in the educational activity (trainer-students) are fundamental in determining whether a leadership style can work or fail.

Figure 1. Characteristics of a facilitator as a communicative leader



Source: Own elaboration based on data from Adam (1987)

CHARACTERISTICS OF THE COMMUNICATIVE LEADER

Getting them to listen does not only require working on the tools, activities and the environment in which events take place. The communicative style must also be nurtured and worked on.

Communication is in itself a necessity in education. But for it to be useful, it cannot be treated only as a system of knowledge transfer. In order for this knowledge to reach and penetrate, the facilitator must fulfil 4 requirements in the communicative system:

- Honesty (Being clear)
- Authenticity (be yourself)
- Integrity (to stick to what he/she says)
- Love (concern for their students)

HONESTY

“Honesty is the absence of falsehood. This seems very simple, but in reality, it is in fact an extraordinary challenge, because lying is part of human nature” (Treasure, 2017).

Tolerance for lying has grown over the years. According to studies by Pamela Meyer, a person can be lied to between 10 and 200 times in a day. We have normalised white lies and even “fake news”.

But despite all this, people still appreciate and value honesty in communication. Treasure (2017) highlights two facets of honesty as critical in communication: being clear and being direct.

Being clear means being committed to communication where the message is easy to understand, direct, complete, and specific, so that the message is generally received effectively.

Being direct means being frank, that is, saying what you want to say, always thinking about what you are saying. Demonstrating firmness in your thoughts and assessments, without ambiguity, will make the recipients not want to miss a word.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SOCIAL
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AUTHENTICITY

In communication it is possible to act consciously or unconsciously. Taking into account the communicative interests, it can be important in the transmission of the message to generate a positive you, in order to create an effective discourse.

However, it is important to clarify that authenticity is not contradictory to privacy. Being authentic does not mean being transparent and unfiltered. Personal privacy is a perfectly valid choice, and one that does not detract from authenticity; there is a big difference between levels of authenticity and roles assumed Treasure (2017).

INTEGRITY

Integrity understood as keeping your word is important in the message. If recipients give weight to your words, they will create a bond based on respect and sincerity. To reach this point, it is essential that your words are backed up by actions and not contradictions or lies. When words lose value, communication loses value, and the door of mistrust opens.

"If you fail to live up to your integrity, remember the advice of the 7 deadly sins about excuses: simply apologise and explain what you are putting in place, so it doesn't happen again" Treasure (2017).

LOVE

Understood as a “loving kindness”. Refers to “the intentions of the love of good wishes” conveyed in the communicative act. That is, that the teachings, explanations, or speeches align with the interests, motivations, or well-being of the recipients. This attitude also shapes other attitudes such as honesty and seeks a balance between having no filter by being completely honest, and not “hurting” the feelings of the listeners. With an emotion of appreciation for others, communication does not seek manipulation, deception, or self-interest, but is more altruistic.

You are there to contribute to the listeners. It is usually possible to detect a speaker who is self-absorbed (likes to listen to himself) and seeks approval, this is an artificial, interpreted communication.

On the other hand, a communication that is intended to convey a valuable message to the recipients (seeking the growth of learners, joy, inspiration, etc.) may not only convey information, but will come across in a more meaningful way with a warmth and naturalness that will further increase the recipients’ attention to the message.

5.1. Soft skills for communicative leadership

The andragogic must have certain qualities to be a facilitative leader and perform his or her work as effectively as possible. These include being:

- Creative
- Visionary
- Motivator

CREATIVITY

To succeed, mere planning is insufficient, improvisation is necessary (Isaac Asimov).

The trainer's creativity will enable the emphasis to be placed on techniques that use the learners' experience as a rich learning resource. There are no rules in learning, learning plans must be individualised (a social contract between trainees and trainers).

A creative trainer leaves the margins of formal education and is able to use tools to detect problems of or with learners in learning and create creative solutions (López, 2015).

Informal education is a necessary and valuable complement to formal adult education, and creativity is a crucial skill in this teaching. It feeds curiosity and encourages learners' motivation because it uses very pragmatic and real resources.

For example, there is a session on transforming factory waste into useful products. Spaces such as squares, and the faculty become a workshop that opens the door to new ways of thinking for all participants.

The transfer of creativity is another possibility that appears with a creative trainer. Creativity is especially important for older people; it means reinventing oneself and proving one's capacity for self-improvement. Older people start from a base of experience and knowledge that younger people do not have or have developed to a lesser extent. This level of knowledge sometimes obstructs the ability to create and try new and different things, because the comfort zone is more comfortable and safer. The fact that the trainer provides tools and creative means to develop the capacities of the learners overrides or reduces the vision of the traditional, every day, monotonous, etc. to stimulate the curiosity and motivation of the participants for the activity.

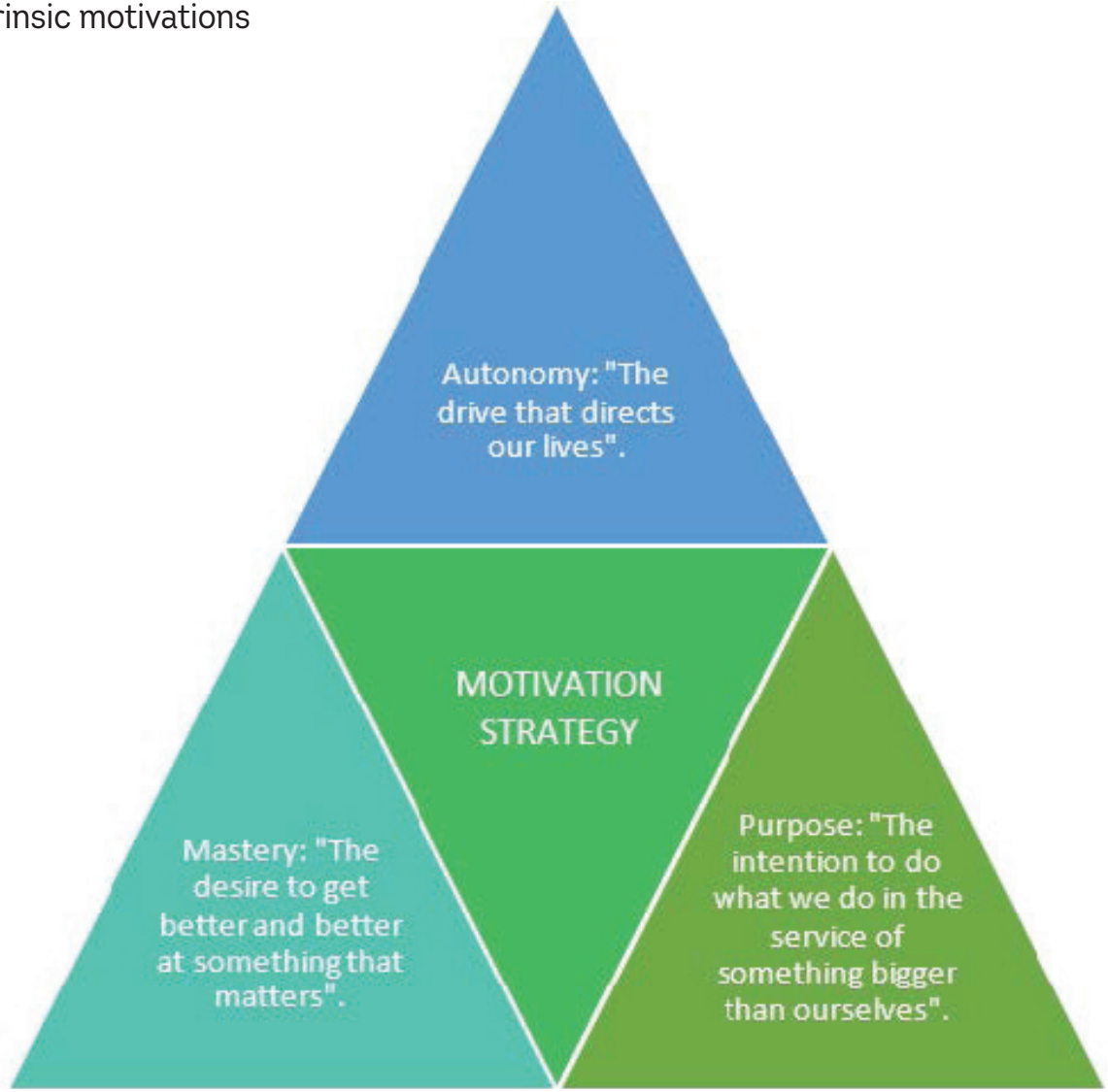
Thus, the courtyard of a cultural centre can be transformed into a fashion workshop by creating a Creative Textile Recycling Marathon. You can learn how to paint, sew, raise awareness about environmental damage and create anything you can imagine with used clothes.

MOTIVATION

In order to establish a motivation strategy, it is important to differentiate incentives from intrinsic motivation. The reason why people engage in the activity: because they like it, they are interested in it, it is important to them. From Pink's (2009) perspective, there are three main intrinsic motivations (Figure 2):

- Autonomy
- Mastery
- Purpose

Figure 2. The intrinsic motivations



Source: Own elaboration based on data from Pink's (2009)

AUTONOMY

The facilitator must motivate the learners, for which a very important resource is autonomy. Autonomy goes hand in hand with creativity. It allows the students to recreate themselves, to imagine possibilities and of course, to generate that "impulse" to do things, to create and develop, we call this "impulse" motivation.

Autonomy can be of time, resources, methodology, etc. Depending on the objectives or the strategy of the facilitator in the activity, the "rules" of autonomy must be established. For example, in a training on communication and soft skills, the following conditions can be set as rules for the learners:

- You have to work with communicative resources (at least 1).
- It is a group work

The more rules the less autonomy, but it is necessary to establish a minimum of conditions as a facilitator to guide, as in the end, they will not be seen as "rules", but as resources.

The difference between fostering autonomy and purpose or mastery is that the former is linked to a condition of enjoyment of the activity.

MASTERY

When we speak of mastery, we refer to mastery, whether it be of a skill, a subject, a hobby, etc.

There are adults who throughout their lives have developed skills, sports hobbies, arts, sciences, or have simply developed them due to needs that have arisen.

In the end, throughout life, people learn directly or indirectly through taste or necessity. However, there are people who not only learn, but also seek to go further, to deepen, improve or perfect what they already started with a certain knowledge.

At this point, Briceño (2017) differentiates between two different situations in which people can find themselves: learning or performance.

They are in the learning zone when they want to improve, so they carry out activities on something they have not yet mastered and want to improve on it.

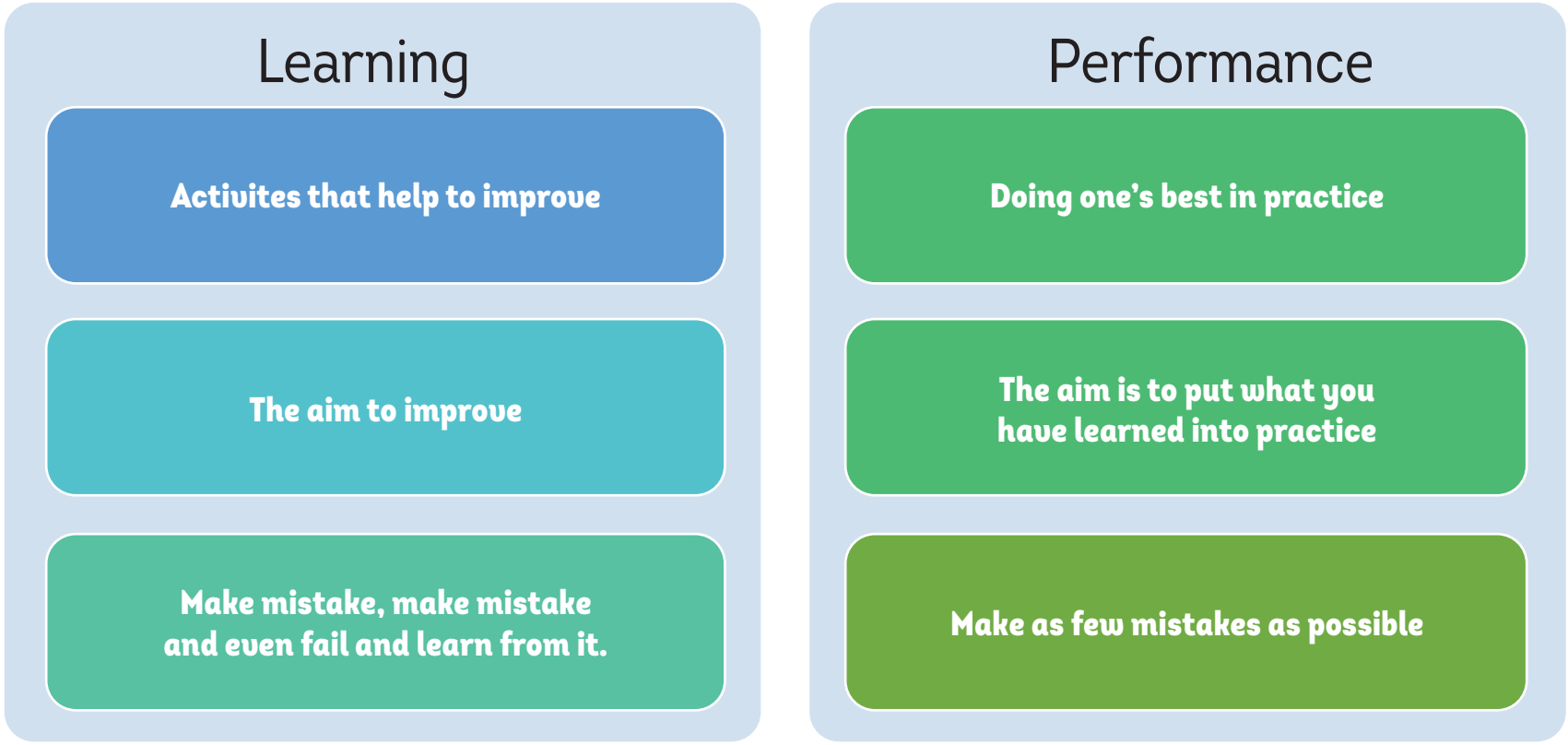
In the performance zone they have already mastered the skill, activity, topic, etc. and are looking to perform.

This distinction is fundamental, as learning is a zone where activities are completely different. In fact, providing learners with a performance context when seeking learning can be harmful to the individual (generating stress, frustration, etc.) and their performance.

Learning processes require what psychologist Ericsson (2016) called "deliberate practice". This refers to the individualisation of skills and practices for analysis and identification of points for improvement. In this way it is possible to concentrate efforts on one point of action.

The key point is that adults who have been directed to learning by this motivation step out of their comfort zone to face challenges. This means experiencing failures and mistakes, improving and learning.

Figure 3. Comparative table between learning and performance

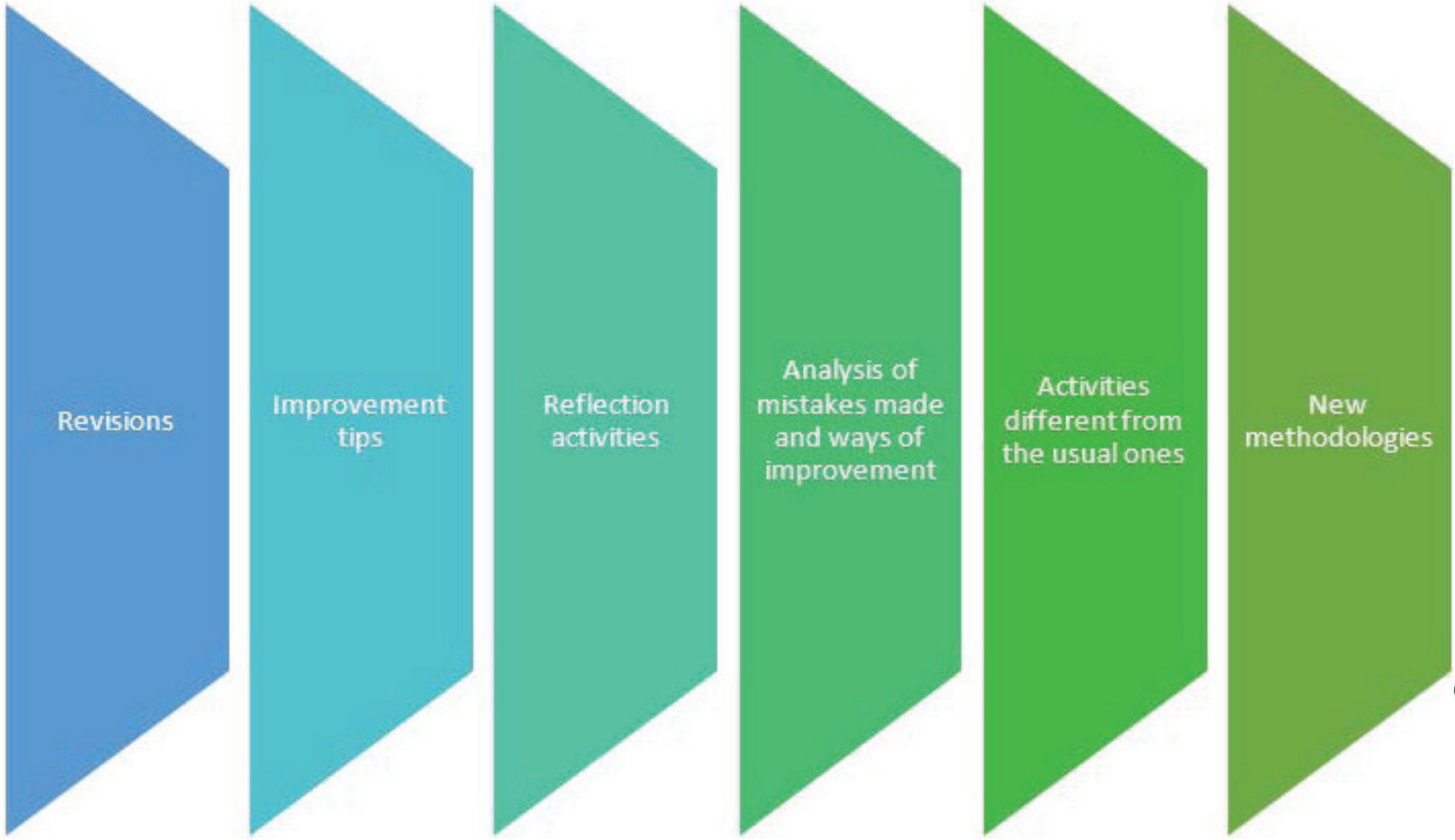


Source: Own elaboration based on data from Briceño (2017)

Therefore, the ground that the facilitator must prepare for the learner must be of specific conditions.

This does not mean that the area of performance is useless, because it is. In fact, it is just as necessary as the area of learning. It is necessary to be in both areas all the time. In other words, they must be alternated.

Figure 4. Tips for the learning zone



Source: Own elaboration

PURPOSE

Purpose is another very important intrinsic motivation. Finding a practical application is a strong motivational point for seniors. The trainer must embody meaningful learning, which meets real needs is one of the most effective guides to promote a motivating environment and create commitment among learners. New concepts and broader generalisations should be pointed out, demonstrated, and exemplified with life experiences drawn from the learner. In other words, how they try to apply what they have learned to their daily lives.

Adults approach teaching and learning with a different time perspective than children. Children's learning is discipline centred. Adults, on the other hand, think in terms of immediate application.

In other words, for older people, education is a response to the life problems they are facing at the time. In this line, it becomes crucial in motivation to adapt and adapt the activity to the profile and needs of the learners. It means the difference between a motivated or unmotivated student body.

VISION

A facilitator may have the knowledge, but he/she must also have the resources to crystallise it.

The visionary facilitator has the ability to see the potential of tools, technologies, materials, activities and the potential of their learners, etc., understand them and work with them to serve their needs and those of their learners.

The visionary teacher can look at ideas of others and envisage how they would use these in their classroom. Based on this, he/she can look for ways to get his/her students to work outside the comfort zone or to deal with new ways of thinking, to work on creativity, possible mistakes, or weaknesses, etc.

In other words, he is able to "look" across disciplines and curricula to go beyond. In doing so, it can make links that reinforce and enhance the value of learning, and strengthen teaching (Expansion, 2011).

5.2. TRAINER GAME: Training Trainers

RULES: imagine you have to prepare a lesson for your students. Before planning the lesson you should think about the conditions that the lesson requires, the design per se. To do this, play the following video and identify the characteristics of a learning zone versus a performance zone.

You can then try to answer the following questions to use as a script:

Can you differentiate between the learning zone and the performance zone? Explain and exemplify it.

How much time is spent in the learning zone? Is it complementary to the performance zone?

What is the therapist doing? What kind of activities is he/she using?

What is the therapist's methodology?

What do you think is the therapist's strategy? Do you think he/she improvises?

Video link: https://www.youtube.com/watch?v=7WJts0gKCRM

Competences gained: This activity will develop your analytical skills as a facilitator and allow you to get a little closer in identifying the type of competences you need to reinforce.

5.3. COMMUNICATION AND DEBATE GAME: Rock, paper, scissors or something

Imagine that you are giving a course on communication, debate, improvisation, etc. to older people. Your objective is that they develop the skill of mental agility, using all their resources and knowledge. In this exercise you want to improve their skills and develop their motivation during the activity.

RULES: there is one mediator. All other participants are players. Each player has three blank sheets of paper. Two teams are made. Players can talk to each other in their teams to choose a representative and think of a strategy of play in this time. They can paint on each card a stone, a piece of paper, scissors or something of their choice, the same drawing can be repeated. In addition, they should number each card.

Once all participants have painted their papers. Without showing it, they have to fold them and put them in a box. Each representative takes three pieces of paper. They will play three rounds. They have 3 minutes to create a play strategy in which they have to choose the order of the play with each card. When the time is up, the game begins.

The moderator gives the signal, and the first card is shown. In case the "something" card comes up, whoever has played it must first argue why their card would beat the opposing card (they can create stories, give examples, talk about experiences, scientific questions, etc.) has 3 minutes, while arguing, the representative of the opposing team must think of an argument that cancels it out. The winner is the one who convinces the mediator. If both teams draw the card something at the same time, the one with the highest number starts arguing, and the time is reduced by 30 seconds.

The moderator/facilitator should then encourage a moment of reflection on the game in which the answers given are reflected upon. This should focus on the weak points of the argumentation (against the clock) and on the possible development or improvement of stronger arguments.

Examples of reflection questions could be:

Do you see the weaknesses in your arguments? How would you argue now with this in mind? What did you find most difficult?

Would you draw something else? What? How would you argue it?

- To learn more about learning methodologies you can go to the Mastery chapter.

Skills gained: Mental agility, to improve general debating skills through improvisation and creativity.

5.4. CREATIVITY AND RECYCLING GAME: Environment, Architecture or Fashion

This activity will develop creativity, teamwork, environmental awareness, and depending on the target audience, knowledge of design, engineering, fashion, etc. can be developed. Imagine you are giving a training course on environment, design, architecture, etc. for seniors. Your aim is to apply their knowledge in a creative way.

RULES: all participants receive a piece of paper. On it they write the name of an object. They fold the paper and put it into a box.

The participants are divided into two teams. Each team has to reach into the box and select a random piece of paper. They read out the written object and ask the other team to read it. The other team does the same.

In this activity you will have to imagine that it is a broken object, and you have to give it a second life, but in its current state it is impossible. So, you have to look for creative ideas to give it a second life. Additional materials can be used in addition to the object that has been given to each team.

The team should discuss the possibilities and ideas they can develop with different materials.

- The team that comes up with the most original idea wins.
- The time limit to develop the idea is 15 min.

After the activity there can be a moment of reflection to identify the pros and cons of the different objects created, the possibilities of application, the places of application, possible additional uses, the people who could use it (children, adults, etc.).

Finally, the teams can discuss what they would have created, or how they would have reused the other team's object.

- To learn more about learning methodologies you can go to the 1.3.6.1 Creativity chapter on page 8

Competences gained: Creativity, development of a new methodology with few restrictions and rules, only going out of the usual application of the objects.

After the activity there can be a moment of reflection to identify the pros and cons of the different objects created, the possibilities of application, the places of application, possible additional uses, the people who could use it (children, adults, etc.).

Finally, the teams can discuss what they would have created, or how they would have reused the other team's object.

- To learn more about learning methodologies you can go to the 1.3.6.1 Creativity chapter on page 8

Competences gained: Creativity, development of a new methodology with few restrictions and rules, only going out of the usual application of the objects.

5.5. Test

Analyse your communication and soft skills as a facilitator.
1. The atmosphere of the activities, classes or dynamics should be participatory.
2. The learning that takes place in their classrooms should be cooperative.
3. The facilitator understands but not meets the needs of adult learners.
4. The facilitator knows how to apply different teaching methods and teaching techniques.
5. The facilitator does not take risks in pursuing new ideas, considering failures as learning factors.
6. The andragogic recognise the uniqueness and potential of each individual but does not intervene in them.
7. The carrot and stick technique is often used to stimulate pupils
8. The facilitator is continually broadening his or her field of interest.
9. Some facilitators will handle problems better than others, depending on academic preparation, teaching experience,...

You can also access the test in online mode from this link:
https://kahoot.it/challenge/02981250?challenge-id=b442c765-be96-41e5-8ef0-7e2f4bea4a1c_1667002329722

GAME PIN: 02981250


MacBook Pro

ANSWERS:

1. True
2. True
3. False

The role of the facilitator must avoid authoritarianism, opting for a democratic and participative leadership, and adjust learning to the needs of learners to encourage motivation.

4. True
5. False

The trainer provides tools and creative means to develop the capacities of the learners overrides or reduces the vision of the traditional, every day, monotonous, etc. in order to stimulate the curiosity and motivation of the participants for the activity.

6. False

They recognise the uniqueness and power of each individual and build on them. The visionary facilitator has the ability to see the potential of tools, technologies, materials, activities and the potential of their learners, etc., understand them and work with them to serve their needs and those of their learners.

7. False

The carrot and stick is an incentive system that does not always work, only in circumstances where the activities are very simple to perform. It is better to use intrinsic incentives of adult learners such as purpose, mastery or autonomy.

8. True
9. True

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