Digital for All

Peer-to-peer digital competency training curriculum

Higher education
School education
Vocational education and training
Youth
Sport
Jean Monnet

Erasmus+
Enriching lives, opening minds

Adult education

Abstract

As a result of the Erasmus+ Digital for All project a community-based digital support program for individuals has been created, which can be adapted and implemented without license fees, in different cultural environments. Four communities participated in the testing phase (Estonia, Lithuania, Malta and EUCAP members) and have tested a training program with now 30 trained digital skills peer support persons, who are able to pass their skills on and improve digital skills levels of people with disabilities and other vulnerable groups. The focus of the project was on digital education. Specifically on increasing the digital skills and readiness of people with disabilities. Since digital literacy today permeates all areas of life horizontally, it is extremely important that people with disabilities are not left behind. With sufficient digital skills, people with disabilities can more easily participate in society, have access to the labour market, participate in adult education and engage in self-fulfilment in the field of culture.

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1. General introduction

As a result of the Erasmus+ Digital for All project a Community-Based Digital Support Program for individuals has been created, which can be adapted and implemented without license fees, in different cultural environments. Four communities (Estonia, Lithuania, Malta, and the European Council of Autistic People) piloted a training program that equipped 30 peer support persons with digital skills. These newly trained individuals can now empower people with disabilities and other vulnerable groups to improve their digital literacy. The focus of the project was on digital education, specifically on increasing the digital skills and readiness of active participation of people with disabilities. Since digital literacy today permeates all areas of life horizontally, it is extremely important that people with disabilities are not left behind. With sufficient digital skills, people with disabilities can more easily participate in society, have access to the labour market, participate in adult education and engage in self-fulfilment in the field of culture. Every learning aspect of this curriculum is designed solely to enhance a person's digital competencies.

DigComp states that: *digital skills for work and for life are at the top of the European Policy Agenda. The EU digital skills strategy and related policy initiatives have the objective of enhancing digital skills and competences for the digital transformation. The European Skills Agenda, of 1 July 2020, supports digital skills for all. The European Pillar of Social Rights Action Plan has set an ambitious policy target of reaching a minimum of 80% of the population with basic digital skills.*[1]

[1] https://publications.jrc.ec.europa.eu/repository/handle/JRC128415

One of the key cornerstones for the Community Based Digital Support Program was The Digital Competence Framework for Citizens (DigComp) and its five main digital competencies.

A definition of the five main digital competencies:

1. Information and Data Literacy: This involves finding, organising, understanding, and critically evaluating information found online. It's about knowing how to identify trustworthy sources of information.

2. Communication and Collaboration: This focuses on using digital tools like email, social media, and video conferencing to connect and work with others effectively, even from a distance.

3. Digital Content Creation: This involves the development of original content in different formats – like writing, editing images, creating videos, and designing presentations.

4. Safety: This is about understanding online risks like viruses and scams. It includes learning how to protect personal information and self-protection in the digital world.

5. Problem-Solving: This is the ability to use digital tools and technology-focused thinking to solve problems and overcome challenges.[2]

Based on the research gathered, the Community Based Digital Support Program is comprised of eleven training modules that cover the basics for digital competence development.
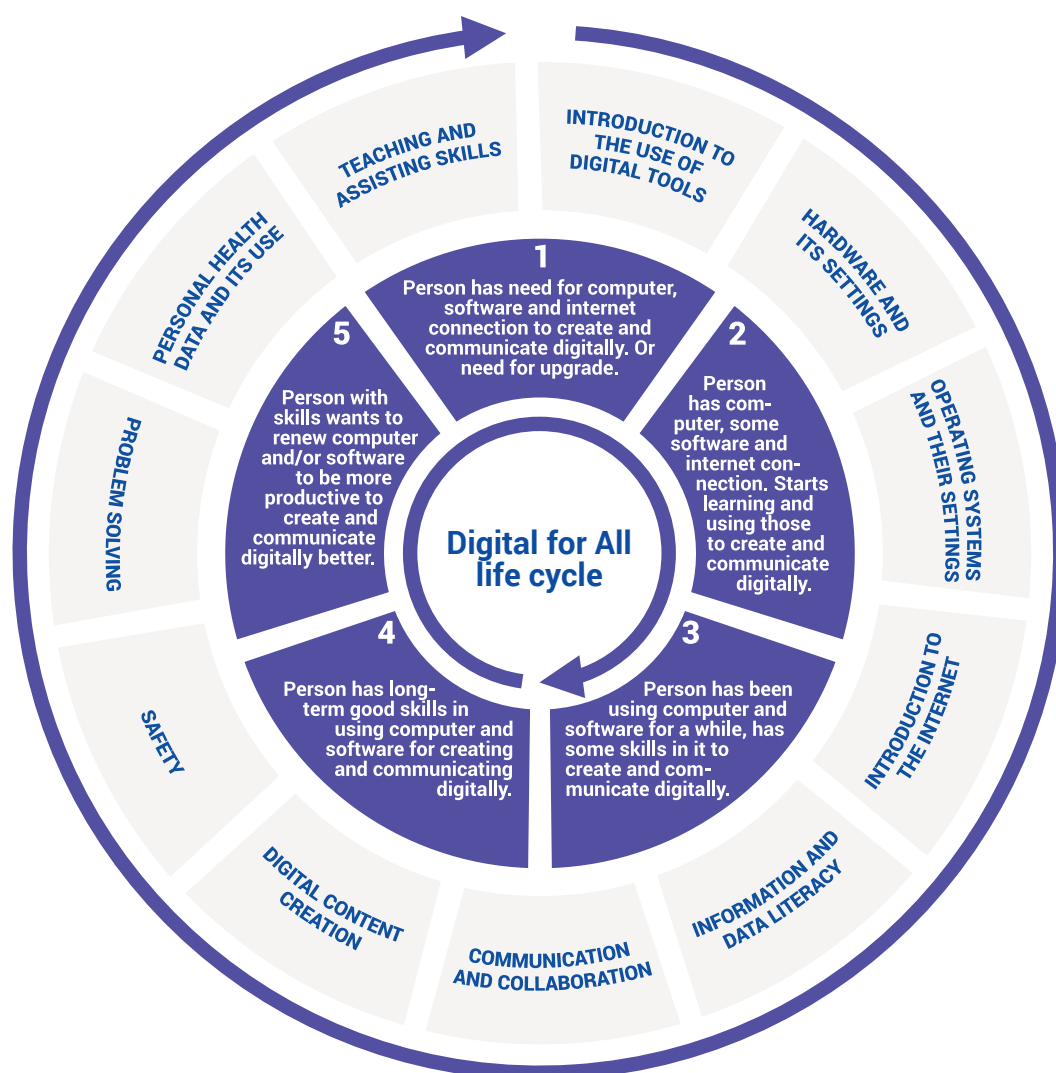
A definition of the eleven training modules used:

1. **Teaching and assisting skills:** This Module teaches how to explore different effective methods for presenting information and engaging in digital settings.

2. **Introduction to the use of digital tools:** This Module explains what digital tools are, provides the learners with practical knowledge on how to use digital tools and how it could benefit them.

3. **Hardware and its settings:** This Module explains the basic components of computer hardware, including input/output devices, storage, processing units.

4. **Operating systems and their settings:** This Module explains what operating systems and their settings are, provides the learners with practical knowledge about different operating systems and how they work.

5. **Introduction to the Internet, overview, principle of operation:** This Module explains to learners what Internet is, how it works, why it is beneficial and sometimes dangerous, how to protect one's security while browsing.

6. **Information and data literacy:** This Module explains what information and data literacy is and provides a simple overview of how to extract information and select trusted sources.

7. **Communication and collaboration:** This Module explains how to bridge the distance with others and work together effectively.

8. **Digital Content Creation:** This Module explains what digital content is, and how digital content is created.

9. **Safety:** This Module explains why safety is important and focuses on data protection, safe online practices and understanding digital threats.

10. **Problem solving:** This Module explains how to develop digital troubleshooting skills.

11. **Personal health data and its use:** This Module explains how a person's health data is collected and used digitally.

Why is it important?

It is said that affordability, accessibility of technology products and digital literacy are the main barriers affecting digital access and inclusion of people with disabilities. *In April 2020 UNHCR's Innovation Service jointly with the GSMA M4H program undertook research to address the issue of lack of access to digital services, - with the aim to understand and address barriers in the access and use of mobile technologies for persons with disabilities, and maximize opportunities for social and economic inclusion*[3]

People with disabilities face many obstacles participating in everyday life and using different e-services.[4] The European Accessibility Act was adopted on 17 April 2019 and must be put into practice by EU member states from 28 June 2025. The Act sets new EU-wide minimum accessibility requirements for a list of products and services, for example the act lists smartphones, tablets, computers, smart TV-s, online shopping sites and banking services.[5] DigComp has also pointed out that: *...more specifically, emerging technologies, such as Artificial*

[3] https://www.unhcr.org/innovation/wp-content/uploads/2021/03/Digital-Access-and-Inclusion-of-People-with-Disabilities.pdf

[4] https://www.edf-feph.org/projects/accessibilitech-project/

[5] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019L0882

Intelligence, Virtual and Augmented reality, robotisation, the Internet of Things, datafication or new phenomena such as misinformation and disinformation, have led to new and increased digital literacy requirements on the part of the citizen.[6]

The European Council recommendation of 22 May 2018 has stated that everyone has the right to quality and inclusive education, training, and lifelong learning to maintain and acquire skills that allow full participation in society and successful transitions in the labour market. The document also adds that Member States should support all learners, including those facing disadvantages, or having special needs, to fulfil their potential and by doing so, raising the level of achievement of basic skills (literacy, numeracy, and basic digital skills) and supporting the development of learning to learn competence as a constantly improved basis for learning and participation in society in a lifelong perspective.[7]

Digital competence is described as one of eight key competences in The Reference Framework. Based on the Framework, digital competence involves confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society. It includes information and data literacy, communication and collaboration, media literacy, digital content creation (including programming), safety (including digital well-being and competences related to cybersecurity), intellectual property related questions, problem solving and critical thinking.[8]

[6] https://publications.jrc.ec.europa.eu/repository/handle/JRC128415

[7] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2018.189.01.0001.01.ENG&toc=OJ:C:2018:189:TOC

[8] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2018.189.01.0001.01.ENG&toc=OJ:C:2018:189:TOC

1.1. Real life examples

After losing my sight, I became more interested in the digital world than before. Over time, there have been many ways to simplify my life with digital services via the Internet. For example, the application for disability, while previously I had to find a person to accompany me and arrange times to go to an office somewhere, now I can do it independently, without leaving home. There's no need to be afraid of digital services, just get to know the website calmly at first and start experimenting. You can experiment with complete peace of mind because the form or application won't be sent anywhere before it is confirmed. Since online environments are different, there is always something new to learn and remember. Until now, I have been able to make my life easier and more convenient thanks to the various possibilities that the internet offers. I pay various bills through online banking, submit statements and requests as needed, even submitting an income tax return is a breeze. At the beginning, I mentioned that I lost my sight and therefore I use the computer with a screen reader, and so far, the barrier to using digital services has generally been lack of accessibility, but not complexity. To conclude, if the website of the service provider is accessible, then everything is fine, and it is up to me to take the opportunity and learn how to use this page to make my life easier. Digital skills pay off anyway.

Easier life with digital skills (Estonia, 44)
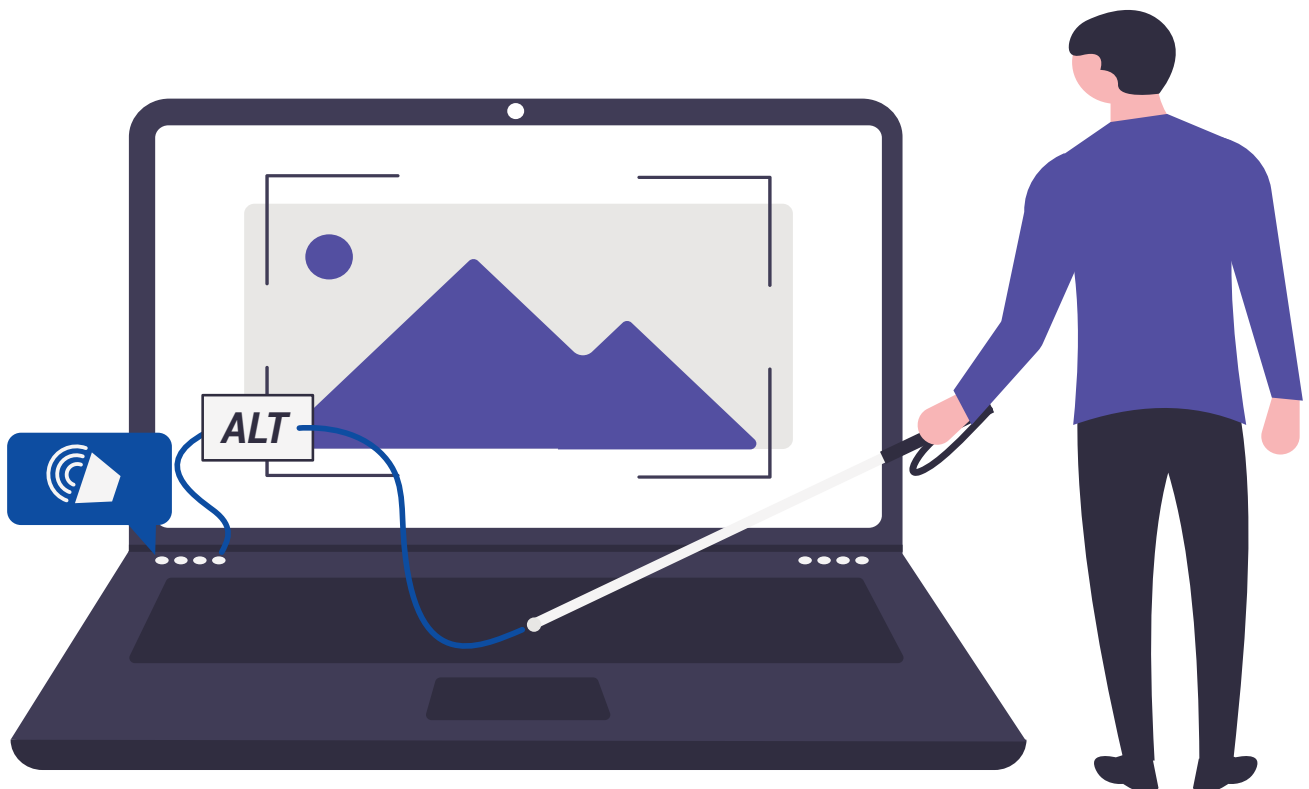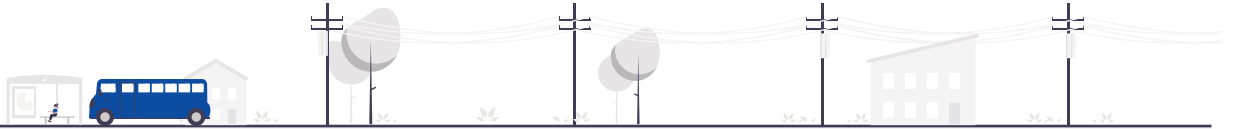
I'm often exposed to information technology. I can turn on the phone and internet at home myself. I can understand information on the internet from pictures because I have not learned to read. I listen to music on YouTube. I can use a calculator minimally, I know what it can do, but I can't tell you all the answers because I don't recognise the amount. I don't have a Facebook account, but I would like to create one. I would like to learn how to use a smartphone. At the moment I have a simple push-button phone, which I can use fluently, and I know how to call basic contacts. Although I can't read, I can recognise a written name. I sometimes use public transport on my own, and I know how to use the route lights. I can use a house combination lock, but I need skills because I confuse numbers.

Personal Experience (Lithuania, 47)
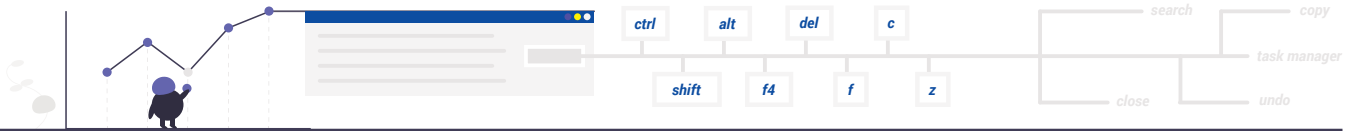
Being a person with a Spinal Cord Injury and limited physical dexterity, I found it challenging and time-consuming pressing 2 or 3 keys at once. For example, bringing up task manager or else. These tasks can be simplified in Laptop or mobile platforms by having button digital widgets or usb physical hardware which 'buttons' can be programmable at command. In addition, if this would be a digital widget, it could be an option under accessibility solutions on devices.

Personal experience (Malta, 46)
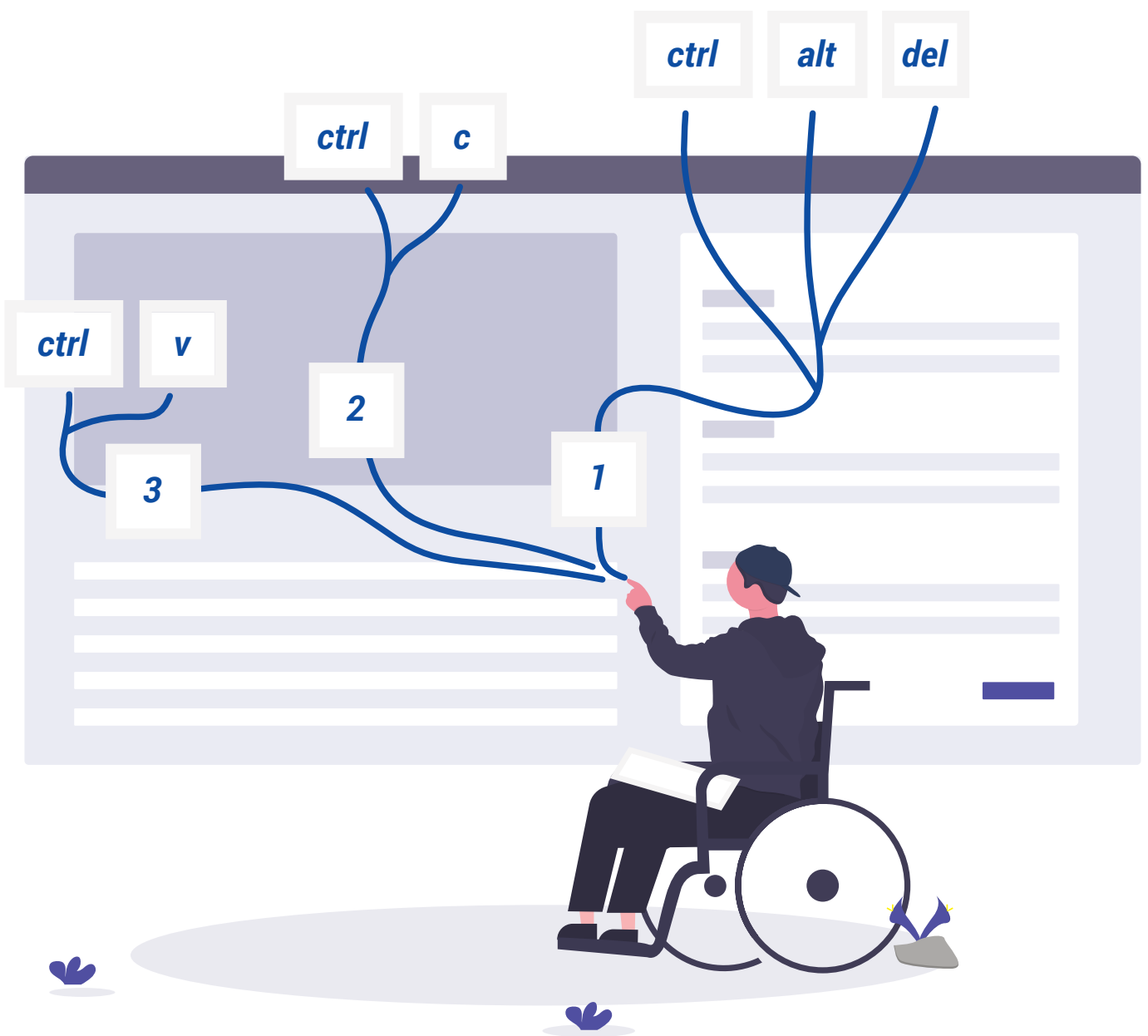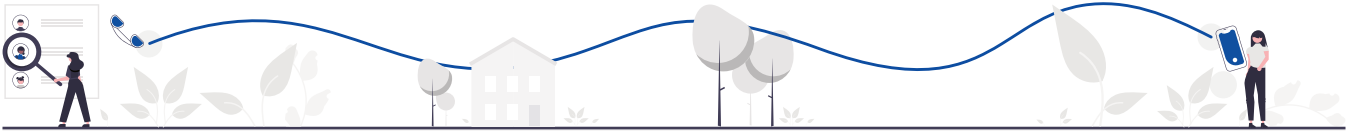
I find technology interesting. I was taught how to use a computer by a teacher, when I was in a sanatorium. I know how to use a computer, but I can't turn it on myself. It won't go. I know how to collect texts: words, poems, songs. I can make phone calls from a list. I can also turn on a shaver and shave myself. I know the buttons to press when I go down the elevator with my mother and I know how to use them.

Personal Experience (Lithuania, 25)

I am a board member of a charity which has organised an annual conference by and for autistic people since 2005, and which provides much needed respite and an opportunity to be around other autistic people. We have participants from around the world as well as those based in the UK. In 2020 we had to cancel the planned residential conference and instead held an online conference which had online social spaces in addition to streaming presentations.

This social space turned out to be so valuable to people that at the end of the conference a small group of admins and moderators (including myself) decided to create a spin-off server which is community-led rather than associated with the charity. Almost four years later, this server is still going strong with over four hundred members in total, many of whom log in very frequently. It provides a space not only for people to socialise, but also for peer support and information sharing across a global population of disabled people who are often isolated.

Personal Experience (UK, 43)
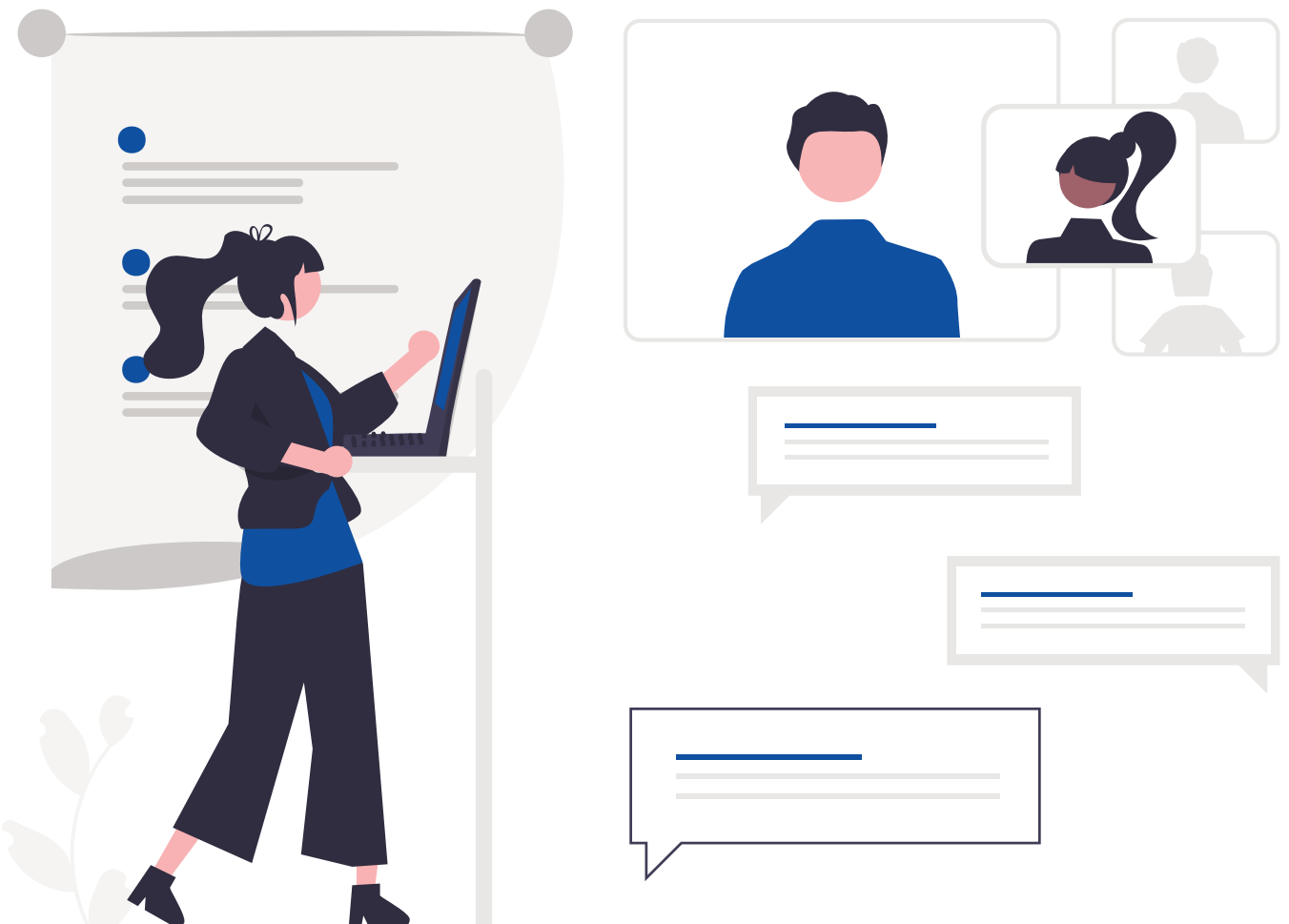
2. Peer-to-peer support

The program has been tested on target groups with different cultural backgrounds and their learning curves have been documented. Each country can adapt and implement the methodology based on these basic rules: simplicity, community based, peer-to-peer support. To become a peer-to-peer supporter, standardised recruitment process should be used that requires three conditions: a recommendation from one's community, experience in using local social services and basic digital skills. In the context of this document, the people who are offering peer to peer support are called digital assistants.

What is peer-to-peer support?

The UN Convention on the Rights of Persons with Disabilities (UN CRPD) mentions peer-to-peer support in Article 26, paragraph 1 as follows: to enable persons with disabilities to attain and maintain maximum independence, full physical, mental, social, and vocational ability, and full inclusion and participation in all aspects of life.[9]

The roles of the process are defined in advance with one being the qualified Peer Counsellor and the other a person seeking advice (counselee). Both participants are on equal footing, which can't always be said about other professional consulting services. In the concept of Peer

[9] https://social.desa.un.org/issues/disability/crpd/article-26-habilitation-and-rehabilitation

Counselling the counsellors use their competencies in the interest of the counselees. In contrast to other counselling formats and in the context of this curriculum, digital assistants can identify with many issues, since they may have similar lived experiences. This means that peer-to-peer support can offer a holistic approach to accompany the counselees in the best way possible and makes the digital assistants skilled experts by learned and lived experiences, related to accessibility of digital technology. [10]

Peer-to-peer counselling plays a crucial role in enhancing digital competencies by offering personalised guidance to overcome the digital divide. It allows those with greater digital expertise to help bridge the gap for less experienced individuals. This form of support is instrumental in building confidence, as it encourages experimentation with new tools and reduces technology-related anxiety. Peers provide tailored support by relating to specific challenges in learning digital skills and sharing relevant examples from their own experiences. They create a safe learning environment where individuals can ask questions, make mistakes, and learn without judgment, thus fostering a positive learning experience. Additionally, peer-to-peer counselling facilitates collaborative troubleshooting, where peers can work together to solve technical problems.

2.1. How to facilitate learning in the described competences

During the project the focus was on learners with different disabilities and how peer-to-peer counselling can improve the necessary competences to use digital technology more efficiently and through that improve participants' quality of life.

Europe is rapidly digitalising, and people with disabilities could benefit from digital innovation, which makes it easier for them to access vital services. Digital public and private services diminish the consumption of time (no transportation needed), enable people with visual impairments using screen readers to use the services independently and people with hearing disabilities communicate with the help of video calls, using sign language. Unfortunately, most digital services are developed without the involvement of people with disabilities, often resulting in inaccessible services that are impossible for them to use. For example, a person with a disability affecting their hand mobility would be unable to enter a PIN on a touchscreen, rendering the service inaccessible and unusable.

The Community Based Digital Peer-to-Peer Support Program is focused on basic level digital competencies. At basic level learners with the help of digital assistants should know the key subjects in every module and have developed the skills to know the correct sources to search for further information.

[10] https://www.frontiersin.org/articles/10.3389/fresc.2022.822484/full

2.2. Competence self-testing

Competence self-testing is a valuable approach for individuals to assess their digital competencies. It involves using online tools and platforms that provide a structured framework for evaluating one's skills across various digital competency subjects. One resource is the DigCompSat tool, which measures digital competences based on the DigComp 2.1 framework, covering knowledge, skills, and attitudes across five competence areas.[11] Also, the website mydigiskills enables users to better understand the level of digital skills based on knowledge, skills, and attitude in each of the five areas of the European Digital Competence Framework for Citizens.[12]

These tools help identifying current skill levels and pinpoint areas for improvement, offering personalised suggestions for further learning. They are designed to be accessible and user-friendly, encouraging self-reflection and continuous development in the digital space. By taking advantage of such self-assessment tools, users can better understand their digital strengths and weaknesses to take proactive steps to enhance their digital literacy.

2.3. Different competency levels

After attaining the knowledge for digital competencies at a basic level, the learners acquire:

1. **Teaching and assisting skills:** Teaching and counselling methodologies to determine the most effective ways for sharing knowledge in specific situations.

2. **Introduction to the use of digital tools:** Digital tools are software applications or platforms that are designed to perform specific tasks or functions using digital technology.

3. **Hardware and its settings:** Hardware is the collection of physical devices such as computers, smartphones, printers etc.

4. **Operating systems and their settings:** Operating systems are software systems that manage a computer/device hardware and software resources.

5. **Introduction to the Internet, overview, and principle of operation:** The Internet is a global network with a wide range of information and possible threats.

[11] https://joint-research-centre.ec.europa.eu/digcomp/digcomp-self-reflection-self-assessment-and-measurement-tools_en

[12] https://mydigiskills.eu/

6. **Information and data literacy:** by defining and articulating information needs, learners can decide what they need and why it's necessary.

7. **Communication and collaboration:** Communicate and collaborate by being able to choose appropriate tools for different collaboration situations.

8. **Digital Content Creation:** Digital content can be created for various purposes, for example entertainment, education, communication, and information dissemination or self-advocacy.

9. **Safety:** Safety can help protect users and others from possible harm when using different technology.

10. **Problem solving:** Problem solving is an integral part of using digital services and technology.

11. **Personal health data and its use:** Personal health data and its use gives the users control over health data collected by different devices and apps.

2.4. Accessibility specific aspects related to training

It's essential to recognise that the requirement for support when engaging with the curriculum is unique to each individual and varies according to the situation and environment. The curriculum provides broad recommendations aimed at enhancing the inclusivity of the training for all participants, drawing on insights from user feedback during the pilot phase. The information presented is reflective of the time it was compiled and is subject to refinement as additional knowledge is acquired.

When planning and implementing digital competency trainings, it is also necessary to consider different accessibility specific aspects that help to create an inclusive learning environment. This chapter will shortly discuss about different key aspects for designing and delivering a digital competency training that is accessible for all. Recommendations described here help to ensure that every learner has the opportunity to develop essential digital skills.

Example of challenges related to online training:

+ **Live training sessions**: These can be difficult to follow for people with a hearing impairment.

+ **Pre-recorded training sessions:** Not being able to ask for clarification or additional support might prove problematic for people with a sensory or learning disability.

+ **Drag and drop exercises:** People with a mobility impairment may struggle with the physical dexterity required to carry out this exercise.

+ **PDF documents:** What looks like text in PDFs, is often an image of a text. This can be confusing for blind or visually impaired people using screen reading software.

+ **Timed assessments and tests:** For people with ADHD, AHD, ADD, dyslexia, or other learning difficulties, fixed assignments and timed tests could prove challenging.

[13] https://www.talentlms.com/blog/accessible-training-for-people-with-disabilities/

+ **A completely colour-driven UI:** A UI that uses colour as its only navigation tool will be less easy to follow for people who are colour blind

+ **Mobile learning:** small screen sizes, the potential for physical disturbances, peripheral noise, and phone-generated notifications could prove stressful for people with some sensory or learning disabilities.[13]

Example of challenges related to on-site training:

+ Placement of the room, before starting the class ask around if everyone can see the screen or hear the lecturer properly.

+ The slides must be of good contrast, accessible font, if needed with a sign language demonstration (if there is no possibility to have a sign language translator on premises).

+ Adjust the computers' contrast, position beforehand.

+ The location must have two places (i. e. break room) enabling people to calm down if stimulated too much or if they just need a break.

+ Prepare an easy read manual for people with intellectual disability and distribute beforehand, if possible.

+ Prepare a simple brochure of an upcoming theme with a few points and distribute beforehand, if possible.

+ Organise a few (or however many necessary) computers accessible for people with visual impairment (with Braille or a synthesizer).

+ Gather a group of assistants (i. e. ratio 1 assistant to 3 students) to help with whatever needs or help students might ask for during the course.

Example of challenges related planning training groups:

+ When planning learning groups consider that the participants may have different communication speeds and requirements, differing levels of executive functioning.

+ Understanding that learner's physical capabilities and the way they control hardware can be different.

+ More time needs to be planned for practical exercises (i.e. hardware setup).

+ Accessible products can be more difficult to find and can vary in different countries.

+ Accessibility of various information online for individuals with disabilities can differ, including the availability of large print, braille, audio, and electronic formats compatible with assistive technologies.

+ Assistive technologies for health management to provide training on how to integrate assistive technologies into health management routines effectively.

+ Privacy and security considerations for assistive technologies to discuss privacy and security implications associated with the use of assistive technologies for managing personal health data, including potential risks of data breaches or unauthorised access.

+ Offer guidance on configuring privacy settings and implementing security measures to protect sensitive health information when using assistive technologies.

3. Examples of previous projects and research

Based on the intensive exercise in November and December 2022, mapping of digital skills of people with disabilities and finding solutions how to bridge the digital gap took place in Estonia. Several surveys and interviews were conducted during which the aim was to find out, why not all disabled people actively use the benefits of digital services. It turned out that despite the disappearance of physical services from rural areas, people with disabilities are not very ready to use electronic services. This is because their digital skills and readiness are low. Of course, there is always a group of people who need external help, but many disabled people could handle the use of e-services independently. Corresponding technical means have been created, for example screen readers for the blind, eye-guided programs have been created for people with mobility disabilities who cannot use their hands, etc. Despite this, barriers exists and places a heavy workload on regional social workers and personal assistants. Partners in the project have all experienced similar problems in their networks and countries. More and more services are becoming digital and therefore it is an increasing problem in Europe, because not all changes consider necessary accessibility features sufficiently. Poor accessibility to digital services causes seclusion and reduced well-being.

Since 2023, the Lithuanian Active Rehabilitation Association (Lietuvos aktyvios reabilitacijos asociacija) is implementing the project "Strengthening the inclusion of people with disabilities (adults and children) in society through active rehabilitation". The project is financed by an agreement with the Social Services Supervision Department under the Ministry of Social Security and Labour. During the project an online learning course to improve skills and knowledge using IT technologies and alternative formats of information presentation have

been organised. People with mobility disabilities and mobility impairments will be trained in the use of IT applications and new formats of information presentation, increasing their competences and skills and their ability to use social networks, to access the information they need from a variety of sources, and to be more aware of these technologies.

Lithuanian Association of the Blind and Partially Sighted (Lietuvos aklųjų ir silpnaregių sąjunga) prepared six videos about tools that enable people with visual impairments to successfully use information technologies. The videos provided the basic information needed by new users of screen reader software to enable visually impaired people to operate a computer on Windows, Android, Ios operating systems, as well as on the specific Blindshell 2 classic phone environment for visually impaired people and on the web. The videos will provide new users of the screen reader with the necessary information to enable visually impaired people to operate a computer or phone. Commercial businesses and mobile operators will have an educational tool to provide the visually impaired person with the information they need.

An upcoming course on information skills development services is provided within the framework of the project "Development of Technological Skills of Older Persons" and will be implemented by the Lithuanian Association of the Deaf (VšĮ Vilniaus kurčiųjų centras), funded by the Ministry of Social Security and Labour. People aged 60 and over are invited to take the opportunity to learn how to use the latest technologies and improve their computer literacy knowledge and skills.

4. Glossary

Artificial intelligence

Artificial intelligence (AI) refers to machine-based systems that can, given a set of human-defined objectives, make predictions, recommendations, or decisions that influence real or virtual environments. AI systems interact with us and act on our environment, either directly or indirectly. Often, they appear to operate autonomously, and can adapt their behaviour by learning about the context. [14]

Digital accessibility

Extent to which people from a population with the widest range of characteristics and capabilities can use digital products, systems, services, environments, and facilities to achieve a specified goal in a specified context of use (direct use or use supported by assistive technologies).

[14] UNICEF, 2021, p.16

Digital assistant

A person who is available to help with tasks and answer questions by possessing the necessary skills to do so or knowledge to search for information. The assistant is proficient in a variety of tasks from scheduling appointments to managing emails and knows the main problem-solving possibilities.

Digital content

Data, which is produced and supplied in digital form, for example video, audio, applications, digital games, and any other software. Digital content includes information that is broadcast, streamed, or contained in computer files.

Digital service

Allows a user (citizen, consumer) to create, process, store, or access data in digital form and to share or interact with data in digital form uploaded or created by the same or other users of that service.[15]

Digital technology

Any product that can be used to create, view, distribute, modify, store, retrieve, transmit and receive information electronically in a digital form. For example, personal computers and devices (e.g. a desktop, laptop, netbook, tablet computer, smart phones, PDA with mobile phone facilities, games consoles, media players, e-book readers, smart assistants, AR/VR headsets and other devices), digital television, robots.

Disinformation and misinformation

Disinformation is false information intentionally created and disseminated to deceive people whereas misinformation is false information regardless of intent to deceive or mislead people [16]

GDPR

The General Data Protection Regulation (EU) 2016/679 is the legal framework that sets guidelines for the collection and processing of personal information of individuals within the European Union. GDPR came into effect across the EU on May 25, 2018.[17]

Learner

In the context of this curriculum, a learner is a person who studies based on the described digital competency training modules and in the future can assist others with similar needs.

Media literacy

It refers to skills, knowledge and understanding that allow citizens to use media effectively and safely. To enable citizens to access information and to use, critically assess and create media content responsibly and safely, citizens need to possess advanced media literacy skills. Media literacy should not be limited to learning about tools and technologies but should aim to equip citizens with the critical thinking skills required to exercise judgment, analyse complex realities and recognise the difference between opinion and fact.[18]

Privacy policy

The term related to the protection of personal data, for example, how a service provider collects, stores, protects, discloses, transfers, and uses information (data) about its users, what data are collected, etc.

[17] https://gdpr.eu/

[18] the EU's Audiovisual Media Services Directive (2018)

Problem solving

An individual's capacity to engage in cognitive processing to understand and resolve problem situations where a method of solution is not immediately obvious. It includes the willingness to engage with such situations in order to achieve one's potential as a constructive and reflective citizen.[19]

User

A person who uses digital devices and services. The user might have quite advanced skills, but often might need quite a lot of support to navigate complex digital environments.


[19] OECD, 2014, p. 30

5. Curriculum

The curriculum comprises of 11 digital competency modules, each designed to empower users with the essential skills for thriving in a digitally driven world. From mastering information management and problem solving to navigating online communication platforms, these modules offer a structured pathway to enhance the user's digital literacy. Each module is designed to be a guideline for the digital assistant to know what, why and how the digital competence of learners could be improved. The modules are meant to have interactive lessons that cover critical areas such as data security, digital content creation, and online collaboration. When progressing through the modules, learners should gain not only proficiency but also the confidence to apply these competencies in various professional and personal contexts in their everyday lives. All the modules are written from the perspective of using digital technology and improving the competency of the learners to eventually do so independently. The Modules described help the digital assistant to plan step by step activities, for the learner to become an autonomous user of digital technologies.
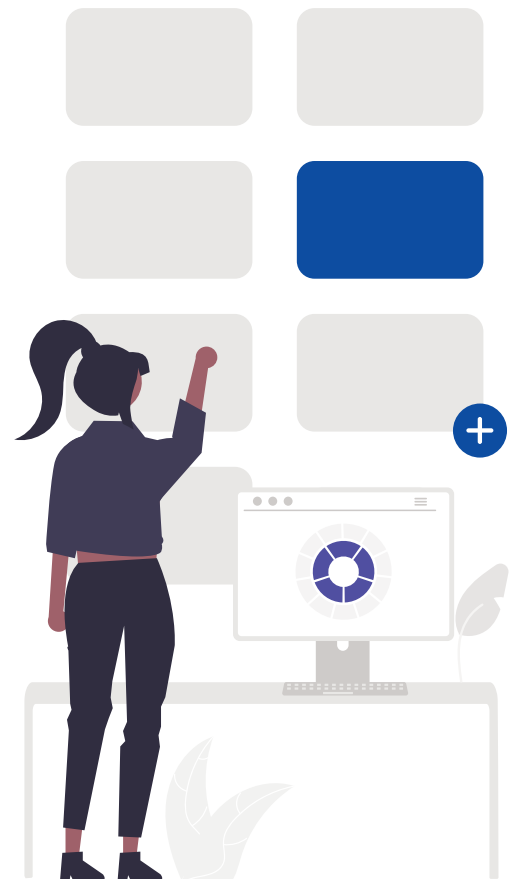
5.1. Teaching and assisting skills

+ What do we need to know when teaching others?

+ Why is it important to understand the differences between learners?

+ How to be an inclusive teacher?

Module Description:

This Module teaches how to explore different effective methods for presenting information and fostering engagement in digital settings. Digital assistants develop skills in creating clear and interactive online and offline learning experiences.

Key topics (objectives):

+ Teach learners how to become effective teachers themselves.

+ Outline requirements for successful teaching in general.

+ Creating a safe environment for the learners so they can focus on gaining new knowledge.

+ Understanding the basics of psychological well-being while using digital technologies.

+ Effective feedback – clear verbal and non-verbal communication.

+ Digital literacy to understand and use digital tools and platforms to enhance teaching.

+ Assessment and feedback to give learners tasks with clear goals and constructive feedback based on task fulfillment.

+ Adapting to the needs of the learners by customising teaching approaches and speed.

+ Using interactive content such as videos, quizzes, and games on make the learning more diverse and practical.

+ How to teach different topics on and offline.

By the end of this module, the learners will know (learning outcomes):

Understand teaching and counselling methodologies to determine the most effective ways for sharing knowledge in specific situations.

Digital literacy that will help to teach and assist others effectively when acquiring digital skills.

Facilitate inclusive learning by being aware and mindful of the learning environment and learners needs.

Creating engaging learning content that will be relatable and practical for the learners by improving their independence in everyday activities.

5.2. Introduction to the use of digital tools

+ **What are digital tools?**

+ **Why do we need digital tools?**

+ **How can digital tools be used?**

Module Description:

This Module explains what digital tools are, provides the learners with practical knowledge on how to use digital tools and how it could benefit them. It also gives learners an overview of different functions that can make digital solutions more accessible.

Key topics (objectives):

+ Short historical background on how digital tools have developed throughout time.

+ Overview of different problems that pushed the need to have digital tools i.e. efficiency, more convenience, less travelling, accessing digital services from home.

+ Overview of different accessibility tools for different online services, websites, and apps.

+ Some examples: Speech to text, Handsfree devices, Text to speech

+ Examples of the main digital tools covered in the module:

  › E-mail platforms,

  › Microsoft 365 and similar,

  › Microsoft Copilot and similar,

  › Google Drive, Google Maps.

+ Examples of the main online services covered in the module:

  › Calendars,

  › To-do lists,

  › Smart homes with Alexa or Siri,

+ Examples of the main online services covered in the module:

  › Online Banking,

  › Online shopping,

  › Leisure – booking a flight,

  › Transport – booking a cab or finding public transport.
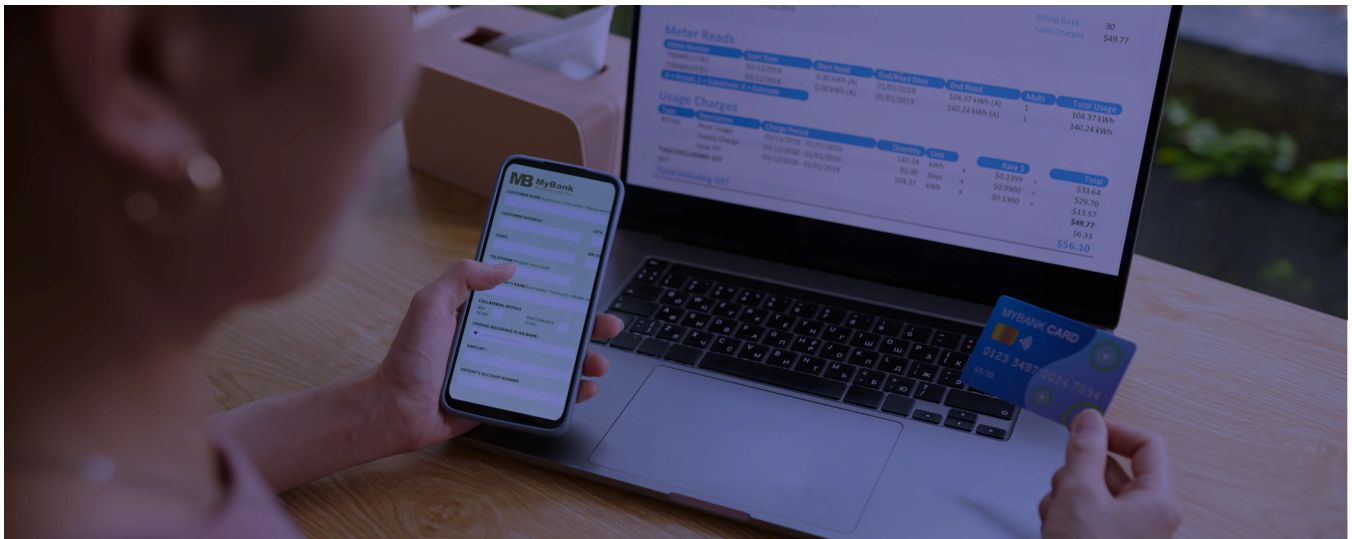
By the end of this module, the learners will know (learning outcomes):

Understand that digital tools are software applications or platforms that are designed to perform specific tasks or functions using digital technology.

Navigate digital tools like email and word processing software to more complex tools like graphic design programs, project management platforms, and data analysis software.

Using digital tools across various industries and disciplines to streamline processes, increase efficiency, and enhance productivity.

Manage everyday activities better and improve the independence of users with different abilities.

5.3. Hardware and its settings

+ What is hardware?

+ Why do we need hardware?

+ How can hardware be used?

Module Description:

This Module explains the basic components of computer hardware, including input/output devices, storage, and processing units. Learners will explore how to adjust hardware settings for better performance, troubleshooting and how to accommodate individual needs for technical adaptation.

Key topics (objectives):

+ Short historical background on how hardware components have developed throughout time.

+ Basic introduction to computer hardware and its components such as the motherboard, CPU, RAM, and storage devices.

+ Basic installation and configuration of common hardware like keyboards, webcams, printers etc.

+ Basic troubleshooting and maintenance techniques for diagnosing and fixing common hardware issues.

+ Understand how hardware works differently with different operating systems.

+ Basic overview of peripheral devices likes ports, connectors, and interfaces.

+ Understand how to adapt different hardware according to specific needs.

+ Adjust the basic settings on the computer or smartphone like language, time, location, brightness of the screen, automatic translations, know how to turn on the screen reader, how to turn on voice texting etc.

+ Understand where to ask for help for different hardware related issues.

By the end of this module, the learners will know (learning outcomes):

Understand that hardware is the collection of physical devices such as computers, smartphones, printers.

Which hardware is most suitable for the user and how to acquire the needed hardware.

That hardware can be adapted to suit specific abilities and needs through different accessibility features to improve user independence.
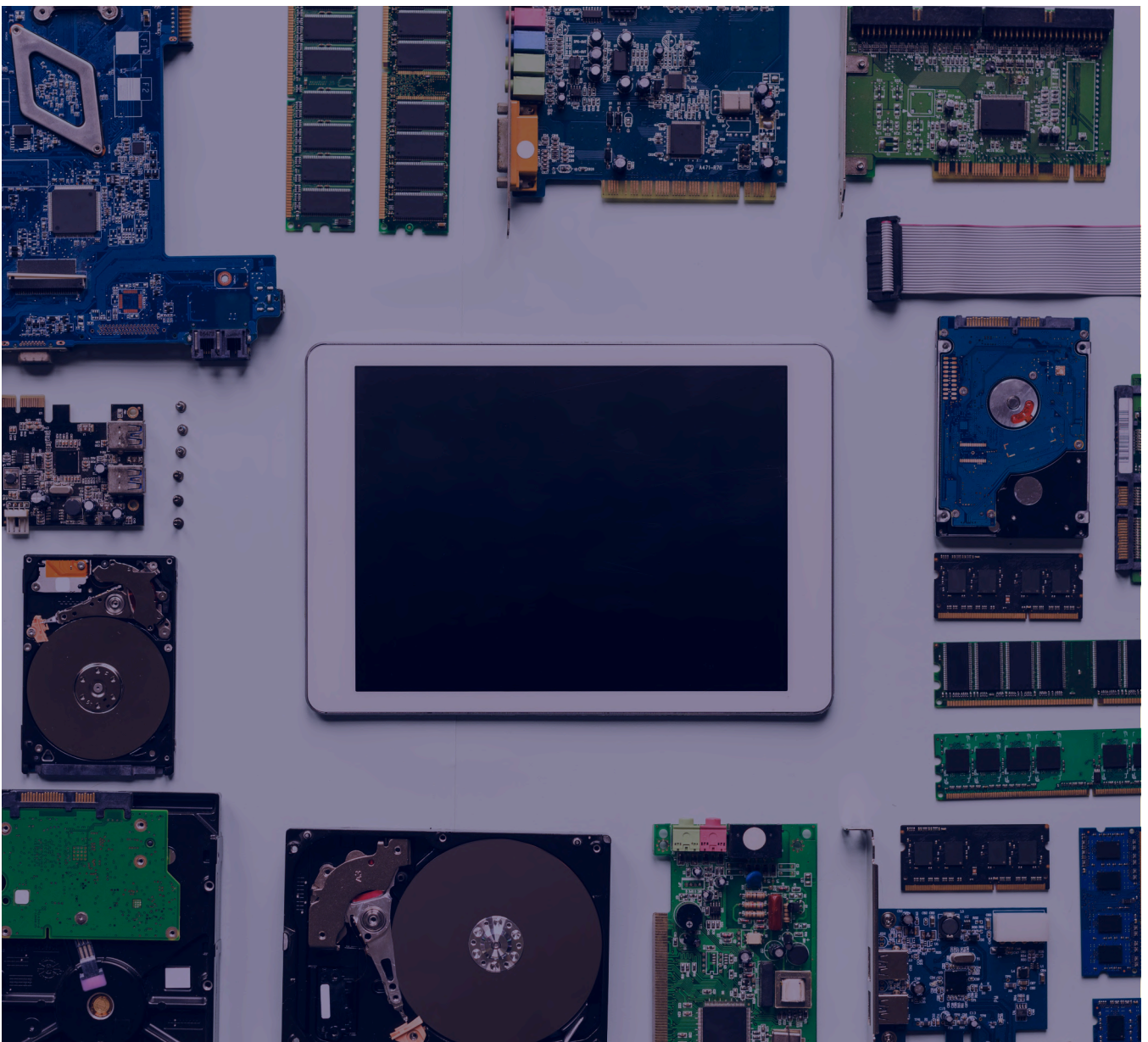
5.4. Operating systems and their settings

+ **What are operating systems?**

+ **Why do we need operating systems?**

+ **How can operating systems be used?**

Module Description:

This Module explains what operating systems (OS) and their settings are, provides the learners with practical knowledge about different operating systems and how they work. Learn about what operating systems are available and how they function.

Key topics (objectives):

+ Short historical background on how different operating systems have developed throughout time.

+ What is Microsoft Windows?

+ What is MacOS?

+ What is Android?

+ What is Linux?

+ What is Chrome, Mozilla Firefox, Safari or other similar browsers.

+ How to customise operating system according to user preferences.

+ How to find accessibility features in different operating systems.

+ How to search online?

+ How to install, launch and delete different applications and programs?

+ How to use different security features – eg. Apple ID, Samsung ID.

+ How to manage or organise personal photos or videos?

By the end of this module, the learners will know (learning outcomes):

That operating systems are software systems that manage a computer/device hardware and software resources.

Understand that operating systems perform tasks such as managing memory, facilitate communication between software applications, and providing a user interface for interacting with the computer.

How to adapt operating systems to suit specific abilities and needs through different accessibility features to improve user independence.
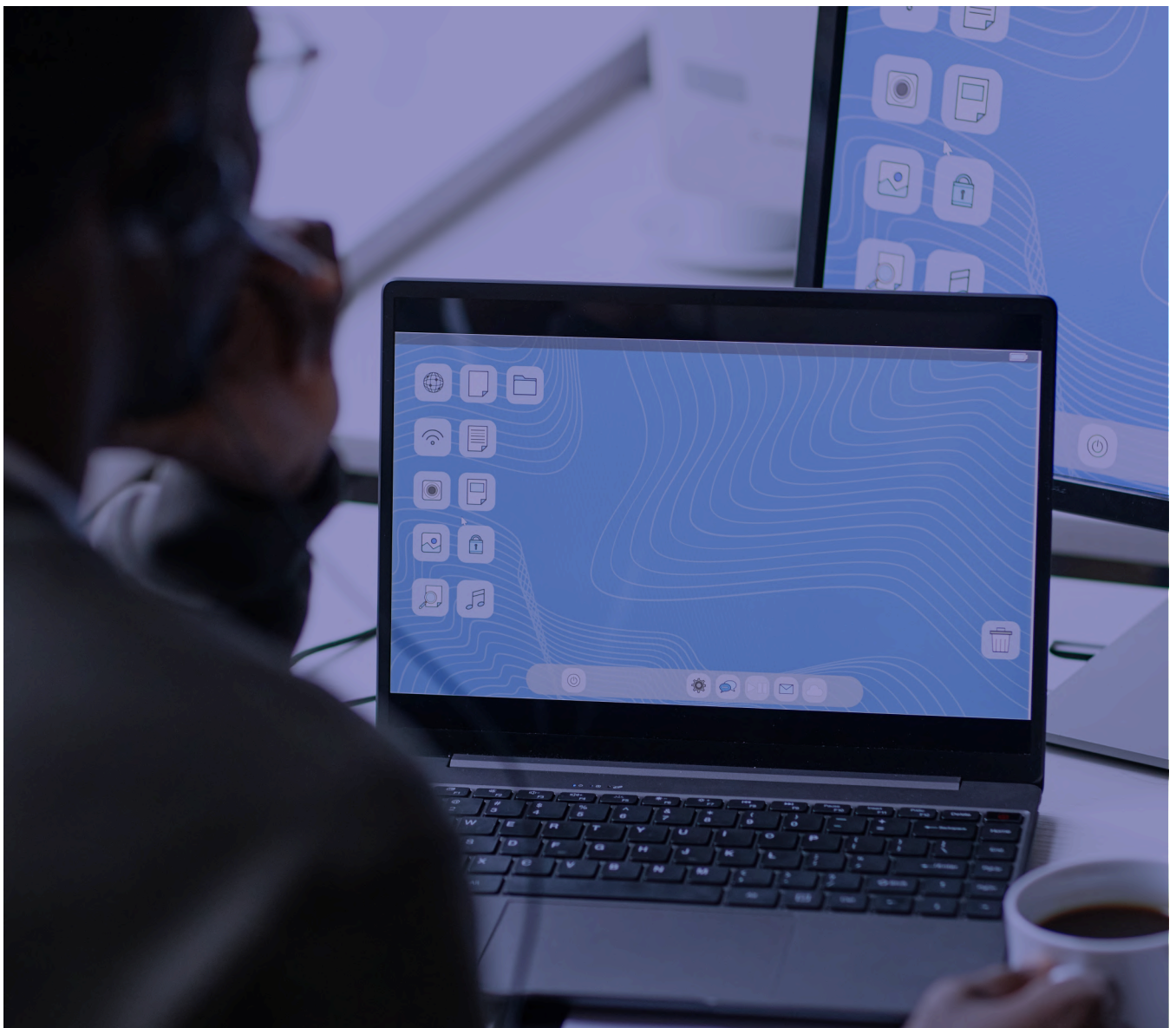
5.5. Introduction to the Internet, overview, and principle of operation.

+ What is the Internet: connection to everything.

+ Why do we need the Internet?

+ How can the Internet be used?

Module Description:

This Module explains to learners what the Internet is, how it works, why it is beneficial and sometimes dangerous, how to protect one's security while browsing. The course is more theoretical than practical and gives a learner an understanding of the principles regarding the Internet.

Key topics (objectives):

+ Short historical background on how the Internet was found and how it has developed throughout time.

+ How the Internet changed the world.

+ Possible ways to connect to the Internet with practical examples (phone, computer, computer at the library, phone in the shopping mall etc.).

+ Where and whom to ask for help with questions related to the Internet.

+ Giving an overview of the possibilities of the Internet – concrete examples of what a person can do via the Internet (checking the bus times, reserving a table in the restaurant, using email, checking up some recipes etc.)

+ Overview of handy possibilities that the Internet provides for people with disability (i. e. interactive maps with sound direction).

+ Explaining in a generalised way, what is 3G, 4G, 5G Internet.

+ Distinguishing what are MB, GB and how much amount of data it is.

+ Giving examples of a downloaded object and approximate amount of data it requires (i. e. download a song – 60 mb).

+ How to be a smart explorer when using the Internet and how to avoid common threats.

By the end of this module, the learners will know (learning outcomes):

The Internet is a global network with a wide range of information and possible threats.

Internet usage as an important part of everyday lives allowing the users to communicate, commerce, educate and enjoy entertainment.

Understand that the Internet can be accessed by users with different abilities and needs through different accessibility features to improve user independence.

5.6. Information and data literacy

+ What is information and data literacy?

+ Why is information and data literacy important for users?

+ How can information and data literacy benefit users?

Module Description:

This Module explains what information and data literacy is and provides a simple overview of how to extract information and select trusted sources. There will also be practical exercises to develop critical thinking and manage data related actions on different devices on and offline.

Key topics (objectives):

+ Short historical background on information and data literacy and how it has developed throughout time.

+ Overview of gadgets that users can gather information with phone, computer, tablet.

+ Overview on how to manage data: how to create a file, how to move information from one file to another, how to sort them by i. e. creation time, how to name the file, how to use USB, how to copy file, how to delete file, how to restore file if deleted by mistake.

+ Explanations how devices with internet can provide information.

+ Demonstrating different search engines and chat bots (all with examples of different devices like computers, phones, and tablets).

+ Using voice activated search options.

+ Demonstrate how to check the author of information and its credibility.

+ The possible effects of medicine, mood swings while managing information. How to manage user's feelings when certain triggering information appears (click bait pop ups)?

By the end of this module, the learners will know (learning outcomes):

Understand how to manage information and data literacy better by identifying and evaluating sources based on their credibility.

Understand information and data literacy by utilising tools and devices for information retrieval and using the right tools effectively.

How to organise and communicate data based on different abilities and needs through different accessibility features to improve user independence.

5.7. Digital communication and collaboration

+ What is digital communication and collaboration?

+ Why is digital communication and collaboration important for users?

+ How can digital communication and collaboration skills benefit users?

Module Description:

This module explains how to communicate safely and effectively within a digital environment. The Module explains how to bridge the distance with others and work together.

Key topics (objectives):

+ Short historical background on digital communication and collaboration.

+ Overview of the most common digital tools for collaboration and how to solve common problems that may occur when using these platforms.

+ Understand how to collaborate remotely using digital platforms with basic knowledge about virtual meetings, shared documents, and project management tools, including accessibility features. Also using screen readers, voice input, and alternative communication methods.

+ Overview of the most common social communication platforms and how they are used.

+ Understand how to choose one or two social communication platforms best suited for the user's needs.

+ Understand what a digital identity is and how to protect it.

+ Understand the consequences of what can be posted on the internet and how it is visible for others with practical examples.

By the end of this module, the learners will know (learning outcomes):

Digital communication and collaboration by being able to choose the most appropriate collaboration tool for their needs. Have experience with, and basic skills using two or more collaboration tools.

Digital communication and collaboration by understanding what a digital identity is. What are the possible consequences of their digital identity, and how to protect it.

Digital communication and collaboration by being aware of different social communication platforms. How to choose the most appropriate platform for their needs. Have experience with, and basic skills using two or more social media platforms.

Digital communication and collaboration by using the correct tools to improve user independence in everyday activities.

5.8. Digital Content Creation

+ **What is digital content creation?**

+ **Why is digital content creation important for users?**

+ **How digital content creation skills benefit users?**

Module Description:

This Module explains what digital content is, how digital content is created via images, videos, photos, etc. The Module provides the learners with knowledge about the commonly used social media platforms, how to create and use social media accounts.

Key topics (objectives):

+ Short historical background of how digital content creation has developed throughout time.

+ What are social media platforms?

+ What is digital content creation?

+ The importance of learning about online safety and potential risks of sharing personal data.

+ What are the most commonly used social media platforms and how to create an account?

+ How to upload a photo or a video or other digital content?

+ Basic rules of online behaviour:

  › What can be shared online;

  › Always asking for permission if photos or videos features another person/s before uploading it on any social media platform;

  › What does it mean to tag people in a video or photo;

  › What can happen if a company logo is misused.

  › Brief explanation of the GDPR.

+ What is Artificial Intelligence (AI)? Use of different AI as an example.

+ The use of AI to assist communication or understanding, how to draft an email, or a simplified version of a document.

+ One should remember that what is shared online will remain online and can be shared and re-shared by others. Practical explanations on how it can be done.

+ Developing digital content (different accessibility features when creating digital content, for example how are webpage management portals accessible, how to use social media page managers etc.) What kind of content creating platforms different cultures or groups mainly use.

+ Integrating and re-elaborating digital content (how can users improve and add new data to already existing digital content). When some understanding of a topic changes, how to update all the relevant news, posts etc.

+ Copyright and licenses (what are the basic copyright and license laws, are there any different rules for people with disabilities or NGO who help people with disabilities. What can happen if you don't follow the rules)

+ Programming (basic understanding of programming, overview of the main programs used for it and their accessibility). The option to use AI to help with coding.

By the end of this module, the learners will know (learning outcomes):

Digital content can be created using different digital formats such as text, images, videos, audio.

Digital content can be created for various purposes, for example entertainment, education, communication, and information dissemination or self-advocacy.

Digital content creation can be published online or on social media platforms, and online safety on sharing of personal information.

Digital content creation can improve the quality of life and independence of users in everyday activities.

5.9. Safety

+ What is safety in the digital environment?

+ Why is safety important?

+ How can users be safe when using technology?

Module Description:

This Module explains why safety is important and focuses on data protection, safe online practices and understanding digital threats. Practical examples and exercises help learners to understand how to manage sensitive data.

Key topics (objectives):

+ Short historical background on digital safety and how it has developed throughout time.

+ The module teaches appropriate behaviour in online interactions. This includes respecting privacy, avoiding cyberbullying, and maintaining a positive online presence.

+ Gives an overview on how to protect personal information online. Learning about password security, phishing (scam e-mails etc), and safe browsing practices.

+ Gives an overview of common online risks and practical examples of how to recognise scams and frauds.

+ Raising awareness about cyberbullying and how to report it.

+ Protecting devices, what options are there to protect a person's hardware and software.

+ Protecting personal data and privacy, understanding of the basic personal data and privacy laws. Are there any exceptions for people with disabilities. How to access and get accessible information about different regulations.

+ How to protect a person's physical health, when using digital technologies.

+ How to use digital technologies for safe and supported social inclusion.

+ Protecting the environment, what can a person do to help save the environmental effects or changes caused by growing use of digital technologies.

+ Identify simple ways to protect devices and digital content.

+ Differentiate simple risks and threats in digital environments.

+ Identify simple privacy policy statements of how personal data is used in digital services.

+ Differentiate simple ways to avoid health risks and threats to physical.

By the end of this module, the learners will know (learning outcomes):

Safety is vital for an enjoyable use of digital technologies.

Safety can help to protect the users and others from possible harm when using different technology.

Safety has many possible features and relates to all the other modules in the curriculum.

Safety can help to improve user independence and well-being in everyday life.

5.10. Problem solving

+ What is digital problem solving?

+ Why is digital problem solving important for users?

+ How can users solve the most common digital problems independently?

Module Description:

This Module explains how to develop digital troubleshooting skills and how to use digital tools to solve real-world problems. How to learn effective strategies to identify, analyse and solve technical problems using digital tools and resources.

Key topics (objectives):

+ Short historical background on digital problem solving and how the possibilities have developed throughout time.

+ Recognise digital competence needs and be aware of ways to map others' competence.

+ Awareness of a range of sources of knowledge and training that can be recommended to learners.

+ Practicing basic 5-10 simple solutions to common hardware and software problems.

+ Awareness of common solutions to technical problems and ways to seek information about complex problems.

+ Identify digital tools and technologies that can be used to create knowledge and to innovate processes and products.

+ Skills to recognise where digital competence needs to be improved or updated.

+ Identifying where to seek opportunities for self-development and to keep up to date with the digital evolution.

+ Identifying technical problems when operating devices and using digital environments and identify solutions to solve them.

+ Identifying individual disability-related needs and recognise digital tools and possible technological responses to solve those needs. Choose ways to adjust and customise digital environments to personal needs.

+ Using remote assistance to find and resolve problems.

By the end of this module, the learners will know (learning outcomes):

Digital problem solving is an integral part of using digital services and technology. Learners have experience of common technical problems and how to solve them, as well as where to look for help.

Digital problem solving to understand common flaws in websites and applications, and ways to overcome these.

Digital problem solving to understand problems that arise from unmet accessibility needs and ways to overcome these.

Digital problem-solving skills can vastly improve user independence in everyday activities and to have experience in using digital tools to solve disability-related problems in their lives.

5.11. Personal health data and its use

+ What is personal data and its use?

+ Why is it important to protect personal health data?

+ How can personal health data benefit users?

Module Description:

This Module explains how a person's health data is collected and used digitally. Learn how to manage a person's privacy settings and make informed decisions about one's health information.

Key topics (objectives):

+ Short historical background on personal health data and its use and how the possibilities have developed throughout time.

+ Have an understanding what different health data can know about the user and what kind of personal data different apps and devices collect.

+ Be aware of how and when to share personal data, who to give access to it and understand the ownership of the information.

+ Understanding what personal health data encompasses, including medical history, treatment records, diagnostic tests, medication information.

+ Explain the importance of personal health data in healthcare decision-making and treatment planning.

+ Privacy and confidentiality to educate on the importance of privacy and confidentiality of personal health data. Provide examples of potential risks associated with unauthorised access or sharing of personal health data.

+ Data ownership and control to discuss individuals' rights and responsibilities regarding their own health information, including the right to access, amend, and restrict the use of their data.

+ Data collection and sharing practices to explain how personal health data is collected, stored, and shared within the healthcare system.

+ Explore consent mechanisms and the importance of informed consent in data sharing practices.

+ Digital Health Technologies to introduce various related technologies (e.g.,

Electronic Health Records, health apps, wearable devices) and their role in managing personal health data.

+ Discuss security measures implemented in digital health technologies to protect personal health information.

+ Health literacy and empowerment to provide resources and tools to help individuals navigate and interpret their health information effectively.

+ Practical real-life examples and case studies that demonstrate the practical implications of personal health data use and its impact on individuals' lives.

By the end of this module, the learners will know (learning outcomes):

Personal health data and its use gives the users control over health data collected by different devices and apps.

Personal health data and its use gives the awareness of where the data collected by the healthcare system is located and who has access to it.

Personal health data and its use can improve user independence in health-related data decisions.