



D.2.2. COURSE DESIGN

R2 DEVELOPING, TESTING AND ASSESSING A SET OF DIGITAL TRAINING CONTENT MODULES
AND SESSIONS FOR INFORMAL CAREGIVERS

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INTRODUCTION

The modular digital skills training course has been developed in the framework of Digitalis - *Empowering Informal Carers in Their Daily Usage of Digital Healthcare Services* project (2021-1-IT02-KA220-ADU-000033535) and by the partnership designed by and for the female informal caregivers in the 3 participating countries (Greece, Hungary, Italy) according to their national healthcare environment and context through national co-creation workshops. The course will be implemented as part of the Digitalis - *Empowering Informal Carers in Their Daily Usage of Digital Healthcare Services* project in R2, *Developing a set of digital training content modules and sessions*. This project result will provide a set digital training modules and face to face learning sessions for informal caregivers which will help them to utilize new technologies in their daily work.

Course development was preceded by a thorough survey among informal caregivers in the 3 countries the results and conclusions of which are the base of the curriculum.

AIM OF THE COURSE

The aim of the course is to provide informal female caregivers with the essential digital skills and knowledge to fully exploit the potential of digital healthcare services and technologies to improve their own professional status as well as the quality of life and safety of their care recipients they provide care for.

TARGET GROUP

Women above 18 providing care voluntarily for their neighbours, family members or strangers individually or within an organization of volunteers who typically haven't received any organized upskilling training to prepare them for the caring job and have different education level and diverse digital skills.

METHODOLOGY OF THE COURSE

The course is based on learning by doing and be delivered in **blended** form:

- online via Moodle (LMS)
- face to face workshops, practical sessions, consultations

Preferred methods:

- Problem-based learning
- Practice-based learning
- learning by doing
- Flipped Classroom method

MODULES

- **Module 1. Basic digital skills and competences for caring for older adults** (using the DigComp framework). 15% elective module
- **Module 2. Assistive technologies and health related information services.** 25%
- **Module 3. Self-monitoring and disease management by using ICT.** 20%
- **Module 4. Digital adherence technologies** (smartphone-based technologies, digital pillboxes, etc.) 20%
- **Module 5. Social networks, online communities for active and healthy ageing.** 20%

ASSESSMENT METHODS AND CRITERIA

- Quizzes at the end of each module (80%)
- Activity in the online collaboration in the forums of the LMS (10%)
- 2 Case studies submitted (10%) (in Module 2)

DURATION OF THE COURSE

The training course involves 5 modules, each weighted differently compared to the whole.

Module 1: Basic digital skills and competences for caring for older adults (using the DigComp framework). **15% elective module**

Module 2: Assistive technologies and health related information services. **25%**

Module 3: Self-monitoring and disease management by using ICT. **20%**

Module 4: Digital adherence technologies (smartphone-based technologies, digital pillboxes, etc.) **20%**

Module 5: Social networks, online communities for active and healthy ageing. **20%**

The total duration of the course is 18 hours completed with face to face practical work.

LEARNING MATERIAL

Types of the learning material used:

- online textbook with links
- video tutorials
- interactive presentations

COURSE INFORMATION

The training course is piloted in 2 of the partner countries: Greece and Hungary in the national languages. The content is prepared in English and translated to Greek and Hungarian.

At some topics the different language versions may vary as some tools, applications and the national e-health systems exist only in the national language of the partner organization.

LMS USED FOR ONLINE LEARNING

Moodle

A Moodle training course customized for the course with visual appearance and graphics in accordance with the design elements of the project and a forum function to enable collaborative learning and knowledge sharing. The Quiz activity module allows the teacher to design and build quizzes consisting of a large variety of question types. Images, infographics, videos, etc. can be embedded to serve 21st Century teaching.

A detailed user guide will be provided for the participants.

URL of the course: <https://course.digitalis.prompt.hu/>

MODULE 1. BASIC DIGITAL SKILLS AND COMPETENCES FOR CARING FOR OLDER ADULTS

AIM OF THE MODULE:

The module prepares the caregivers to search and select digital information and tools (devices and apps) which could help the person being cared for improve his/her quality of life, well-being and safety living and maintain health. They will be able to develop their own personal digital strategy, including applying digital tools for their work, keep contact and communicate with the care recipients, the families and other caregivers and will be able to apply and suggest practical digital tools and applications and teach the recipients to use them in order to stay mentally and physically healthy. In this module, the importance of privacy, personal data, GDPR and internet safety are focused on in each of the subtopics. At the end of the module, the levels of knowledge, skill and attitudes of the participants will reach at least “Intermediate 4” level according to the European framework of DigComp 2.2

LEARNING OBJECTIVES

In this module, learners will obtain all the knowledge and skills that are involved in the criteria to fulfill the level Intermediate 4 of DigComp 2.2.

LEARNING OUTCOMES

By the end of the training participants will be able to:

Knowledge understand the importance of digital safety and to recognize reliable and false information and data on the internet. They will be able to download, save and edit content and share it with others and to create their own digital content.

Skills find and manage predictable information on the Internet. They will be able to communicate and collaborate with others online. They will be able to manage their and the recipient’s personal data and privacy safely. **Responsibility/Autonomy:** realize the proper manner of communication on the Internet

and the importance of being safe online. They will be able to decide themselves if they need more help e.g. consultancy while delivering the module.

DURATION

3 hours online course.

UNITS

- **Introduction**
- **Information and data literacy**

Browsing, searching, evaluating and managing data, information and digital content, managing digital identity. Building and customizing digital environments on different devices and identifying basic technical problems while working with them.

- **Communication and collaboration**

Interacting with others, sharing information and collaborating by using a wide variety of digital technologies and practising proper behaviour on the Internet.

- **Digital content creation and problem solving**

Developing digital content in order to boost up their communication on the Internet and customize their accounts, collaborative content creation

- **Digital safety issues**

Recognizing and identifying the risks and threats of the online environments, and knowing methods to avoid them, and protecting personal data and privacy.

- **Summary/Conclusion**

ASSESSMENT

Self-assessment quiz measuring their level of digital skills against the criteria set in DigComp 2.2.

(See ANNEX 2)

MODULE 2 ASSISTIVE TECHNOLOGIES AND HEALTH RELATED INFORMATION SERVICES.

AIM OF THE MODULE

In this module, participants will be introduced to some of the most practically usable digital health tools and applications for their home caring job. They will acknowledge what are the benefits of these devices, platforms and apps and learn how to use them and how to put them into operation in order

to monitor, diagnose or maintain the physical state and their mental health of the recipients. They will be able to use these DHLs to solve emergency cases and to gain information on the recipients' physical and mental condition, e.g. monitor their activity, heart rate, blood pressure and level of glucose in their blood and offer them applications for learning and brain-training.

LEARNING OBJECTIVES

Learners will come across with applications and digital tools that assist homecare, communication between the recipient and the caregiver, the family and other caregivers. They will also be introduced to emergency alerting and life-saving tools used in case of a medical crisis. As mental health being as important as physical health, they will learn about applications that help maintain the mental conditions of the recipients.

LEARNING OUTCOMES

By the end of the training participants will be able to:

Knowledge: evaluate and offer digital tools and apps that are developed to assist homecare. They will be able to find such and understand the basic steps to get them into operation. They will be able to recognize how to manage these in accordance with the recipient's needs.

Skills use the most suitable tools and devices that each of their care recipient's physical and mental health requires. They will be able to teach the recipients how to use these on their part.

Responsibility/Autonomy identify the most suitable digital tools and apps for the given recipient's needs. They will be able to offer such to other caregivers. They will be able to collaborate with other caregivers while using these and ask for professional help if necessary.

DURATION

4 hours online +2 hours f2f (group work workshops + 2 hours individual work)

UNITS

- **Introduction**
 - **Emergency alerts and life-saving apps**
 - **Communication and home safety**
 - **Physical and mental health preservation**
 - **Summary**
-

ASSESSMENT, CRITERIA

Quiz with 4 multichoice, closed questions – 8 points

2 case studies (own and recipient experience) at least 1500 chr. 2 points

Min. passing criteria: 5 points

MODULE 3 SELF-MONITORING AND DISEASE MANAGEMENT BY USING ICT.

AIMS OF THE MODULE

The module aims to provide essential knowledge for learners regarding the smart use of the medical devices used to self-monitor the patients and to give more information about the management of the diseases in order to improve the clinical outcomes.

LEARNING OBJECTIVES

Analyzing how the learners use the self-monitoring medical devices in their daily routine and give to the learners the information needed to manage everyday needs of patients with co-morbidities and long-term care needs. It will analyse how the learners use the self-monitoring medical devices in their daily routine. It will give to the learners the information needed to manage everyday needs of patients with co-morbidities and long-term care needs.

LEARNING OUTCOMES

By the end of this Module participants will be able to:

Knowledge understand the fundamentals of health knowledge (focus on chronic disease) e.g. different adverse effects related to the most important chronic diseases or threats, the most important and critical side effects of a chronic disease. Understand the importance of using self-monitoring medical devices and apps.

Skills increase their confidence and the motivation in order to receive a prompt support, use self-monitoring medical devices and apps. Use, manage and read data obtained. Better communicate/improve the communication with the healthcare professionals.

Responsibility/Autonomy increase self-confidence reducing fears and misunderstandings.

DURATION

4 hours online

UNITS

- **Understanding the fundamentals of the health knowledge (focus on chronic disease)**

Example of Chronic Diseases

Symptoms

Importance to promptly understand possible alarms' signals

- **Understanding the importance of using self-monitoring medical devices and apps.**

Explanation about the different models of self-monitoring medical devices and mobile apps

Link between the self-monitoring medical devices and mobile apps and diseases/chronic diseases

Benefits of using self-monitoring medical devices and mobile apps and tips

- **Understanding how to use, how to manage and how to read the data obtained during the self-management**

Importance of the right management of self-monitoring medical devices and mobile apps;

Importance of the right management and understanding of the obtained data

Tips on how to avoid mistake and data misunderstanding

- **Understanding how to better communicate/improve the communication with the healthcare professionals.**

Tips on how to improve the communication and the interaction with the healthcare professionals

ASSESSMENT, CRITERIA

Quiz with 4 multichoice answers

MODULE 4 DIGITAL ADHERENCE TECHNOLOGIES

AIMS OF THE MODULE

To provide essential knowledge on digital health interventions to learners in order to efficacy improve disease and patient management, physical health and patient adherence to medications.

LEARNING OBJECTIVES

Demonstration of the effectiveness of digital tools developed to measure medication adherence. Making understand the importance of continuous information, medical adherence and treatments. Presenting how to improve communication with healthcare professionals and national eHealth systems.

LEARNING OUTCOMES

By the end of this Module participants will be able to:

Knowledge understand the effectiveness of the digital tools developed to measure medication adherence, the importance and the benefits of using digital health tools. Understand the importance of receiving real-time information about the medical adherence and treatments

Skills use the digital medical tools in a smart way and avoid mistakes during the daily use of these kind of tools.

To improve medication adherence in several therapeutic areas including different type of chronic diseases.

Understand how to better communicate /improve the communication with the healthcare professionals and National E-Health Systems.

Responsibility/Autonomy improve the interaction with healthcare professionals, increase the self-confidence, reduce fears and misunderstandings

DURATION

3 hours online

UNITS

- **Introduction**
- **Understanding the effectiveness of the digital tools developed to measure medication adherence**

Definition of a medical adherence

Description of the characteristics of the different medical digital tools (digital smart pill organizer, mobile app, pills embedded with specific sensors, ...) compared to the medical non-digital tools (diary, non-digital pill organizer)

Examples of how to use a medical digital tool

Tips on how to better use the medical digital tools

Cost / benefit

- **Understanding the importance to receive in real time information about the medical adherence and treatments**

Importance of receiving real time data in order to monitor the patients' health situation

Understanding how to connect the data obtained to the patients' health situation Tips on how to avoid mistakes and misunderstandings

- **Understanding how to better communicate /improve the communication with the healthcare professionals and National E-Health Systems.**

Introduction of National E-Health website and app

Learning how to use National E-Health website and app, how to record medical certificates and to manage the documents

Tips on how to improve the communication, the interaction with the healthcare professional and the correct use of the National E-health website and app

ASSESSMENT, CRITERIA

Quiz with 4 multichoice answers

MODULE 5 SOCIAL NETWORKS, ONLINE COMMUNITIES FOR ACTIVE AND HEALTHY AGEING

AIMS OF THE MODULE

The module aims to provide learners with the essential knowledge on social networks and online communities for active and healthy aging and their use to all aspects of caring work. This module will cover the followings:

LEARNING OBJECTIVES

Learners will understand the fundamentals of social networks and online communities, the benefits and drawbacks of using social networks and online communities for active and healthy ageing. They will understand the importance of online safety and privacy for older adults. They will learn about different platforms and tools that can be used for social connections and engagement.

LEARNING OUTCOMES

By the end of this Module participants will be able to:

Knowledge. understand the fundamentals of social networks and online communities. The learner will be able to understand what social networks and online communities are and how they work, the key features and functions of social networks, how social networks and online communities can be used for personal and professional networking. They will be able to understand the benefits and drawbacks of using social networks and online communities for active and healthy ageing, know the benefits of using social networks for staying connected with friends and family, discovering new interests, and staying active and engaged, the potential drawbacks of using social networks, the importance of critically evaluating information and sources on social networks, strategies for staying safe and healthy while using social networks and the role of online communities in providing support, resources, and a sense of belonging for older adults. They will be able to recognize the strengths and limitations of each platform and tool, and how they can be used to stay connected with friends, family, and communities

Skills become aware of popular social networking platforms, video conferencing tools, instant messaging apps, online forums and discussion boards and virtual reality platforms that allow users to engage in immersive online experiences. Understand the importance of online safety and privacy for older adults.

Responsibility, autonomy. know how risks associated with activities in social media, e.g. bullying, and protect against such.

DURATION

4 hours online + 2 hours F&F

UNITS

- **Fundamentals of Social Networks and online communities**

Definition of a social network

User Profiles

Interactions

Content

Examples of how to use a social medium (making a profile, connecting with friends etc.)

- **Understanding the benefits and drawbacks of using social networks and online communities for active and healthy ageing.**

Benefits of using social networks and online communities for active and healthy ageing.

Drawbacks of using social networks and online communities for active and healthy ageing.

Tips on how to mitigate the risks of using social networks.

- **Understanding the importance of online safety and privacy for older adults.**

Definition of online privacy and security

Importance of privacy and security online

Tips on how to maintain privacy and security online

- **Learning about different platforms and tools that can be used for social connections and engagement.**

Understanding the role of social networks and online communities in reducing isolation and loneliness among older adults.

Discovering resources and initiatives for promoting physical activity and healthy lifestyles for older adults online.

ASSESSMENT, CRITERIA

Quiz with 4 multichoice questions



ANNEXES

ANNEX 1

The following definitions have been referred to by the present curriculum:

‘learning outcomes’ means statements regarding what a learner knows, understands and is able to do on completion of a learning process, which are defined in terms of knowledge, skills and responsibility and autonomy;

‘knowledge’ means the outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a field of work or study. In the context of the EQF, knowledge is described as theoretical and/or factual;

‘skills’ means the ability to apply knowledge and use know-how to complete tasks and solve problems. In the context of the EQF, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments);

‘responsibility and autonomy’ means the ability of the learner to apply knowledge and skills autonomously and with responsibility;

(Source: [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017H0615\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017H0615(01)) Last visited on 20 February 2023

ANNEX 2

DigComp 2.2 (Digital Competence Framework for Citizens)

Source: <https://digital-skills-jobs.europa.eu/en/inspiration/research/digcomp-22-update-digital-competence-framework-citizens>

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Proficiency level Intermediate 4

COMPETENCE AREA	COMPETENCE	PROFICIENCY LEVEL 4 (TARGETED WITH THE COURSE)
1. INFORMATION AND DATA LITERACY	1.1 BROWSING, SEARCHING AND FILTERING DATA, INFORMATION AND DIGITAL CONTENT	<ul style="list-style-type: none"> • Illustrate information needs, • organize the searches of data, information and content in digital environments, • describe how to access these data, information and content, and navigate between them, • organize personal search strategies
	1.2 EVALUATING DATA, INFORMATION AND DIGITAL CONTENT	<ul style="list-style-type: none"> • perform the analysis, comparison and evaluation of sources of data, information and digital content. • perform the analysis, interpretation and evaluation of data, information and digital content
	1.3 MANAGING DATA, INFORMATION AND DIGITAL CONTENT	<ul style="list-style-type: none"> • organize information, data and content to be easily stored and retrieved. • organize information, data and content in a structured environment.
2. COMMUNICATION AND COLLABORATION	2.1 INTERACTING THROUGH DIGITAL TECHNOLOGIES	<ul style="list-style-type: none"> • select a variety of digital technologies to interact, and • select a variety of appropriate digital communication means for a given context
	2.2 SHARING THROUGH DIGITAL TECHNOLOGIES	<ul style="list-style-type: none"> • manipulate appropriate digital technologies to share data, information and digital content. • explain how to act as an intermediary for sharing information • and content through digital technologies, • illustrate referencing and attribution practices
	2.3 ENGAGING CITIZENSHIP THROUGH DIGITAL TECHNOLOGIES	<ul style="list-style-type: none"> • select digital services in order to participate in society. • discuss appropriate digital technologies to empower myself and to participate in society as a citizen.
	2.4 COLLABORATING THROUGH DIGITAL TECHNOLOGIES	<ul style="list-style-type: none"> • select digital tools and technologies for collaborative processes
	2.5 NETIQUETTE	<ul style="list-style-type: none"> • discuss behavioural norms and know-how while using digital

COMPETENCE AREA	COMPETENCE	PROFICIENCY LEVEL 4 (TARGETED WITH THE COURSE)
		<ul style="list-style-type: none"> technologies and interacting in digital environments. discuss communication strategies adapted to an audience and discuss cultural and generational diversity aspects to consider in digital environments.
	2.6 MANAGING DIGITAL IDENTITY	<ul style="list-style-type: none"> display a variety of specific digital identities, discuss specific ways to protect my reputation online, manipulate data I produce through digital tools, environments or service
3. DIGITAL CONTENT CREATION	3.1 DEVELOPING DIGITAL CONTENT	<ul style="list-style-type: none"> indicate ways to create and edit content in different formats, express myself through the creation of digital means
	3.2 INTEGRATING AND RE-ELABORATING DIGITAL CONTENT	<ul style="list-style-type: none"> discuss ways to modify, refine, improve and integrate new content and information to create new and original ones
	3.3 COPYRIGHT AND LICENCES	<ul style="list-style-type: none"> discuss rules of copyright and licenses that apply to digital information and content
	3.4 PROGRAMMING	<ul style="list-style-type: none"> list instructions for a computing system to solve a given problem or perform a specific task.
4. SAFETY	4.1 PROTECTING DEVICES	<ul style="list-style-type: none"> organise ways to protect my devices and digital content, and differentiate risks and threats in digital environments. select safety and security measures. explain ways to have due regard to reliability and privacy
	4.2 PROTECTING PERSONAL DATA AND PRIVACY	<ul style="list-style-type: none"> discuss ways to protect my personal data and privacy in digital environments, and discuss ways to use and share personally identifiable information while protecting myself and others from damages. indicate privacy policy statements of how personal data is used in digital services.
	4.3 PROTECTING HEALTH AND WELL-BEING	<ul style="list-style-type: none"> explain ways to how to avoid threats to my physical and psychological health related with the use of technology. select ways to protect self and others from dangers in digital environments. discuss on digital technologies for social well-being and inclusion
	4.4 PROTECTING THE ENVIRONMENT	<ul style="list-style-type: none"> discuss ways to protect the environment from the impact of digital technologies and their use
5. PROBLEM SOLVING	5.1 SOLVING TECHNICAL PROBLEMS	<ul style="list-style-type: none"> differentiate technical problems when operating devices and using digital environments. select solutions to them
	5.2 IDENTIFYING NEEDS AND	<ul style="list-style-type: none"> explain needs, and

COMPETENCE AREA	COMPETENCE	PROFICIENCY LEVEL 4 (TARGETED WITH THE COURSE)
	TECHNOLOGICAL RESPONSES	<ul style="list-style-type: none"> select digital tools and possible technological responses to solve those needs. select ways to adjust and customise digital environments to personal needs.
	5.3 CREATIVELY USING DIGITAL TECHNOLOGY	<ul style="list-style-type: none"> differentiate digital tools and technologies that can be used to create knowledge and to innovate processes and products. engage individually and collectively in cognitive processing to understand and resolve conceptual problems and problem situations in digital environments
	5.4 IDENTIFYING DIGITAL COMPETENCE GAPS	<ul style="list-style-type: none"> discuss on where my digital competence needs to be improved or updated, indicate how to support others to develop their digital competence. indicate where to seek opportunities for self-developments and to keep up-to-date with the digital evolution