DIGITAL COMPETENCES FRAMEWORK

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TEA 4 SENIORS:

"TEACHING DIGITAL COMPETENCES TO LOW-SKILLED OR LOW-QUALIFIED SENIOR CITIZENS THROUGH ANALOGIES"

IO1_A2 Digital Competence Framework for Low-skilled or Low-qualified Seniors

"Learning by Analogies and Gamification Digital Framework for low-skilled Seniors"

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Teaching methodology and audience definition

The **TEA 4 SENIORS** project aims to foster digital literacy and understanding of the digital world among low-skilled or low-qualified senior citizens and their educators through an effective and innovative methodology based on **gamification** and **analogies**:

- Learning by analogy will guide the development of the e-learning platform and content materials of the project, in a way that analogies are easy to follow and understand so that, once the concepts are clear in mind, a friendly, visual, practical step-by step guidance on the use of each digital tool will be provided.
- "In simple terms, gamification is about taking fun, compelling, interactive elements from games and applying them to productive, day-to-day activities. The goal is to make the product or service less boring, more engaging, and, eventually, more attractive"[1]. Gamification in e-learning makes the learner's experience fun and engaging.

The Digital Competence Framework for Low-skilled and Low-qualified Seniors is produced as one of the intellectual outputs of the Erasmus+ Strategic Partnerships Project for VET **TEA4SENIORS** (Teaching Digital Competences to Low-skilled or Low-qualified Senior Citizens through Analogies and Gamification), implemented in the period 2018-2020.

First, this competence framework helps to recruit and select learners: **low-skilled and low-qualified seniors.**

Then, it helps to set performance expectations and to measure contributions objectively providing a roadmap for learners' development. Finally, it helps to identify and to assess competency gaps.

[1] https://learn.g2.com/gamification

Project audience target definition:

Based on national desk researches and focusing on the natural age, a senior citizen is a person who generally is 60 years old. Also, based on same national desk researches, a low qualified person is a person with an education up to ISCED 3, and a low skilled person is a person with educational attainment up to ISCED 2. Combining the definition of senior and low-skilled or low-qualified, the partnership has decided to define a “low-qualified senior” as a person who has reached 60 years whose level of educational attainment is between 0-3; and a “low-skilled senior” as a person with the same age ranges (60 years old) whose level of educational attainment is between 0-2.

1. Competence Framework

1.1: Context and Scope of the Competence Framework

The TEA 4 SENIORS project has conducted a research process to identify the deep needs, channels, media and digital skills that target groups – low-skilled and low qualified seniors – need to know appropriately. It is through this means that desk and field research has been set up. This research process has made it possible to highlight the state of the art of national and EU theoretical and operational models for analogical and cross-cultural methodologies to support the development of digital competences; the effective application in partners countries of methodologies in senior training; the perceived training need in the participating countries related to innovative learning methodologies for the development of digital skills and competences of disadvantaged population groups.

First of all, research process reveals that there are many supportive initiatives by Government, universities, private organization to activate seniors, but not in all countries of the research. Indeed, there aren't enough initiatives to support seniors and more action is needed to be implemented in their favour. Therefore, TEA 4 SENIORS project aims to develop digital skills of the project target, through digital competence framework, in order to make them more independent in the digital world and to make this framework applicable to other projects.

Second of all, research process has shown that participating countries of the project have national competence frameworks on digital skills based on the European Digital Competence Framework made by the European Commission (*DigComp*). This means that *DigComp* works as a basis structure, to a greater or lesser extent, on which EU countries built their own national digital competence frameworks.

However, *DigComp per se* is not made to address the project target group (low-skilled or low-qualified seniors) but to give a solid basis for all educators and learners in Europe regarding digital skills.

That's why the research process also had helped to clarify the scope and use of this European competency framework and made possible to establish a competency framework for the project target group: the low-skilled and low-qualified seniors.

The main outputs which emerged from the research process regarding the **senior's digital needs** are the following:

- **Priority number 1**
  - Communication and interaction
- **Priority number 2**
  - Internet basics: searching online info, email creation etc.
  - E-government services
- **Priority number 3**
  - Basic usages of devices with a priority given to smartphones
  - E-services: online services access from home
  - Telemedicine and health apps
  - Online purchasing and banking
- **Priority number 4**
  - Leisure and entertainment digital activities

The development of the Digital competence Framework for seniors has been built combining the *DigiComp* and the senior's digital needs which emerged from the field research.

In the Competence Framework development process, were taken into consideration the special needs of our target audience: the low-qualified and low-skilled senior. These special needs were also examined trough the educators' national interviews collected during the field research. To address this special target, we have to consider the **senior's limitations**:

- On the **physical** wise: limited vision, impaired hearing, limited motor skills
- On the **learning capacity** wise: avoid lectures and theory, simple to complex topics, basic features and practical learnings, slow teaching and repetition (=spiral progression approach).

In conclusion, 4 areas of competences have been identified as essential to help older people adapt to the digital era:

1. **Essential data literacy and basic use of digital devices**
2. **Communication and collaboration**
3. **Digital Content Creation**
4. **Digital citizenship**

The Digital Competence Framework for Low-skilled or Low-qualified senior developed by the TEA4SENIOR partnership is a tool that aims to improve the digital competence of learners by developing a methodology and a guideline for educators. Based on competences framework, adapted courses will be created to enable adult trainers to develop the required digital competences for seniors. The methodology pack will permit that trainers and facilitators build upon this rich and innovative methodology and apply it to their day-to-day teaching activities in their respective organisations. This competence framework captures the key digital competences that seniors require to navigate in an increasingly digitalised world.

1.2: The Structure of the Digital Competence Framework for Low-skilled and Low-qualified Seniors

The Digital Competence Framework for low skilled or low qualified seniors has been designed by combining the *DigComp* and the needs emerging from the field and desk researches (as explained in the previous section). This is to meet the specific needs of seniors and to develop their digital competence.

The Competence Framework is composed of **Competence Areas**, which are categories of competences that seniors are expected to develop.

The first three Competence Areas from the *DigComp Framework* have been selected*:* **Information and data literacy**, **Collaboration and Communication** and **Digital content creation**. These *DigiComp* competence areas appear as relevant in the context of digital skills to acquire for the low-qualified and low-skilled senior audience. Indeed, these specific digital competences have been mentioned during the interviews conducted with educators (field research). In addition, the literature review and research findings lead to the same outputs.

Based on data collection from field research, a new category has been settled.
This new category is related to the different uses of the internet and the understanding of its support in a senior daily life activity. The increasing need to use e-government services was pointed out during the interviews and makes part of this competence area.

This new category has been untitled: **digital citizenship.**

The two last competence areas from the *DigComp* – **Problem Solving** and **On-line Safety** – have been kept in this digital competence framework as transversal competences, as they are applicable to each proposed competency category and will be taught throughout the course.

Another element which needs to be kept transversely is the **use of smartphones**. Indeed, the desk and field researches show that senior are more likely to use smartphones than computers.

1.3: Competence Summary

This digital competence framework will be used to set up training sessions. These training for seniors will be competency-based, considering identified areas. That's why, the competence summary explains and develops each of the four competence areas.

- ✓ **Competence 1: Essential data literacy and basic use of digital devices**

In this module learners will become familiar with the basic terms and concepts related to digital media (devices, Internet, etc.), and learn how to use a keyboard, mouse, etc. So, they can be able to use them every day (basic use).

- ✓ **Competence 2: Communication and collaboration**

In this module learners will learn how to use digital technology for communication purposes, share resources through online tools, connect with others and collaborate using digital tools, interact and participate in communities and networks.

✓ **Competence 3: Digital Content Creation**

In this module learners will learn how to create new digital content by using previous basic knowledge of keyboard and mouse use (developed in the module 1), know how to use different methods to organise digital content (as saving files).

✓ **Competence 4: Digital citizenship**

In this module, learners will learn how to make a practical use of the internet through e-services which will prevent them from moving from home: e-government services but also telemedicine and health app, online purchasing, online banking.

On-line Safety and **Problem Solving** will be kept as transversal competences throughout the framework. It is crucial to make it appear in each competence area. Several examples will be given in the section 2.

1.4: How to Use the Competence Framework

A Framework is a basis of a project which allows to set rules, concepts, values, ideas, interlinked, in order to support a specific objective. It is generally used as a guide that can be modified as required by adding or deleting items[2].

Thus, the Competence framework gathers competences as a set of knowledge, skills, responsibility and autonomy, which are called learning outcomes.

This framework works as a structure which will permit the development of a logically organised course. The framework gives the skeleton of the course development by defining learning goals and a progression. The achievement of these learning outcomes will be the evidence of successful learning.

The following section will develop the content of this digital competence framework.

[2] http://www.businessdictionary.com/definition/framework.html

2. Competences and Learning Outcomes

The identified competences are further described in this section.

Each **Competence area** includes:

- **A Competence Statement:** description of the competence seniors are expected to develop
- **The Learning Outcomes** which have been formulated and expressed in terms of the ***Knowledge, Skills, Responsibility*** and ***Autonomy*** to demonstrate achievement of the competence**.**

The following chapter will define the competence components, and then the guidance of the content of them.

2.1: Terminology of Competence Components

"According to the Recommendation of the European Parliament and of the Council of 23rd April 2008 on the establishment of the European Qualifications Framework for Lifelong Learning: *"Learning outcomes" means statements of 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"*[3].

The Learning Outcomes of the Digital Competence Framework are divided as follow: Knowledge, Skills and Responsibility and Autonomy.

✓ **Knowledge**

"Knowledge" means the outcome of the assimilation of information through learning, body of facts, principles, theories and practices that is related to a field of work or study. In the context of the European Qualifications Framework, knowledge is described as theoretical and/or factual. (European Humanitarian Action Partnership, 2018)[4]

[3] https://eurspace.eu/ecvet/pedagogicalkit/framework-for-defining-learning-outcomes-knowledge-skills-competence/

[4] European Humanitarian Action Partnership, EUHAP, (2018), self-evaluation-tool-level-6, p.1 : http://euhap.eu/upload/2018/07/self-evaluation-tool-level-6-editable.pdf

- ✓ **Skills**

"Skills" means the ability to apply knowledge and use know-how to complete tasks and solve problems. In the context of the European Qualifications Framework, 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). (European Humanitarian Action Partnership, 2018)[5]

- ✓ **Responsibility and Autonomy**

"Responsibility and Autonomy" mean the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situation and in professional and personal development. (European Humanitarian Action Partnership, 2018)[6]

The following chapter will provide an overview of the scope of the learning outcomes which will be detailed in the next chapter in the *modules*.

[5] European Humanitarian Action Partnership, EUHAP, (2018), self-evaluation-tool-level-6, p.1 : http://euhap.eu/upload/2018/07/self-evaluation-tool-level-6-editable.pdf

[6] European Humanitarian Action Partnership, EUHAP, (2018), self-evaluation-tool-level-6, p.1 : http://euhap.eu/upload/2018/07/self-evaluation-tool-level-6-editable.pdf

2.2: Competence and learning outcomes guidance

2.2.1: Competence Area 1: Information and data literacy

General Description

To learn, memorise the basic terms and concepts related to digital media (devices, Internet, etc.). and to use and select appropriate tools.

Competence Area	**1**	**Essential data literacy and basic use of digital devices**

Competence Element	**1.1**	**A basic approach to the digital world**

Competence Statement	Getting to know the appropriate device and tools and identifying or Recognising basic glossary

Learning Outcomes		
Knowledge	1.1.1	Identify the main communication elements in the digital world. Identify the communication terminology as analogy (speaker/message/receiver, etc.)
Skills	1.1.2	Interact with the main functions, tools and main features of smartphones by analogy or gamification
	1.1.3	Interact with the main functions, tools and main features of computers by analogy or gamification
Responsibility and Autonomy	1.1.4	Show an autonomy attitude in personal use of digital devices

Transversal skills (problem solving and online safety):

For example, in this first competence area, learners will get more familiar with digital devices as how to turn on a computer/laptop or a smartphone and we could include a problem-solving competence by solving technical problems (verify if the computer is properly plugged in or if the battery is fully charged).

2.2.2: Competence Area 2: Communication and collaboration

General Description

To learn how to use digital technology for communication purposes, share resources through online tools, connect with others and collaborate using digital tools, interact and participate in communities and networks.

Competence Area	**2**	**Communication and collaboration**

Competence Element	**2.1**	**Interacting through the actual use of digital devices**

Competence Statement	Interacting with the digital world by using digital devices and applications, understanding how digital communication works

Learning Outcomes		
Knowledge	2.1.1	Identify main applications for digital communication (on smartphone and computer)
	2.1.2	Identify and select appropriate websites or application for social online inclusion and networking
Skills	2.1.3	Choose and use appropriate digital tools for communication (smartphone and computer)
	2.1.4	Share information through social media (smartphone and computer)
	2.1.5	Select appropriate content to share and appreciate critical thinking
Responsibility and Autonomy	2.1.6	Mindful that not all the contents are true (fake news)

Transversal skills (problem solving and online safety):

For example, in this second competence area, learners will share information through social media and need to be aware of what they share (personal data, etc.). We could include on-line safety competence by the protection of personal data and digital identity.

2.2.3: Competence Area 3: Digital content creation

General Description

To create new digital content, know how to manipulate different methods to organise digital content (save files, print, email, etc.)

Competence Area	**3**	**Digital content creation**

Competence Element	**3.1**	**Developing digital content**

Competence Statement	Creating digital content to communicate with others and support daily activities

Learning Outcomes		
Knowledge	3.1.1	Identify and describe saving and storing methods to organise digital content
Skills	3.1.2	Use basic tools to print content in different format
	3.1.3	Manipulate saving and storing method to organise digital content through basic actions and tools, by using analogy method
	3.1.4	Create a folder and a file (on smartphone & computer)
	3.1.5	Create a limited range of communication tools (apps and emails) to exchange messages (on smartphone & computer)
	3.1.6	Write digital content by using basic keyboard (on smartphone & computer)
Responsibility and Autonomy	3.1.7	Show an autonomy attitude in personal use of devices

Transversal skills (problem solving and online safety):

In this competence area, we can also include on-line safety area in order to make our target aware about on-line problems. About problem solving area, it can be included as well if learners experience difficulties in creation and with turning on and shutting off the devices.

2.2.4: Competence Area 4: Digital citizenship

General Description

To get familiar with different e-services and know how to use them by understanding similar and recurrent process

Competence Area	**4**	**Digital citizenship**

Competence Element	**4.1**	**Using different e-services**

Competence Statement	Getting to know the e-services and how to use it

Learning Outcomes		
Knowledge	4.1.1	Identify main e-services (e-government, health, bank) and their utility
Skills	4.1.2	Get to know how to fill and validate a form online with personal data
	4.1.3	Get to know how work the validation process with email, proofs and receipts
	4.1.4	Get to know how to pay online
	4.1.5	Get to know how work the e-government services
	4.1.6	Get to know how you can manage your bank account and transactions online
	4.1.7	Get to know how to use health services (insurance/ telemedicine, etc.) + health apps on smartphones
	4.1.8	Get to know other e-services possibilities: purchasing, booking transportation, ordering a meal.
Responsibility and Autonomy	4.1.9	Show an autonomy attitude in using e-services procedures

Transversal skills (problem solving and online safety):

Low skilled and low qualified need to be aware about internet traps regarding false official websites or emails fishing. On-line safety transversal skill could be included in this area by informing them about it and showing them how to spot fraudulent online content. Our audience need to know how to search for secured government websites or online bank. They also need to know how to pay online safely. This competence area must include the basic steps to secure personal data: log in and log out process for instance.

The problem-solving can be dedicated to online forms to fill (wrong font, typing error etc.) and the validation/confirmation process to deal with.

2.3: Developing learning outcomes through modules

For each competence area and learning outcomes, the following modules description are proposed. These modules are a basis for the course development which must include two teaching methods: gamification and teaching by analogies. That's why, in these modules, ideas for integrating these two methods are suggested.

Competence 1: Essential data literacy and basic use of digital devices

Module 1.1.1: Learners will discover what is a computer and how to start with this device by using analogy or gamification process. They will identify the related basic digital glossary. They will assimilate and describe different devices terminology (keyboard, mouse, cursor.)

Module 1.1.2: Learners will be able to do their first steps on Windows (navigation, files and folders, OS, accounts system, Microsoft office applications) by using analogy or gamification process. They will identify the related basic digital glossary.

Module 1.1.3: Learners will be able to understand how to connect a computer to an internet network and use web browsers by using analogy or gamification process. They will identify the related basic digital glossary.

Module 1.1.4: Learners will be able to understand the basic settings of a smartphone or tablet on Android (device settings, internet connection, navigation on Android etc.) by using analogy or gamification process.

Modules 1.1.5: Learners will be able to explore the specificities of a smartphone/tablet like the phone calls, the contacts list, messages, apps etc. by using analogy or gamification process. They will identify the related basic digital glossary.

Competence 2: Communication and Collaboration

Module 2.1.1: Learners will be able to create an email account both on a PC computer and Android devices by using analogy or gamification process.

Module 2.1.2: Learners will be able to configurate a Web browser (storing data, clear cookies, browsing history, web safety) by using analogy or gamification process.

Module 2.1.3: Learners will understand the rules of social media (role, rules and dangers) by using analogy or gamification process.

Module 2.1.4: Learners will be able to use Facebook and create an account on it which will work as an example for social media by using analogy or gamification process.

Module 2.1.5: Learners will know how to use Skype. They will create an account and be able to use Skype bot on a computer and on Android device (tablet/smartphone) by using analogy or gamification process.

Module 2.1.6: Learners will be able to use WhatsApp which will work as an example of a messaging application (log in and out, find and add new contacts, send messages, make voice or video calls, configuration of this app on devices)

Competence 3: Digital Content Creation

Module 3.1.1: Learners will identify and be able to save and store (right click) media such as word files, videos, audios, images, etc. that can be used to organise digital content. The analogy method can be used in comparison with saving and storing in real professional and domestic world (folders, sub-folders etc.)

Module 3.1.2: Learners will be able to transfer data between an Android phone and a computer (connect a PC to a smartphone, transfer photos and data). Gamification and analogies teaching/learning methods will be used.

Module 3.1.3 Learners will understand how to edit documents using Microsoft Word (documents template an edition, save and store Word document as a pdf, print a document). Gamification and analogies teaching/learning methods will be used.

Module 3.1.4: Learners will understand how to manage their documents on an Android smartphone / tablet (create and save documents, use a Cloud). Gamification and analogies teaching/learning methods will be used.

Module 3.1.5: Learners will be able to share different kind of files from their computers to their smartphones (email with attachment, Bluetooth, multimedia message). Gamification and analogies teaching/learning methods will be used.

Competence 4: Digital Citizenship

Module 4.1.1: Learners will be able to stay safe when using online services (how to spot fraudulent website, phishing emails, safe online payments). Gamification and analogies teaching/learning methods will be used.

Module 4.1.2: Learners will be able to create a trusted profile (creation, registration, authorization). Gamification and analogies teaching/learning methods will be used.

Module 4.1.3: Learners will be able to sign official documents using electronic signature (signing forms, verification of signatures etc.). Gamification and analogies teaching/learning methods will be used.

Module 4.1.4: Learners will understand how work the e-government services.
They will get a general overview of services which exist and what kind of tasks they can realise online. Gamification and analogies teaching/learning methods will be used.

Module 4.1.5: Learners will understand how work electronic payments (security, how to use a CB online, save payment information etc.). Gamification and analogies teaching/learning methods will be used.

Module 4.1.6: Learners will understand how to shop online (safe online shopping, safe accounts on websites etc.). Gamification and analogies teaching/learning methods will be used.

Annexes:

The partnership of the project: 6 organisations involved

Eurosuccess Consulting (Cyprus): is a Consulting and Training organization active in the field of project management, training & consulting services. They provide a comprehensive package of services addressing the needs of various target groups and organizations, regarding their lifelong learning opportunities in Cyprus and abroad.

GoEurope (Spain): is an Intercultural Association with the aim of promoting an international spirit aligned with the common European cultural objectives. They promote the intercultural dialogue, exchange of knowledge and European awareness through the active participation of adult and young people and in projects involving mobility, entrepreneurial education, professional and personal growth. The association provides non formal education training mainly focused on boosting transversal skills, above all entrepreneurial, digital, creativity and language learning in order to increase the employability.

Polygonal (Italy): is a non-governmental organization with the aim of transferring a concrete set of possibilities in terms of personalised patterns of learning of dis-empowered groups of citizens, with specific focus on minorities, under-skilled seniors, NEETs and women. It has much focused on open data teaching and usage through grassroots activities dedicated to active ageing and digital learning.

Power Net Consulting (Romania): is a consultancy company and training provider, activating in the creative industries field and also in the area of managing and implementing European funded projects. It has created a rich portfolio of implemented projects, and had offered integrated products and services, adapted to the necessities of each individual project.

OIC Poland Foundation (Poland): is a Foundation with the aim of preventing of unemployment and fostering economic development by implementation of the educational and counselling programmes, targeted at inhabitants of the south-eastern Poland. It offers a comprehensive, effective training and counselling targeted to companies, institutions and individuals. It continually modifies the offer and methodology of trainings to adapt them to the expectations and changing economic conditions, introducing modern and innovative training methods, simulation games, cases studies or story elements.

CDE SAP (France): is a comprehensive business support designed for start-up and fledgling new entrepreneurs to ease their growth and integration into a market economy by providing access to shared services, training, financing, equipment and often offices for the development of their business. They conduct activities that enable and encourage innovations that accompany people in their advancing age and reduce the loss of autonomy. CDE SAP takes an active role in the silver economy by supporting new entrepreneurs who work in digital and well-ageing sectors.