

1. Framework Title

DigComp 2.1: The Digital Competence Framework for Citizens with eight proficiency levels and examples of use

2. Initials

DigComp 2.1

3. Document(s) in which the framework is presented (if there are previous versions, etc.)

How to cite this report:

Carretero, S.; Vuorikari, R. and Punie, Y. (2017). DigComp 2.1: The Digital Competence Framework for Citizens with eight proficiency levels and examples of use, EUR 28558 EN, doi:10.2760/38842

<https://data.europa.eu/doi/10.2760/836968>

Vuorikari R, Punie Y, Carretero Gomez S and Van Den Brande G. DigComp 2.0: The Digital Competence Framework for Citizens. Update Phase 1: the Conceptual Reference Model. EUR 27948 EN. Luxembourg (Luxembourg): Publications Office of the European Union; 2016, doi: 10.2791/607218, JRC101254. <https://publications.jrc.ec.europa.eu/repository/handle/JRC101254>

Punie, Y. and Brecko, B., editor(s), Ferrari, A., DIGCOMP: A Framework for Developing and Understanding Digital Competence in Europe. , EUR 26035, Publications Office of the European Union, Luxembourg, 2013, ISBN 978-92-79-31465-0, doi:10.2788/52966, JRC83167.

<https://publications.jrc.ec.europa.eu/repository/handle/JRC83167>

4. Documents dates

2013; 2016; 2017

5. Number of pages of the document(s)

50; 44; 48 (respectively)

6. Organizations or authors responsible for developing the framework, context (if applicable)

The report presents the latest version of the Digital Competence Framework for Citizens (DigComp)² which was elaborated by the Human Capital and Employment Unit (Joint Research Centre) on behalf of the Directorate General for Employment, Social Affairs and Inclusion of the European Commission.

7. Scope: regional (indicate region) or international

JRC research on Learning and Skills for the Digital Era started in 2005 with the aim to provide evidence-based policy support to the European Commission and the Member States on harnessing the potential of digital technologies [...]

8. Synthesis

DigComp 2.1 is a further development of the Digital Competence Framework for Citizens. Based on the reference conceptual model published in DigComp 2.0, we present now eight proficiency levels and examples of use applied to the learning and employment field.

9. Purpose(s) of the framework

The current version is labelled DigComp 2.1 and it focuses on expanding the initial three proficiency levels to a more fine-grained eight level description as well as providing examples of use for these eight levels. Its aim is to support stakeholders with the further implementation of DigComp.

It aims to provide evidence-based scientific support to the European policymaking process

10. Focus of the framework: citizens, workers, teachers, students, managers, parents, organizations, etc.

Framework for Citizens

11. Methodology for the elaboration of the framework

There is no section that explains the adopted methodology. I have gathered below some phrases that may clarify something.

Section 2 The eight proficiency levels and examples of use

Eight proficiency levels for each competence have been defined through learning outcomes (using action verbs, following Bloom's taxonomy) and inspired by the structure and vocabulary of the European Qualification Framework (EQF). Moreover, each level description contains knowledge, skills and attitudes, described in one single descriptor for each level of each competence; this equals to 168 descriptors (8 x 21 learning outcomes). An online validation survey helped to revise a first version of the levels, and to produce a final version.

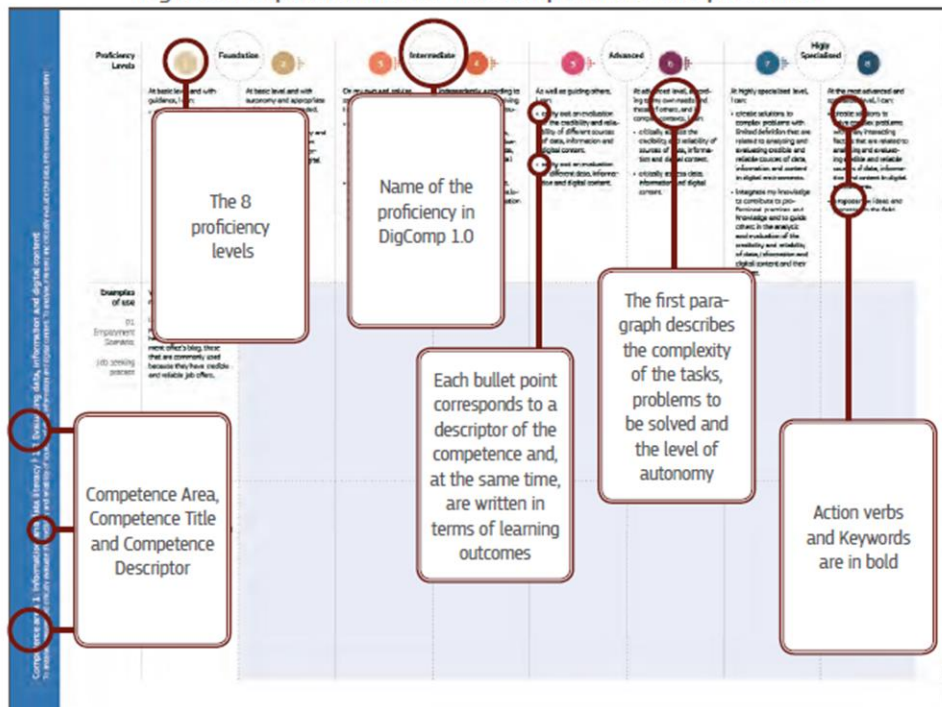
12. Framework structure

The report presents the latest version of the Digital Competence Framework for Citizens (DigComp)2[...]

The DigComp Framework has 5 dimensions:

- Dimension 1: Competence areas identified to be part of digital competence
- Dimension 2: Competence descriptors and titles that are pertinent to each area
- Dimension 3: Proficiency levels for each competence
- Dimension 4: Knowledge, skills and attitudes applicable to each competence
- Dimension 5: Examples of use, on the applicability of the competence to different purposes

Figure 1: Explanation how the competences are presented



Proficiency Levels	1	2	3	4	5	6	7	8
Foundational								
Intermediate								
Advanced								
Highly Specialized								
Competence Area, Competence Title and Competence Descriptor								
Name of the proficiency in DigComp 1.0								
Each bullet point corresponds to a descriptor of the competence and, at the same time, are written in terms of learning outcomes								
The first paragraph describes the complexity of the tasks, problems to be solved and the level of autonomy								
Action verbs and keywords are in bold								

Section 2 of this report explains the eight proficiency levels and describes the examples of use. Section 3 presents the new Framework in detail.

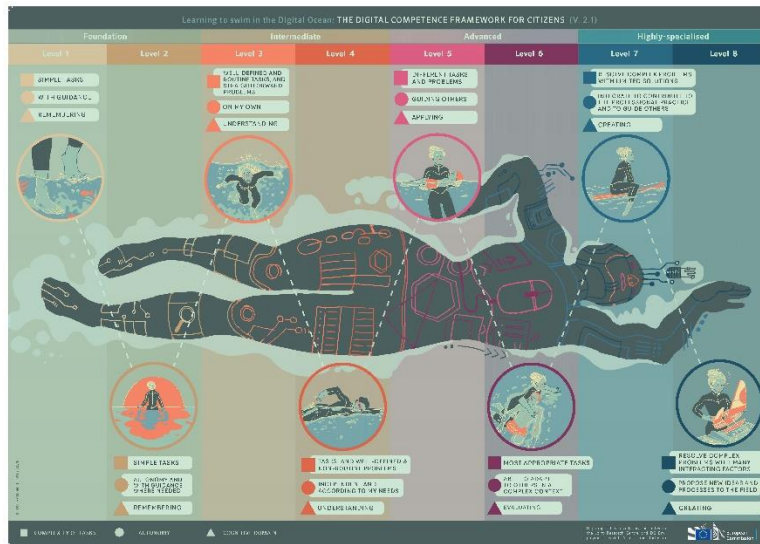
Section 2

As shown in Table 1 on the following page, each level represents a step up in citizens' acquisition of the competence according to its cognitive challenge, the complexity of the tasks they can handle and their autonomy in completing the task. [...] We can also see that the first six proficiency levels of the new Framework are linked to the three levels originally identified in DigComp 1.0. A new highly-specialised level has been added to the latest version of the Framework which includes levels seven and eight.

Table 1: Main keywords that feature the proficiency levels

Levels in DigComp 1.0	Levels in DigComp 2.1	Complexity of tasks	Autonomy	Cognitive domain
Foundation	1	Simple tasks	With guidance	Remembering
	2	Simple tasks	Autonomy and with guidance where needed	Remembering
Intermediate	3	Well-defined and routine tasks, and straightforward problems	On one's own	Understanding
	4	Tasks, and well-defined and non-routine problems	Independent and according to one's needs	Understanding
Advanced	5	Different tasks and problems	Guiding others	Applying
	6	Most appropriate tasks	Able to adapt to others in a complex context	Evaluating
Highly specialised	7	Resolve complex problems with limited solutions	Interact to contribute to the professional practice and to guide others	Creating
	8	Resolve complex problems with many interacting	Propose new ideas and organise to the field	Creating

The Figure 1 below gives a detailed explanation of how the competences are presented in the Section 3 of this report.



13. Definition of digital competence, digital literacy etc. proposed by the framework

The DigComp 2.1 framework does not provide definitions of competence or digital literacy.

14. Competences proposed by the framework (areas, dimensions, competences, knowledge, skills and attitudes, levels of proficiency, etc.)

Competence area 1: Information and data literacy

- 1.1 Browsing, searching, filtering data, information and digital content
- 1.2 Evaluating data, information and digital content
- 1.3 Managing data, information and digital content

Competence area 2: Communication and collaboration

- 2.1 Interacting through digital technologies
- 2.2 Sharing through digital technologies
- 2.3 Engaging in citizenship through digital technologies
- 2.4 Collaborating through digital technologies
- 2.5 Netiquette
- 2.6 Managing digital identity

Competence area 3: Digital content creation

- 3.1 Developing digital content
- 3.2 Integrating and re-elaborating digital content
- 3.3 Copyright and licences
- 3.4 Programming

Competence area 4: Safety

- 4.1 Protecting devices
- 4.2 Protecting personal data and privacy
- 4.3 Protecting health and well-being
- 4.4 Protecting the environment

Competence area 5: Problem solving

- 5.1 Solving technical problems
- 5.2 Identifying needs and technological responses
- 5.3 Creatively using digital technologies
- 5.4 Identifying digital competence gaps

DigComp 2.1 does not include an update of dimension 4, we prefer focusing on providing examples of use applied to the field of employment and learning due to their policy relevance.

Dimension 4: Knowledge, skills and attitudes applicable to each competence.

15.Examples of use

The examples of use (dimension 5 of the framework) have also been updated and contextualised in scenarios for two areas of use: employment and learning. These illustrate the eight proficiency levels to help future implementation of DigComp 2.1.

As we can see in the Section 3 of this report, the examples of use are presented as follows:

- We include examples of proficiency levels for two areas of use: employment and learning.
- We include scenarios for each competence area and area of use in

We have elaborated examples for the two areas of use in each proficiency levels. In this version 2.1, the examples for the 8 levels are only available in the first competence (1.1), for the rest of competences we provide an example per level and area of use5.

[illegible]

The information below was taken from the DigComp Homepage <https://ec.europa.eu/jrc/en/digcomp> and in my understanding could be used in section 16 – indications for the elaboration of instruments.

What can DigComp do for citizens?

The Digital Competence Framework can help with self-evaluation, setting learning goals, identifying training opportunities and facilitating job search.

- Self-evaluate the level of digital competence and facilitate the job Search - From summer 2015 onwards, the Europass CV includes an online tool for jobseekers to self-evaluate their digital competence and describe and include it in their Curriculum Vitale (CV). The tool uses the five areas of the DigComp framework with an easy to use self-evaluation form. See also news about the New Europass Framework.
- Set learning goals and identify training opportunities - In 2014, the Basque Country in Spain created a free online Self Diagnosis Tool for testing one's level of digital competence based on the DigComp framework. After taking a 15-minute online test, the results are available in a simple format to evaluate one's skills and identify training opportunities. Mid 2015, more than 10 000 individuals have already taken the test. Currently, the EU is planning to implement a similar tool which will eventually be available for all citizens in their own languages.

What can DigComp do for policymakers?

The Digital Competence Framework can help to monitor citizen's digital skills and to support curricula development.

For policymakers it can be beneficial to know where citizens stand for digital competence at the country level. The EU-wide Digital Economy and Society Index (DESI) offers an indicator for Digital Skills that uses the DigComp framework.

The "digital skills" indicator is one part of the many indicators to measure Human Capital which is needed to take advantage of the possibilities offered by a digital society. The Digital Agenda Scoreboard offers an online tool to view the

data in an interactive way (opens a new window, please allow time for the download).

The DigComp framework can be used to plan and design education and training offers. For example, the Spanish Ministry of Education, Culture and Sports has adapted DigComp for Spanish teachers and it has been used as a strategic support document for further development of teacher professional development (Marco comun de Competencia Digital Docente 2.0). Other similar examples can be found under implementation.