European Commission

The European Digital Competence Framework for Citizens

Social Europe

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What is the Digital Competence Framework for Citizens and why is it needed?

Europeans live in an increasingly complex digital world, one which is revolutionising how they work, do business, learn, and conduct themselves as active citizens in today's society. Whether it is filling out a job application online, using e-commerce to shop or banking through an app, people need the skills, knowledge and confidence to make the most of the digital revolution.

A lack of digital skills can have a profound effect on people's general life chances and employability. Around 40 % of the European Union (EU) population have an insufficient level of digital skills — of which 22 % have none at all. These are often older citizens, less educated young people, lower income families and migrants. What is more, 32 % of the EU workforce have insufficient digital skills, with 13 % assessed as having none at all [(1)]. It should also be noted that across the EU, 42 % of citizens with no computer skills are inactive in the labour market.

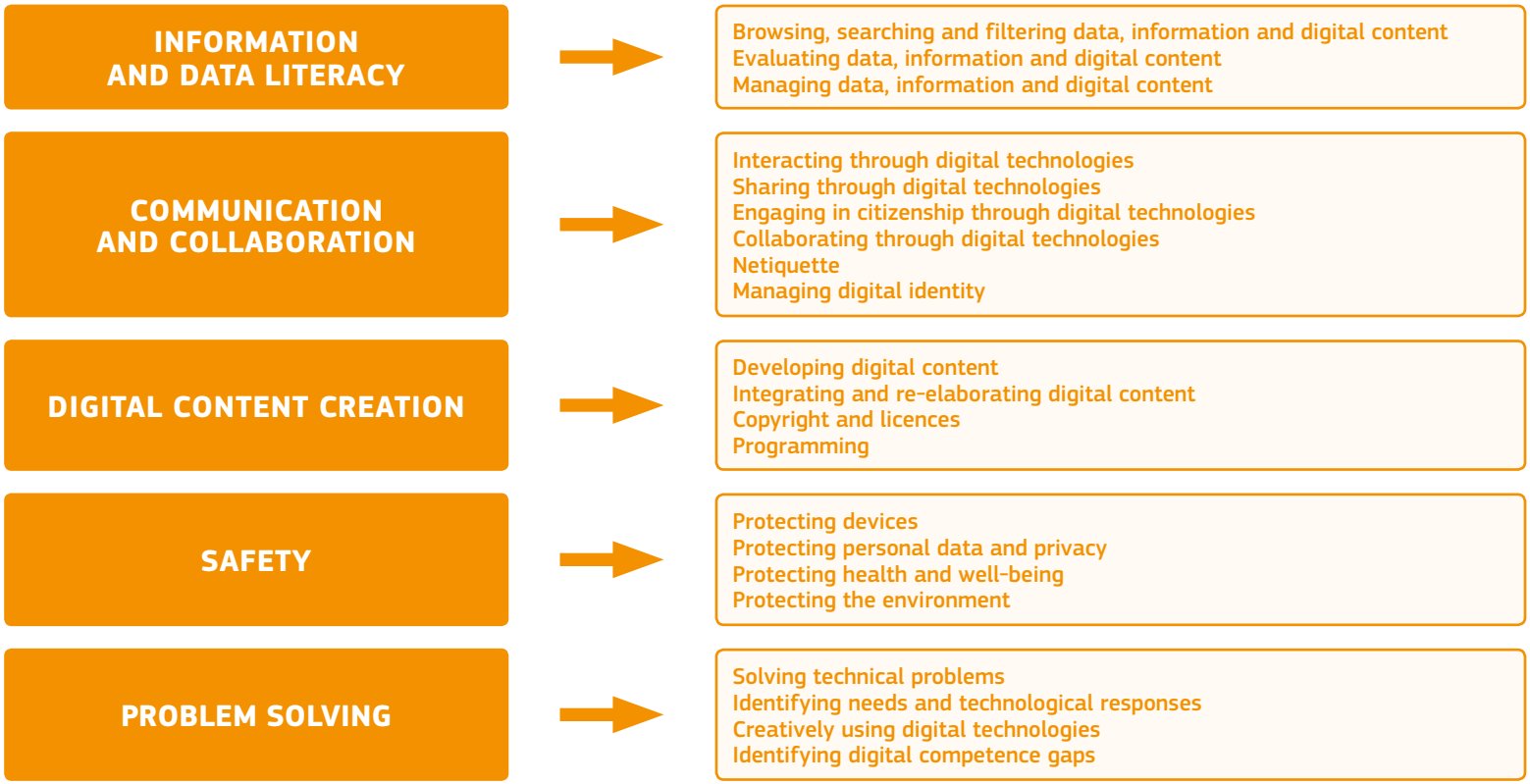
The EU is acutely aware that many citizens lack the ability to exploit the full potential of digital technologies in their everyday lives. In addition, there has been no common understanding of what digital skills are or how to assess them. This is why the European Commission has developed the European Digital Competence Framework for Citizens — known as DigComp — and a related self-assessment tool.

Essentially, the framework identifies 21 competences in five key areas, describing what it means to be digitally savvy. People need to have competences in each of these areas in order to achieve goals related to work, employability, learning, leisure and participation in society.

Being digitally competent is more than being able to use the latest smart phone or computer software — it is about being able to use such digital technologies in a critical, collaborative and creative way. This is why DigComp asks people to think about a range of issues such as storing information, protecting their digital identity, developing digital content and 'Netiquette'.

(1) Digital Scoreboard, European Commission, 2015.

DigComp's five key areas and 21 competences



The DigComp framework acts as a common reference tool that can be used as a basis for an online self-assessment test, which allows people to measure their digital competence and identify gaps in their knowledge, skills and attitudes in the five key areas.

DigComp can be used for free by public and private sector organisations. Its flexible design means it can be reused, modified and used to develop tests for digital competence — provided the original source is acknowledged. Results can be used to identify a citizen's level of digital proficiency, provide input for skills-jobs matching or develop the most appropriate training and education packages to improve people's digital competence.

DigComp was developed after an intensive two-year research and consultation process involving more than 120 experts and a variety of stakeholders from EU Member States. The framework represents a novel, scientific attempt to define a common set of competences that people need to prosper in all areas of their lives in a digital society and economy.

This initiative is aimed at helping citizens and especially workers involved in jobs requiring some digital competence. In this way, it complements the existing European e-Competence Framework for ICT professionals (see: http://www.ecompetences.eu) which is focused on the ICT profession in the workplace.

In addition, the framework supports wider key EU policy objectives including: efforts to boost jobs, growth and investment; creating a single digital market; and getting more young people into jobs and training. DigComp also forms part of the wider EU initiative on skills (see: http://ec.europa.eu/social/main.jsp?catId=1146).

Who can use DigComp?

The framework can be used by a range of individuals and organisations to assess digital competences. EU citizens with poor digital skills can use it to identify the knowledge they need to become more active in society. Someone who is unemployed and looking for work can use DigComp to identify the digital skills they already have and add that information to their CV and job applications. In addition, the framework can help them to identify the skills they lack, making it easier to search for the right development and learning opportunities.

Employers searching for new members of staff can use DigComp to define precisely the competences and qualifications that are required to draw up a job description or fill a vacancy. Employment services can use the framework to exchange relevant labour market information — such as CVs and vacancies — and to offer informed career guidance to jobseekers for all jobs that require digital skills but which are not ICT professions.

DigComp is a guide to learning requirements, which means it is also a valuable resource for the education and training sector. For example, teachers can use it to develop courses and to assess the progress of students as they work to improve their digital competences. Teachers also need to be digitally competent.

How does DigComp work?

Anyone can freely describe their digital competence in 27 languages through the EUROPASS self-assessment tool based on the DigComp framework (see: https://europass.cedefop.europa.eu/en/about). EUROPASS is an EU service that allows jobseekers to showcase their skills and qualifications in formats that can be easily understood across Europe.

People completing the EUROPASS self-assessment are asked to declare their level of digital competence for each of DigComp's five key areas. Users are provided with three possible answers, which have been designed to show whether their competence is at the level of basic user, independent user or proficient user.

DigComp in action — an example

When assessing their digital competence in problem solving in terms of innovative and creative use of technology, users can select from three answers ranging from a simple one to a higher level of proficiency in solving complex conceptual problems. Users would then read the following statements carefully and identify which one best corresponds to their skills, knowledge and attitudes.

	Basic user	Independent user	Proficient user
Problem solving	I can find support and assistance when a technical problem occurs or when using a new device, program or application. I know how to solve some routine problems (e.g. close program, re-start computer, re-install/update program, check internet connection). I know that digital tools can help me in solving problems. I am also aware that they have their limitations. When confronted with a technological or non-technological problem, I can use the digital tools I know to solve it. I am aware that I need to update my digital skills regularly.	I can solve most of the more frequent problems that arise when using digital technologies. I can use digital technologies to solve (non-technical) problems. I can select a digital tool that suits my needs and assess its effectiveness. I can solve technological problems by exploring the settings and options of programs or tools. I regularly update my digital skills. I am aware of my limits and try to fill my gaps.	I can solve almost all problems that arise when using digital technology. I can choose the right tool, device, application, software or service to solve (non-technical) problems. I am aware of new technological developments. I understand how new tools work. I frequently update my digital skills.

When all the answers are chosen, the results can be presented in a table. The table shows the user's digital competence across all five areas.

Results according to digital competence

Competence Areas	Digital competences	Foundation	Intermediate	Advanced
Information and data literacy	Browsing, searching and filtering data, information and digital content	○ ○ ○	○ ● ○ ○	○ ○ ○
	Evaluating data, information and digital content	○ ○ ○	○ ○ ○ ●	○ ○ ○
	Managing data, information and digital content	○ ○ ○	○ ○ ○ ○	● ○ ○
Communication and collaboration	Interacting through digital technologies	○ ○ ○	○ ○ ○ ○	○ ● ○
	Sharing through digital technologies	○ ○ ○	○ ○ ○ ●	○ ○ ○
	Engaging in citizenship through digital technologies	○ ○ ○	○ ○ ○ ●	○ ○ ○
	Collaborating through digital technologies	○ ○ ○	○ ○ ● ○	○ ○ ○
	Netiquette	○ ○ ○	○ ○ ○ ○	● ○ ○
	Managing digital identity	○ ○ ○	○ ○ ● ○	○ ○ ○
Digital content creation	Developing digital content	○ ○ ○	○ ○ ○ ●	○ ○ ○
	Integrating and re-elaborating digital content	○ ○ ○	○ ○ ○ ●	○ ○ ○
	Copyright and licences	○ ○ ○	○ ○ ○ ○	○ ● ○
	Programming	○ ○ ○	○ ○ ○ ○	● ○ ○
Safety	Protecting devices	○ ○ ○	○ ○ ○ ●	○ ○ ○
	Protecting personal data and privacy	○ ○ ○	○ ○ ○ ○	● ○ ○
	Protecting health and well-being	○ ○ ○	○ ○ ○ ●	○ ○ ○
	Protecting the environment	○ ○ ○	○ ○ ○ ●	○ ○ ○
Problem solving	Solving technical problems	○ ○ ○	○ ○ ○ ○	○ ● ○
	Identifying needs and technological responses	○ ○ ○	○ ○ ○ ○	● ○ ○
	Creatively using digital technologies	○ ○ ○	○ ○ ○ ●	○ ○ ○
	Identifying digital competence gaps	○ ○ ○	○ ○ ● ○	○ ○ ○

DigComp across Europe

The framework's flexibility allows it to be tailored to the needs of whichever organisation is using it so they can develop their own tests for digital competence.

In 2014, the Basque Country's (Spain) public employment service created a free, online tool based on the DigComp framework, which citizens and workers use to self-assess their digital competence. The intuitively designed test takes about 15 minutes to complete and the results are made available in a simple format, which allows users to understand their current abilities and select appropriate training options. By mid-2015, more than 10 000 people had taken the test (see: http://ikanos.encuesta.euskadi.net/index.php/566697/lang-en).

In fact, the DigComp framework and related assessment tools are being used across Europe to help jobseekers identify and describe the digital skills they have acquired, support employment services to match skills with job vacancies, reform educational curricula, improve learning outcomes and support educators. The map below reveals the extent of DigComp's 'real-life' application in a variety of settings, at both Member State and EU levels.

Member State implementations

POLICY SUPPORT, FRAMEWORK IMPLEMENTATION

ASSESSMENT FOR EMPLOYABILITY

E & T CONTENT/ STUDENT ASSESSMENT

TEACHER PROFESSIONAL DEVELOPMENT

POLAND

The Min. of Digital Affairs published a catalogue of digital competence frameworks for Digital Poland 2014-2020 referring to DigComp.

UNITED KINGDOM

GO ON UK definition of Basic Digital Skills aligns with DigComp (close to Cabinet Office and the Governments Digital Service).

ITALY

Italian Digital Agenda will translate and implement DigComp as part of its strategy.

MALTA

Use of DigComp framework by the Ministry for Education and Employment in "Green Paper: Digital Literacy".

NAVARRA, SPAIN

Navarra Department of Education uses DigComp as a key reference for strategic planning.

BASQUE COUNTRY, SPAIN

Ikanos project developed by the Basque Government to deploy the Digital Agenda. Free DigComp self-assessment and training.

ANDALUCIA, SPAIN

"Andalucia digital" offers a free self-assessment for job-seekers based on DigComp.

FRANCE

Min. of Education uses DigComp to create a model to certify digital skills.

EMILIA-ROMAGNA REGION, ITALY

Uses DigComp to re-design courses/materials in Pane e internet an e-inclusion initiative.

POLAND

Training content and certification based on DigComp provided by FCCC Foundation and ECDL Foundation. Polish translation: http://www.digcomp.pl/

SLOVENIA

Translated by National Education Institute. DigComp used in assessing students in ICT.

LITHUANIA

Translation of the DigComp framework by the Education Development Centre. Used for Teacher PD.

NORWAY

ICT Center uses DigComp as a references to develop teacher digital competence framework.

CROATIA

e-Schools project by Croatian Academic and Research Network uses DigComp to support teachers.

PORTUGAL

The Min. of Education uses DigComp as an input for teachers' PD. Translation by CIDTFF, supported by the MoE.

SPAIN

The Min. of Education, INTEF created Common Framework for Teacher Digital Competence based on DigComp. Use agreed between State and Regional governments.

EXTREMADURA, SPAIN

Extremadura implements Teachers Digital Competence Portfolio based on DigComp.

ESTONIA

Translation by the Ministry of Education and Research. From 2017 on, all 9th graders evaluated using DigComp.

FLANDERS, BELGIUM

Dept. of Education uses DigComp for a curricula review and development of adult education courses.

Want to know more?

DigComp is ready to use free of charge and is available at: http://ec.europa.eu/jrc/digcomp. The EU is committed to updating the framework to keep up with the needs of society and the evolution of technology.

Any changes will be made in consultation with stakeholders and experts in the field, including representatives from the education and training sector, industry, labour market institutions and social partners.

Employers' organisations, trade unions, employment services, education and training providers, and European sector skills councils are among those that already contribute to the framework's development. Their continued, active involvement will ensure that DigComp remains a practical, flexible and relevant tool — one which can be used by a wide range of people and organisations.

The Digital Competence Framework for Citizens was developed by the EU's Joint Research Centre on behalf of the Directorate-General for Employment, Social Affairs and Inclusion.

For more information see: http://ec.europa.eu/jrc/digcomp

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The EU has developed the Digital Competence Framework for Citizens — known as DigComp — and a related self-assessment tool. These resources provide people with the opportunity to assess their digital competence and identify gaps in their knowledge, skills and attitudes. Using DigComp will help citizens to achieve goals related to work, employability, learning, leisure and participation in the digital society.

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