Common Digital Competence Framework for Teachers

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INTEF

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1. Introduction

Digital competence is one of the 8 key competences that every young person should have developed by the end of Compulsory Education to equip them for adult life and permanent lifelong learning, according to European Parliament indications on key competences for lifelong learning (Recommendation 2006/962/EC of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning, Official Journal L 394 of 30.12.2006). Digital competence not only provides the ability to make use of the wealth of new possibilities associated with digital technologies and the challenges they imply, but it has also become increasingly necessary to participate meaningfully in the new knowledge society and in the economy of the twenty-first century.

The "Rethinking Education" strategy, which the European Commission presented in November 2012, highlights the importance of training in the competences needed in today's society of the twenty-first century and in future environments, the need for technology to be fully exploited and integrated effectively in training centers, as well as improving access to education through open educational resources and the unprecedented opportunities that new media offer for professional collaboration, problem-solving and quality improvement and equity in education. Digital competence is a prerequisite for students of all ages to fully benefit from the new possibilities offered by technology for more effective, motivating and inclusive learning (as described in "Education and Training Monitor 2013", pg. 19).

Educational standards should therefore include the kind of knowledge and skills that can help students to develop the new competences required in today's society, which are enhanced by technology, especially those related to knowledge management. In a number of respects, those who are responsible for teaching students of the new millennium have to be able to guide them in their educational journey through the new media. Teachers need a clear political message in this regard: public recognition of what they are expected to do to develop these competences as a priority in their areas or fields. This public recognition will in turn require priority attention in teacher training systems and the recognition of teachers' professional development. The need to ensure high quality teaching has become one of the priorities of the "European Strategic Framework for Education and Training". (ET 2020).

Competence training is a curriculum imperative that, in the case of digital competence, has until now had an undeveloped and diverse specification in its descriptors in the absence of a common reference framework. Developing digital competence in the education system requires a correct integration of ICT in the classroom and ensuring that teachers have the necessary training in that competence. The latter is probably the most important factor for the development of a digital culture in the classroom and to ensure that the education system is in tune with the new "network society". Connectivity and equipment will be found in all classrooms, but it will be much more difficult to find a sufficient widespread level of digital competence in education if there is no reference framework that allows its widespread accreditation (not as something optional or reserved for those interested in computer applications and devices).It also needs the development of a coherent training plan with a proposal for measurable indicators to strengthen one of the worst catered areas of teaching training in the initial stages. It is something that has already been done in

other countries, although with different nuances, orientations and levels of specification.

The project "Common Framework of Digital Competence Teaching" was born in 2012 with the intention of offering a descriptive reference that could serve for training purposes and in evaluation and accreditation processes. It is part of both the "Digital Culture Plan in the School" and the "Strategic Framework for Professional Teacher Development", whose set of projects are the result of the shared reflection process that the Ministry opened with the active participation of the Autonomous Communities and presentations which also included external experts and heads of various units of the MECD. At the meetings of the Learning Technologies (former ICT Committee) and Teacher Training (former Technical Training Committee) working groups, with representatives from all the Autonomous Communities, the corresponding lines of action of the projects were presented. Development takes place in a space of collaboration, debate and joint decision, so that the resulting proposals had a state dimension and general approval and consensus. In 2013 the draft v1.0 was published with a proposal for descriptors of the Framework, which was revised in February 2014 during the"Common Digital Competence Framework for Teachers " session organized in Valladolid in collaboration with the Department of Education of Castilla and Leon. From the conclusions drawn in this Conference, the draft version of this Framework was published in June 2014, being translated into English in October 2015.

In May 2016, the Teaching Digital Competence Conference was reactivated, taking that v2.0 as a starting point to work on the development of the descriptors of each competence of the Framework Areas.It also defined the six competence levels that were presented in the updated version called v2.1, dated November 2016, of the draft Framework, laying the foundations for the technological development of the portfolio of digital teacher competence. This update was submitted for validation through an online survey to the responsible body of Autonomous Communities (AC), Universities, members of European Schoolnet and JRC, as well as other experts in the field of Digital Teacher Competence between November 30 and December 15, 2016. After analyzing the contributions of all of them, the Digital Teaching Competency Framework presented in this document is updated.

2. Project objectives and lines of action.

The Committee of the project "Common Digital Competence Framework for Teachers" was constituted in the meeting of 3 December 2012, in which the following objectives were established:

- To allow teachers to know, help and assess the digital competence of students.
- To provide a common reference with descriptors of digital competence for teachers and trainers.
- To help to be more demanding in relation to digital competence of teachers (University does not currently give sufficient training to future teachers in digital competence and, moreover, it is not required either for the practice of teaching in Public Administration)
- To allow everyone to have a list of minimum teaching competences.
- To help teachers to have the necessary digital competence for using digital resources in their teaching profession.
- To encourage a methodological change in both the use of technological means and educational methods in general.

The Committee members stated that the framework should bear in mind both Initial Teacher Training and Continuing Professional Development of teachers.

In the first meeting the following lines of action were established:

- Line 1: Proposal for a common reference framework.
- Line 2: Plan for evaluation and accreditation of Teachers and Centers.
- Line 3: Parallel promotion of teacher training in digital competence.

In subsequent meetings, the Committee members agreed to work on the following products in relation to the first line of action:

1. Report on the analysis and conclusions of existing frameworks (AC and international ones) for digital competence of teachers (DCT).

1.1. The preparation and distribution of surveys to AC for data collection.

1.2. The preparation of a brief analysis of international frameworks on DCT.

1.3. The conclusions about the analysis on international and AC descriptive frameworks of DCT.

2. A draft with the proposal of a common reference framework for digital competence of teachers.

It was agreed to focus on the 5 areas of digital competence in the DIGCOMP project implemented by the IPTS, now known as JRC Seville:

AREA 1: Information

AREA 2: Communication

AREA 3: Content creation

AREA 4: Safety

AREA 5: Problem-solving

The proposed common framework should achieve the widest possible consensus. In order to do this, it is proposed to be submitted for discussion at a Workshop on Digital Competence of Teachers held in February 2017 with participation of the AC, experts and researchers and other institutions and stakeholders who wish to make their contributions. Thus, it could overcome another possible limiting constraint to the smooth execution of the project: the proposal does not have enough recognition and dissemination to be used for training and evaluation.

The discussion and collection of contributions will enable the development of a proposed framework for digital competence of teachers, v2.0 translated from Spanish to English in 2015, that could be used to subsequently address the following lines of action in the project, related to evaluation, accreditation and training plans, being retaken on 2016.

On May 23, 2016, the members of the Conference met again at INTEF to further advance the elaboration of the Framework and the creation of an instrument for the accreditation of the Digital Teacher Competence. It is in this session that the writing of the leveled competence descriptors for each of the 21 competencies of the 5 areas of the digital competence is addressed and the development of the Digital Teaching Competency Portfolio is proposed as an online service to accredit and certify the Digital Competence of Teachers.

At the following session on October 18, 2016, INTEF presented a prototype of a feasable minimum product of the Portfolio of the Digital Teaching Competence to the members of the Conference, in which 14 of the 17 CCAA are represented. This already included 6 levels of competence and the descriptors developed for the 21 competencies of each of the 5 areas of the digital teaching competence. In the drafting of the descriptors, the methodology of version 2 of the Framework for Digital Competence of the Citizen, JRC Seville, has been followed and the nomenclature of some of the areas has been updated, also following the European line of action.

The Portfolio is an interoperable and online service with the following characteristics:

1. Biography of Teaching Digital Competence: This section includes the self-evaluation

tool of teaching digital literacy, which is the essential part of the service, and whose competence descriptors divided into 6 levels are presented in this Framework. In addition to this, there is a timeline showing the experience of teaching in the field of pedagogy and digital learning.

2. Dossier: it is the dossier of teachers in digital competence, in which the teacher evidences that the level reached in the self-evaluation is real and verifiable.

3. Digital Competence Passport: the previous two sections result in this digital passport, printable, upgradeable and shareable, that the teacher could submit to any educational administration or entity for validation.

3. Conclusions to the comparison of existing frameworks.

In the "Report of analysis and conclusions on existing frameworks (AC and international) of digital teaching competence", prepared as part of the work project in 2013, and shared in the common space of the Conference in CConectAA, it is concluded that the situation is quite diverse in terms of plans for the development of digital teaching competence and that there is a clear lack of a common reference framework with standards and indicators that facilitate the evaluation and accreditation. All Autonomous Communities have ICT training plans, but this training has not always provided better digital competence for teaching professionals; in a few cases, common standards related to a digital competence framework are taken as reference. The most commonly used international reference, when used, is UNESCO's (2008) proposal for ICT competence standards for teachers. The "ICT training" that has generally been provided, was mainly focused on the most instrumental aspects of technology and not so much on the actual use of new media and digital resources in the classroom, its role in professional teaching development, the continuous advance of technology or the generation of virtual learning communities and professional collaboration in the use of educational resources.

According to the TALIS report (2009) and the "European survey of ICT schools in education" (2013), Spain is in the first position in European ICT training in recent years regarding a higher number of hours per teacher in this type of training area. However, in the surveys teachers themselves consider their training low for a full integration of technological means. This paradox suggests the need to rethink the efficacy of an ICT training that is not generally oriented towards the digital immersion of the teacher and the didactical appropriation of the new media. The proportion of students who have teachers who often create digital resources and participate in the school website or in virtual learning environments and social media of professional collaboration is very low. At the same time, we can speak of a generation of digital natives in Spain, where more than 90% of students of the last years of Primary Education already own and use their own mobile devices and computers connected to the Internet to perform some tasks and spend their leisure time or communicate with their friends in social settings. Over 75% of these students have teachers who never or almost never communicate online with their families, assess the use of ICT by students, assess digital resources or give homework to their students on the web.

The aforementioned TALIS report concludes that in many countries "education is still far from becoming a" knowledge industry", which requires principals and teachers to act as a professional community, who have the authority to act, to have the necessary information to decide wisely, and access to effective support systems to help them meet the challenges". This is the key, and for the new digital technologies in the classroom to be used regularly, training in digital competence is essential. Lacking this type of skills is so important that can already be detected in initial training, which scarcely includes in its curricula training in digital competence. As Gutiérrez, Palacios and Torrego (2010) indicate, "even the habitual users of new technologies ignore the learning potential and the possible forms of integration in the curriculum of compulsory education. The possibility of considering ICT as means of creative expression, of democratic participation, is a far cry from the perceptions of the current students of the Degree in Education".

In order to be able to determine what training is necessary for such training in digital competence, in both initial training and continuing professional development (CPD), we need the

reference of a common framework with enough recognition;one which specifies measurable indicators for each area of digital competence. None of the frameworks reviewed in this report have a consolidated overall recognition. The most often cited is the framework of ICT competence from UNESCO (2008), which the institution itself recognized that is in need of a thorough review. On the other hand, the diversified proposal of standards proposed by ISTE, which differentiates between standards for students, teachers and educational administrators, is highly regarded. In our project, the main aspect is the digital competence of teachers.

The most recent proposal, and the only one generated by the EU so far, is the one from the Joint Research Centre of the European Commission that, in June 2016, released its 2.0 version with the results of DIGCOMP project (https://ec.europa.eu/jrc/en/digcomp), launched in 2010 with the objective of developing a framework proposal for the digital competence of all European citizens. The report details the various aspects of digital competence through a list of 21 competences described in terms of knowledge, skills and attitudes, which have been specified following a data collection process (including a review of existing studies, case studies and an online survey) that were submitted to consultation to interested parties (through discussion sessions, online discussions, expert input, presentations at seminars and conferences).

The 1.0 version of that Framework was the result of more than two years of work with the participation of experts from all over Europe. In 2014, it was selected as the one that would be used in Spain as the common reference to make an adaptation applied to the teaching functions, with evaluable indicators that could be accredited after the corresponding training actions. Taking as a reference this common European framework already agreed and recently developed, seemed a good starting point for achieving the greatest possible consensus in our environment.

In this same line we have continued working during 2016, updating the Common Digital Competence Framework for Teachers presented here as a base, as well as all the contributions of the members of the Teaching Digital Competence Conference, Universities, experts in the matter and the version 2.0 of the European Digital Citizens' Competence Framework published by the JRC in June of that same year.

4. Advances towards the digital competence portfolio for teachers.

Following the conclusions to the comparative explained in the previous section, the draft version of the agreed framework was published in October 2014, a version translated from Spanish to English in 2015 and progressed from May 2016 until the update of 2.1, in November 2016, when the descriptors of each one of the five areas were developed, the three general levels of each competence were redefined, and the six competence sub-levels were defined. This version 2.1 was submitted to the validation of experts between November 30 and December 15, 2016, and with the conclusions drawn from it, the new Common Digital Competence Framework for Teachers is published in 2017.

Figure 1 - Comparison of changes in the areas of the Common Digital Competence Framework for Teachers.

Moreover, in order to meet the work objectives aimed at during the 2012 Conference, the portfolio of digital competence of teachers is developed bearing in mind the acknowledgement and certification of the levels of digital competence of teachers.

For this reason we created the technological solution hosted in http://portfolio.educalab.es where each teacher can create their digital competence biography, continuously self-evaluate these competences and show safely their support evidence of work, in an individual and upgradeable dossier, so as to generate a **Digital Competence Passport** showing throughout their professional life how that competence improves until the maximum level is reached.

5. Overview of the DIGCOMP proposal.

The DIGCOMP study was launched by the JRC Unit under an administrative agreement with the Directorate General for Education and Culture (DG EAC) in order to contribute to the better understanding and development of digital competence in Europe.

The objective of the project was to identify exhaustive descriptors of digital competence. The project started in January 2011 and the publication of its final work was made in June 2016: DIGCOMP: A Framework for Developing and Understanding Digital Competence in Europe (https://ec.europa.eu/jrc/en/digcomp/digital-competence-framework).

The DIGCOMP study aimed to create a consensus at European level on the components of the Digital Competence, developing a conceptual framework that could serve as a reference for frameworks, initiatives, curricula and current certifications.

5.1. Definition of Digital Competence

The 2006 European recommendation outlined digital competence as a fundamental core competence, with the following definition:

> *"Digital competence involves the confident and critical use of Information Society Technologies (IST) for work, leisure and communication. It is underpinned by basic skills in ICT: the use of computers to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in collaborative networks via the Internet "*(European Parliament and the Council, 2006).

In this definition we find the main skills of digital competence. The definition and explanation of the components of competence provided in the recommendation offer an overview of digital competence, being evident that, when digital tools are used, the operational capacities are a small proportion of the necessary knowledge. Following the recommendation, information management, communication in social settings and the ability to use the Internet for learning have become highly relevant fields, also for critical thinking, creativity and innovation. However, the access devices are increasingly diverse, and we do not only gain access from the computers that were mentioned in 2006.

As Ferrari (2012) indicates, discourses on literacy tend to focus on the decoding and encoding argument, i.e. reading and writing, but here we prefer to refer to digital competence as the collection of knowledge, skills and attitudes needed today to be functional in a digital environment. Therefore, in addition to the changes introduced by new technologies in reading and writing literacy, we can argue that digital competence requires a new set of skills, knowledge and attitudes. The acquisition of competence in the digital age requires an attitude that allows the user to adapt to the new requirements established by technologies, but also their appropriation and adaptation to one's own ends and to interact socially around them. Appropriation implies a specific way of acting and interacting with technology, understanding it and being able to use it for better professional practice.

In general, digital competence can also be defined as the creative, critical and confident use of information and communication technologies to achieve the objectives related to work, employability, learning, leisure, inclusion and participation in society.

5.2. Common Digital Competence Framework

The DIGCOMP framework created by JRC can be used as a reference tool in order to track the areas and levels to consider in training plans. The DIGCOMP framework is divided into five descriptive dimensions. These dimensions reflect a different aspect of the descriptors and a different definition phase.

Dimension 1: competence areas that have been identified.

Dimension 2: competences that are pertinent to each area.

Dimension 3: proficiency levels that are foreseen for each competence.

Dimension 4: examples of the knowledge, skills and attitudes applicable to each competence (examples are not differentiated in proficiency levels).

Dimension 5: examples on the applicability of the competence to different purposes. Here we focus on education and learning goals.

Each of the 21 competences that have been defined are presented in tabular form including: a brief definition of the competence, descriptors for the three proficiency levels, examples of knowledge, skills and attitudes related to the competence, and examples of potential usefulness of the competence for specific purposes, learning, employment, etc.

5.3. Areas and competences

The digital competence areas of the DIGCOMP 2.0 Framework can be summarized as follows:

1. **Information and data literacy**: identify, locate, retrieve, store, organize and analyze digital information, evaluating its purpose and relevance.

2. **Communication and collaboration**: communicate in digital environments, share resources through online tools, connect and collaborate with others through digital tools, interact and participate in communities and networks; Intercultural awareness.

3. **Digital Content Creation**: create and edit new content (texts, images, videos ...), integrate and re-elaborate previous knowledge and contents, perform artistic productions, multimedia contents and computer programming, know how to apply intellectual property rights and use licenses

4. **Safety**: personal protection, data protection, digital identity protection, use of security, safe and sustainable use.

5. **Problem solving**: Identify digital needs and resources, make decisions when choosing the appropriate digital tool according to the purpose or need, solve conceptual problems through digital media, solve technical problems, creative use of technology, upgrade own competence and of others.

Areas 1, 2 and 3 are fairly linear, while areas 4 and 5 are more transverse. This means that while areas 1 to 3 address competences that can be re-exposed in terms of specific activities and uses, areas 4 and 5 apply to any type of activity carried out through digital media. This does not mean that areas 1, 2, and 3 are not interrelated. Although each area has its own specification, there are several overlapping points and cross-references to other areas. Area 5, "Problem Solving", is the transverse competence area par excellence, which is an independent area of competence in the framework, but, on the other hand, the elements related to problem solving can be found in any of the other competence areas. For example, the competence area "Information" (area 1) includes the competence "assess information", which is part of the cognitive dimension of problem solving. Communication and content creation include several elements of problem solving (as: interact, collaborate, develop content, integrate and re-elaborate, program, etc.). Despite the inclusion of elements related to problem solving in relevant areas of competence, it has been considered necessary to have independent problem solving competence, due to the relevance of this aspect in the use of digital technologies and media. It is necessary to take into account that some of the competences listed in areas 1 to 4 can also be mapped in area 5.

For each of the above areas of competence, a number of related competences have been identified. The number of competences in each area varies from a minimum of 3 to a maximum of 6. The competences are numbered; however, progression does not refer to the various degrees of progression (levels of mastery are presented in Dimension 3). The first competence in each area is always the one that includes more technical aspects: in these specific competences, the knowledge, skills and attitudes have operational processes as the dominant component. It also includes technical and operational skills in each competence, although always aiming to refer to functionality and avoid mentioning specific tools that may change or stop being used in the near future.

6. General digital competence framework (Area Description of the DIGCOMP 2.0 proposal, via JRC)

Area 1: Information and data literacy:

General description:

To identify, locate, obtain, retrieve, store, organize and analyze digital information, evaluating its purpose and relevance.

Competences:

1.1. Browsing, searching and filtering data, information and digital content.

1.2. Evaluating data, information and digital content.

1.3. Managing data, information and digital content.

1.1. Browsing, searching and filtering data, information and digital content.

Dimension 1 Name of the area	Information and data literacy		
Dimension 2 Name and description of the competence	**1.1 Browsing, searching and filtering data, information and digital content.** To articulate information needs, search for data, information and content in digital environments, access them and navigate between them. To create and update personal search strategies.		
Dimension 3 Levels	**A - FOUNDATION**	**B- INTERMEDIATE**	**C- ADVANCED**
	I am able to find certain information, data and online digital content with search engines. I know that the search results are different depending on the search engine.	I browse Internet to locate information, data and digital content. I organize different ways to express my information needs and I know how to select the information, data and digital content.	I am able to use a range of strategies when I search for information, data and digital content, and browse Internet. I know how to filter and manage information, data and digital content I receive. I know how to visit sites to share information on the net (e.g. Blogging).
Dimension 4			
Examples of knowledge	I understand how information is generated and distributed in digital media. I am aware of the existence of different search engines. I know which search engines or databases respond better to my own information needs. I understand how I can find information on different devices and digital media. I understand how search engines categorize information.		

	I understand how the feeding mechanism of dynamic information sources works.
Examples of skills	I adjust searches based on specific needs. I can follow the information presented through hyperlinks or in a nonlinearly form. I use filters and agents. I can search for information using keywords to limit the number of results. I can search for accurate information using a controlled specific vocabulary for the search. I have strategic skills to manage information for goal-oriented activities. I can modify the search for information based on how search algorithms are built.
Examples of attitudes	I show a proactive attitude towards finding information. I value the positive aspects of technologies used to obtain information. I am motivated with searching information for different aspects of my life. I show curiosity about storage systems, information management and its distribution and operation.

Dimension 1 Name of the area	Information and data literacy		
Dimension 2 Name and description of the competence	**1.2 Evaluating data, information and digital contents** To analyse, compare and critically evaluate the credibility and reliability of sources of data, information and digital content. To analyse, interpret and critically evaluate the data, information and digital content.		
Dimension 3 Levels	**A - FOUNDATION**	**B- INTERMEDIATE**	**C- ADVANCED**
	I know that not all information, not all digital content, nor all sources of data found on the Internet are reliable.	I know how to compare different sources of information, data and digital content online.	I am critical with the information / data / digital content that I find and I know how to contrast its validity and credibility.
Dimension 4			
Examples of knowledge	I know how to analyze the information obtained. I assess the content of digital media. I value the validity of the content found on the Internet or in the media and assess and interpret such information. I understand that the reliability of sources of information is not homogeneous. I understand the differences between printed and online information sources. I understand that information sources should be collated. I know how to transform information into knowledge.		
Examples of skills	I am able to handle user-oriented information. I assess the usefulness, timeliness, accuracy and completeness of the information.		

	I am able to compare, contrast and integrate information from different sources. I am able to distinguish reliable information from unreliable sources.
Examples of attitudes	I recognize the limits of Internet as an information source. I am critical with the information I find. I am aware that, despite globalization, some countries are represented on the Internet more than others. I am aware that the mechanisms and algorithms operating search engines are not impartial when presenting information.

Dimension 1 Name of the area	Information and data literacy		
Dimension 2 Name and description of the competence	**1.3 Managing data, information and digital content** To organise, store and retrieve data, information and content in digital environments. To organise and process them in a structured environment.		
Dimension 3 Levels	**A - FOUNDATION**	**B- INTERMEDIATE**	**C- ADVANCED**
	I know how to save files and content (e.g. Text, images, music, videos and web pages). I know how to retrieve the contents that I have saved.	I know how to save and tag files, content and information and have my own storage strategy. I know how to retrieve and manage information and content that I have saved.	I know how to apply different methods and tools for organizing files, content and information. I know how to implement a set of strategies to recover the contents that I or others have organized and saved.
Dimension 4			
Examples of knowledge	I understand how information is stored on different devices / services. I know different storage media. I know different storage options and I am able to select the most appropriate.		
Examples of skills	I structure and classify information and content according to a scheme / classification method. I organize information and digital content. I download / upload and classify information and digital content. I use various classification methods for storing and managing digital resources and information. I am able to use services, programs and applications for information management. . I am able to retrieve and access information and content previously stored.		
Examples of attitudes	I understand the benefits and shortcomings of different devices / storage services (online and local storage). I am aware of the importance of backups. I understand the importance of having a clear outline or storage system for digital information resources.		

	I am aware of the different consequences of saving content privately or publicly.

Area 2: Communication and Collaboration

General description:

Communicate in digital environments, share resources through online tools, connect with others and collaborate using digital tools, interact and participate in communities and networks, intercultural awareness.

Competences:

2.1 Interacting through digital technologies.

2.2 Sharing information and content.

2.3 Online civic engagement.

2.4 Collaborating through digital technologies.

2.5 Netiquette.

2.6 Managing digital identity.

Dimension 1 Name of area	Communication and collaboration		
Dimension 2 Name and description of competence	**2.1 Interacting through digital technologies** To interact through a variety of digital technologies and understand appropriate digital communication means for a given context.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I am able to interact with others using the basic features of communication (e.g. mobile phone, voice IP, chat, and email).	I am able to use several digital tools to interact with others even using more advanced features of the communication tools (e.g. mobile phone, voice IP, chat, and email).	I use a wide range of tools for online communication (e-mails, chats, SMS, instant messaging, blogs, microblogs, forums, and wikis). I select the methods and forms of digital communication that better fit my purpose. I am able to adapt the forms and methods of communication for each addressee. I am able to manage the various types of communication I receive.
Dimension 4			
Examples of knowledge	I am aware of the existence of different digital media (e.g., emails, chats, voice IP, video conferencing, SMS). I know how messages and emails are stored and displayed. I know the functioning of several communication software packages. I know the benefits and shortcomings of various media and identify its usefulness depending on the context.		

Examples of skills	I am able to send an email, an SMS, or write an entry to a blog. I am able to find and connect with peers. I am able to modify the information in order to transmit it via different media (from sending an email to make a slide presentation). I know how to analyze my target audience and I can adapt the communication function thereof. I am able to filter the different messages I receive (for example, select emails, decide who follow in the microblogs, etc.)
Examples of attitudes	I feel safe and comfortable in communication and expression through digital media. I show willingness to use an appropriate code of conduct to each given context. I am aware of the risks associated to online communication with strangers. I am actively involved in online communication.

Dimension 1 Name of area	Communication and collaboration		
Dimension 2 Name and description of competence	**2.2 Sharing through digital technologies** To share data, information and digital content with others through appropriate digital technologies. To act as an intermediary and know about referencing and attribution practices.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I know how to share files and content through simple technological means (e.g. send attachments in emails, upload photos on the Internet, etc.).	I know how to participate in social networks and online communities, where I transmit or share content, knowledge and information.	I can actively share information, content and resources through online communities, networks and collaborative platforms.
Dimension 4			
Examples of knowledge	I know the benefits (for myself and others) of sharing content and information with my peers. I am able to judge the value of the digital resource which I am sharing and know what audience to address with it. I know what content / knowledge / resources can be shared publicly. I know how / when to recognize or cite the source of a particular content.		
Examples of skills	I am able to check the right of ownership or right of use of digital content. I know how to share content on the internet (for example, sharing a video on social networks). I know how to use social networks to disseminate the results of my work.		
Examples of attitudes	I adopt a proactive attitude in the distribution of resources, content and knowledge. I have my own informed opinion on information sharing practices and digital resources, benefits, risks and limits. I have an informed choice about recognition practices of digital resources. I am aware of the existence of copyright and rights of digital resources.		

Dimension 1	Communication and collaboration

Name of area			
Dimension 2 Name and description of competence	**2.3 Engaging in citizenship through digital technologies** To participate in society through the use of public and private digital services. To seek opportunities for self-empowerment and for participatory citizenship through appropriate digital technologies.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I know that the technology can be used to interact with different services and I make passive use of them (e.g. online communities, government, hospitals, medical centers, banks.)	I am able to actively use some basic aspects of online services (e.g., government, hospitals or medical centers, services).	I actively participate in online spaces. I know how I can actively involve online and I am able to use various online services.
Dimension 4			
Examples of knowledge	I know that the technology can be used for participation in democratic actions (such as lobbying, requests, communication with Parliament). I know how technologies and media can facilitate different forms of citizen participation.		
Examples of skills	I am able to access a number of specific networks and communities for different purposes. I am able to find relevant communities, networks and social media that correspond to my interests and needs. I know and I can use various features of networks, digital media and online services.		
Examples of attitudes	I am aware of the potential of digital media and technology for public participation. I have a critical understanding of social media and digital broadcast networks and online communities. I am involved in social media, digital broadcast networks and online communities.		

Dimension 1 Name of area	Communication and collaboration		
Dimension 2 Name and description of competence	**2.4 Collaboration through digital channels** To use digital tools and technologies for collaborative processes, and for co-construction and co-creation of resources and knowledge.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I am able to collaborate with some traditional technologies (e.g., email)	I am able to discuss and develop collaborative products using simple digital tools.	I am able to frequently and confidently use several digital tools and different media in order to collaborate with others in the production and provision of resources, knowledge and content.
Dimension 4			
Examples of knowledge	I understand that collaborative processes foster content creation. I understand when creating content can benefit from collaborative processes and when not. I understand the dynamics of collaborative work and providing and receiving feedback. I assess the contribution others made to my work. I understand that different forms of online collaboration require assuming different roles.		

Examples of skills	I am able to use the collaboration features of the software packages and web-based collaboration services (e.g., change control, comments on a document or resource, labels, contribution to wikis, etc.). I am able to provide and receive feedback. I am able to work remotely with others. I am able to use social media for different types of collaboration.
Examples of attitudes	I am willing to be part of a team. I seek new forms of cooperation that do not necessarily involve a prior physical encounter.

Dimension 1 Name of area	Communication and collaboration		
Dimension 2 Name and description of competence	**2.5 Netiquette** To be aware of behavioural norms and know-how while using digital technologies and interacting in digital environments. To adapt communication strategies to the specific audience and be aware of cultural and generational diversity in digital environments.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I know the basic rules of conduct governing communication with others through digital tools.	I understand the rules of network etiquette and I am able to apply them to my personal and professional context.	I am able to apply various aspects of netiquette to different spaces and contexts of communication. I have developed strategies for identifying inappropriate behavior online.
Dimension 4			
Examples of knowledge	I know the common rules of digital interactions. I understand the consequences of my own behavior. I have knowledge about ethical issues in digital media, such as visiting inappropriate websites and cyberbullying. I understand that different cultures have different practices of communication and interaction.		
Examples of skills	I have skills to protect myself and others from online threats. I am able to ban and report abuse and threats. I have developed strategies to address cyberbullying and to identify inappropriate behaviors.		
Examples of attitudes	I take into account the ethical principles of use and publication of information. I have a clear notion of what is appropriate behavior depending on the media used, the target audience and the existing legislation. I show flexibility and adaptation to different cultures of digital communication. I accept and appreciate diversity. I have a safe and prudent attitude in digital activities.		

Dimension 1 Name of area	Communication and collaboration		
Dimension 2 Name and description of competence	**2.6 Managing digital identity** To create and manage one or multiple digital identities, be able to protect one's own reputation, and deal with the data that one produces through several digital tools, environments and services.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I know the benefits and risks associated with digital identity.	I am able to create my digital identity and track my fingerprint.	I am able to manage different digital identities depending on the context and purpose. I am able to monitor the information and data that I produce through my online interaction, and know how to protect my digital reputation.

Dimension 4	
Examples of knowledge	I know the benefits of having one or more digital identities. I understand the interrelationship between the world inside and outside the net. I understand that there are different actors that can contribute positively or negatively to the construction of digital identity.
Examples of skills	I have the ability to protect myself and other from online threats to my digital reputation. I am able to build a profile that meets my needs. I am able to track my own digital fingerprint.
Examples of attitudes	I know the advantages and risks regarding my online presence. I am not afraid to disclose certain information about myself. I take into account the existence of multiple ways of expressing my own digital identity and personality through digital media.

Area 3: Digital content creation

General description:

Create and edit new digital content, integrate and rebuild prior knowledge and content, make artistic productions, multimedia content and computer programming, know how to apply intellectual property rights and licenses.

Competences:

3.1 Developing digital content.

3.2 Integrating and re-elaborating digital content.

3.3 Copyright and licenses.

3.4 Programming.

Dimension 1 Name of area	Digital content creation		
Dimension 2 Name and description of competence	**3.1 Developing digital content** To create and edit digital content in different formats and express oneself through digital means.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I am able to create simple digital content (e.g., text, or tables, or images, or audio, etc.).	I am able to produce digital content in different formats, including multimedia (e.g., text, tables, images, audio, etc.).	I am able to produce digital content formats, platforms and different environments. I am able to use various digital tools to create original multimedia products.
Dimension 4			
Examples of knowledge	I know that digital content can be produced in various formats. I know which program / application is best suited to the type of content I want to create. I understand how meaning is created through multimedia formats (text, audio, video, images).		
Examples of skills	I am able to use basic packages of tools to create content in different formats (text, audio, video, images). I am able to create representations of knowledge using digital media (e.g., mind maps, diagrams). I am able to use a wide range of media to express myself creatively (texts, images, audio, and videos). I am able to edit content to improve the final product.		
Examples of attitudes	I am not satisfied with the usual forms of content creation, but explore new forms and formats. I understand the potential of the technologies and the means for self-expression and knowledge creation. I appreciate the added value of the new digital media for creative and cognitive processes.		

	I am critical in terms of production and consumption of resources and knowledge through digital media and technologies. I feel comfortable when creating digital content. I am involved in content creation.

Dimension 1 Name of area	Digital content creation		
Dimension 2 Name and description of competence	**3.2 Integrating and re-elaborating digital content** To modify, refine, improve and integrate information and content into an existing body of knowledge to create new, original and relevant content and knowledge.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I can make simple changes to content that others have produced.	I am able to edit, modify and improve the content of others or myself have produced.	I am able to combine elements of existing content to create new content.
Dimension 4			
Examples of knowledge	I contribute to knowledge in the public domain (e.g., wikis, public forums, magazines). I know that resources can be constructed from a variety of sources of non-sequential information. I know different databases and resources that can be recombined and reused. I know that reused content should indicate the identity of its author or authors.		
Examples of skills	I am able to use editing functions to modify content in a simple and basic way. I am capable of creating knowledge representations using digital media (e.g., mind maps, diagrams). I am able to use the right licenses for the creation and sharing of content. I am able to combine different existing content to create new content.		
Examples of attitudes	I am critical when I select the content and resources to rework. I assess and value the work of others. I am aware of the existence of repositories (e.g. Open Educational Resources - OER).		

Dimension 1 Name of area	Digital content creation		
Dimension 2 Name and description of competence	**3.3 Copyright and licenses** To understand how copyright and licenses apply to data, information and digital content.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I am aware that some of the content that I use may have copyright.	I know the basic differences between copyright licenses, copyleft and Creative Commons and am able to apply them to the content I create.	I know how to apply different types of licenses to information and resources I use and create.
Dimension 4			
Examples of knowledge	I take into account the principles behind the regulation of licenses for the use and publication of information.		

	I understand the rules on copyright and licensing. I know that there are different ways to license the production of intellectual property. I understand the differences between copyright licenses, Creative Commons, copyleft and public domain.
Examples of skills	I know how to license my own digital production. I know how to find information on regulations related to copyrights and licenses.
Examples of attitudes	I keep a critical attitude against legal frameworks and regulations. I act independently and assume responsibility for my actions and choices.

Dimension 1 Name of area	Digital content creation		
Dimension 2 Name and description of competence	**3.4 Programming** To plan and develop a sequence of understandable instructions for a computing system to solve a given problem or perform a specific task.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I am able to modify some simple functions of *software* and applications (basic configuration).	I am able to make various modifications to programs and applications.	I am able to make various modifications to programs and applications.
Dimension 4			
Examples of knowledge	I understand how digital systems and processes work. I understand how software works. I understand technological ecosystems. I know the architectural principles behind technology.		
Examples of skills	I create complex models, simulations and visualizations of real-world using digital information. I am able to encode and program digital devices. I am able to change the basic settings of already developed programs. I am able to apply advanced settings to some programs.		
Examples of attitudes	I am aware of the existing programming logic. I am aware that I can apply configurations to most existing software, and I am willing to establish optimal settings for each program, depending on my needs. I express interest in the potential of ICT for programming and creating final products.		

Area 4. Safety

General description:

Protection of personal information and data, digital identity protection, safety, safe and responsible use.

Competences:

4.1 Protecting devices.

4.2 Protecting personal data and privacy.

4.3 Protecting health and well-being.

4.4 Protecting the environment.

Dimension 1 Name of area	Safety		
Dimension 2 Name and description of competence	**4.1 Protecting devices** To protect devices and digital content, and understand risks and threats in digital environments. To know about safety and security measures and have due regard to reliability and privacy.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I am able to perform basic protection actions with my devices (e.g. use of antivirus, passwords, etc.).	I know how to protect my digital devices and update my security strategies.	I frequently update my security strategies and know how to act when my devices are threatened.
Dimension 4			
Examples of knowledge	I know that there are different risks associated with the use of technologies. I know the latest strategies to avoid risks. I know the risks associated with the use of online tools and devices.		
Examples of skills	I am able to install an antivirus. I am able to take steps to reduce the risk of fraud by using safe passwords. I am capable of protecting various devices digital world threats (malware, viruses, etc.).		
Examples of attitudes	I have a positive attitude, but realistic to the benefits and risks associated with the use of online technologies.		

Dimension 1 Name of area	Safety		
Dimension 2 Name and description of competence	**4.2 Protecting personal data and privacy** To protect personal data and privacy in digital environments. To understand how to use and share personal identifiable information while being able to protect oneself and others from damages. To understand that digital services use a “Privacy policy” to inform of how personal data is used.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I am aware that in online environments I can share only	I know how to protect my own privacy online and others.	I often change the default privacy of online services to

	certain types of information about myself and about others.	Generally I understand issues related to privacy and have a basic knowledge of how to collect and use my data.	improve the protection of my privacy. I have extensive knowledge about privacy issues and know how I collect and use my data.
Dimension 4			
Examples of knowledge	I understand the terms of use and conditions of online services (for example, the fact that service providers use personal data of users) and are therefore able to act prudently. I know that many interactive services use personal information to filter commercial messages more or less explicitly. I can distinguish between protection and data security. I know the appropriate behavior in digital environments. I understand how others can see and follow my own digital fingerprint. I know to what extent the data on my digital identity can or can not be used by third parties. I understand the risk of identity theft and other credentials. I know how to protect information related to other people around them (as workers, parents, teachers, etc.)		
Examples of skills	I am able to manage my identity and digital fingerprint. I am able to act prudently regarding privacy issues. I am able to locate information online about myself. I can delete or modify information that I am responsible for about myself or others.		
Examples of attitudes	I am aware of online privacy principles applicable to myself and others. I am aware of the impact and longevity that digital information has when published. I am able to take advantage of having multiple digital identities, aimed at achieving different objectives. I act critically when I show online information about myself.		

Dimension 1 Name of area	Safety		
Dimension 2 Name and description of competence	**4.3 Protecting health and well-being** To be able to avoid health-risks and threats to physical and psychological well-being while using digital technologies. To be able to protect oneself and others from possible dangers in digital environments (e.g. cyber bullying). To be aware of digital technologies for social well- being and social inclusion.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I know how to prevent cyberbullying. I know that technology can affect my health if it is misused.	I know how to protect myself and others from cyberbullying and understand the health risks associated with the use of technologies (from ergonomic aspects to addiction to technologies).	I am aware of the proper use of technologies to avoid health problems. I know how to find a good balance between the online world and the traditional world.

Dimension 4	
Examples of knowledge	I know the consequences of a prolonged use of digital technologies. I have information about the addictive issues of digital media.
Examples of skills	I am able to control the distracting aspects of work and digital life. I am able to take preventive actions to protect my own health and those I am responsible for.
Examples of attitudes	I have a balanced attitude towards the use of technology.

Dimension 1 Name of area	Safety		
Dimension 2 Name and description of competence	**4.4 Protecting the environment** To be aware of the environmental impact of digital technologies and its use.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I apply basic energy-saving measures.	I understand the positive and negative aspects of the use of technology on the environment.	I have an informed opinion about the impact of technology in everyday life, online consumption and the environment.
Dimension 4			
Examples of knowledge	I am able to select safe and suitable digital media, which are efficient and cost-effective in comparison to others. I have an outline or global mental map about how the online world works. I understand the technologies I use to a proper degree to make good purchasing or contracting decisions, for example, devices or Internet service providers. I understand the environmental impact of computers and electronic devices and knows how to extend their useful life recycling their components (for example, changing hard disks).		
Examples of skills	I am able to use digital services without being completely dependent of them. I know how to use digital equipment efficiently in terms of cost and time.		
Examples of attitudes	I have a positive attitude, but realistic, about the benefits and risks associated with information technology. I understand that digital environments can make things better or worse, depending on how I use them and the rules I follow. I am aware of the environmental problems related to the use of digital technologies.		

Area 5: Problem Solving

General description:

Identify needs in the use of digital resources, make informed decisions about the most appropriate digital tools depending on the purpose or need, solve conceptual problems through digital media or digital tools, use technology creatively, solve technical problems, upgrade my competence and that of others.

Competences:

5.1 Solving technical problems.

5.2 Identifying needs and technological responses.

5.3 Creatively using digital technologies.

5.4 Identifying digital competence gaps.

Dimension 1 Name of area	Problem Solving		
Dimension 2 Name and description of competence	**5.1 Solving technical problems** To identify technical problems when operating devices and using digital environments, and solve them (from trouble-shooting to solving more complex problems).		
Dimension 3	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
Levels	I am able to ask for support and specific assistance when technologies do not work or when I use a device, program or application	I am able to solve simple problems that arise when technologies do not work.	I am able to solve a wide range of problems arising from the use of technology.
Dimension 4			
Examples of knowledge	I know what elements are in a computer or digital device. I know where to look to solve a technical problem. I know sources of information and where to seek help to solve technical problems. I know where to search for relevant information for the theoretical and technical resolution of problems related to the use of resources, tools and digital services.		
Examples of skills	I use a varied and balanced combination of digital and non-digital technologies and non-digital for problem solving, and I dynamically update my options and choices over time. I am able to solve a technical problem or decide what to do when technology does not work.		
Examples of attitudes	I adopt an active approach to problem solving. I am willing to ask for advice when a problem arises. I can think of alternatives when problems cannot be solved and tasks must be performed.		

Dimension 1	Problem Solving

Name of area			
Dimension 2 Name and description of competence	**5.2 Identifying needs and technological responses** To assess and identify own needs, to assess, select and use digital tools and give possible technological responses to solve them. To adjust and customise digital environments to personal needs (e.g. accessibility).		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I am able to use certain technologies to solve problems, but only for a limited number of tasks. I am able to make decisions when choosing a digital tool for a routine activity.	I understand the possibilities and limits of technology. I am able to solve non-routine tasks exploring the technological possibilities. I am able to choose the right tool depending on the purpose and I am able to assess the effectiveness of it.	I can make informed decisions when choosing a tool, device, application, program or service for a task with which I am unfamiliar. I keep updated information on new technological developments. I understand how the new tools work and I am able to critically assess which tool best fits my goals.
Dimension 4			
Examples of knowledge	I understand the potential and limitations of the devices and digital resources. I know the range of tasks that can be performed by using technologies. I know the most important or popular digital technologies used by others (for example, by colleagues or by persons of recognized experience). I have reasonable knowledge about available technologies, both in terms of their strengths and their weaknesses, and the opportunities they present to be supportive for achieving personal goals.		
Examples of skills	I am able to make informed decisions (with human or technological assistance where appropriate) about which technologies to use to achieve personally relevant goals. I am able to choose the most appropriate technologies depending on the problem I want to solve.		
Examples of attitudes	I am aware of the value of combining the use of traditional tools with digital media network. I express interest in new information and communications technologies. I critically assess possible solutions using digital tools.		

Dimension 1 Name of area	Problem Solving		
Dimension 2 Name and description of competence	**5.3 Creatively using digital technologies** To use digital tools and technologies to create knowledge and innovate processes and products. To engage individually and collectively in cognitive processing to understand and resolve conceptual problems and problem situations in digital environments.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I am aware that I can use technologies and digital tools for creative purposes and I am able to use technology creatively in some cases.	I am able to use technology to make creative products and use technology to solve problems. I collaborate with others in the development of innovative and creative products, but I do not take the initiative.	I am able to solve conceptual problems taking advantage of technologies and digital tools. I am able to contribute to the generation of knowledge through technological means.

			I am able to participate in innovative actions through the use of technologies. I proactively collaborate with others to create creative and innovative products.
Dimension 4			
Examples of knowledge	I use a heterogeneous and well balanced combination of digital and non-digital technologies to solve different problems and I dynamically change my choices over time. I am able to solve theoretical problems, of individual or collective interest through digital tools or relying on them. I know how to find the relevant knowledge to solve theoretical problems.		
Examples of skills	I know how to explore the net, online market, or network when looking for solutions. I am able to exploit the technological potential in order to identify and solve problems. I know how to solve problems individually and collectively (peer problem solving). I am able to build meaningful knowledge through interaction with available digital resources. I am able to use varied media to express myself creatively (text, images, audio and video).		
Examples of attitudes	I am open to explore alternative solutions offered by technologies I solve problems in a proactive and collaborative way. I am open to review my values and attitudes according to the situation. I understand the potential of technologies and the means for self-expression and knowledge generation. I appreciate the added value that the new media give to cognitive and creative processes. I have a critical attitude regarding the production and consumption of knowledge through media and technologies.		

Dimension 1 Name of area	Problem Solving		
Dimension 2 Name and description of competence	**5.4 Identifying digital competence gaps** To understand where one's own digital competence needs to be improved or updated. To be able to support others with my digital competence development. To seek opportunities for self-development and to keep up-to-date with the digital evolution.		
Dimension 3 Levels	**A - FOUNDATION**	**B - INTERMEDIATE**	**C - ADVANCED**
	I have some basic knowledge, but I am aware of my limitations in the use of technologies.	I can learn to do something new with technology.	I frequently update my needs in terms of teaching digital competence.
Dimension 4			
Examples of knowledge	I understand the broader context of digital tools in a "digital era" characterized by globalization and networks. I understand the origin of ICT, who develops them and for what purposes. I have direct knowledge and expertise in the use of the most important digital technologies used in my area of expertise.		

Examples of skills	I have the ability necessary to update the knowledge on the availability of digital tools. I am able to stay informed using a combination of active searches and personalized services of automated delivery of information. I am able to self-regulate my learning concerning digital technologies. I am able to manage my own goals and to diagnose deficiencies in the digital competence required to achieve those goals. I able to offer support to others to manage and diagnose needs. I am able to learn and integrate new emerging technologies. I am able to learn how to work with any new digital technology by testing and using its user guide. I am able to adapt smoothly to new technologies and integrate them in context. I am capable of transferring knowledge. I increasingly include digital instruments in my daily life to increase my quality of life.
Examples of attitudes	Overall, I get on freely, which means I am willing to experiment with new technologies and I am also able to reject inappropriate technologies. I reflect on my own skills and digital development (the ability to be aware of my own digital literacy and on my own evolution regarding this process). I maintain a positive attitude toward learning about emerging digital technologies. I am able to expand / update digital skills according to my personal / professional needs. I am aware of the general trends in new media even though I do not use them.

7. Development of the competences of the Common Digital Competence Framework for Teachers

As a result of work carried out in 2016, in the Digital Teacher Presentation Conference around an updated Framework for Teaching Digital Competition, defined in competence levels for each of the areas described in DigComp2.0, INTEF created the following proposal:

A) The update of the proposed competence descriptors for each competition in 3 levels: **A (Foundation)**, **B (Intermediate)**, **C (Advanced)**.

B) The development of descriptors subdivided into six competence levels (A1 - C2) for each of the competencies of each of the five areas.

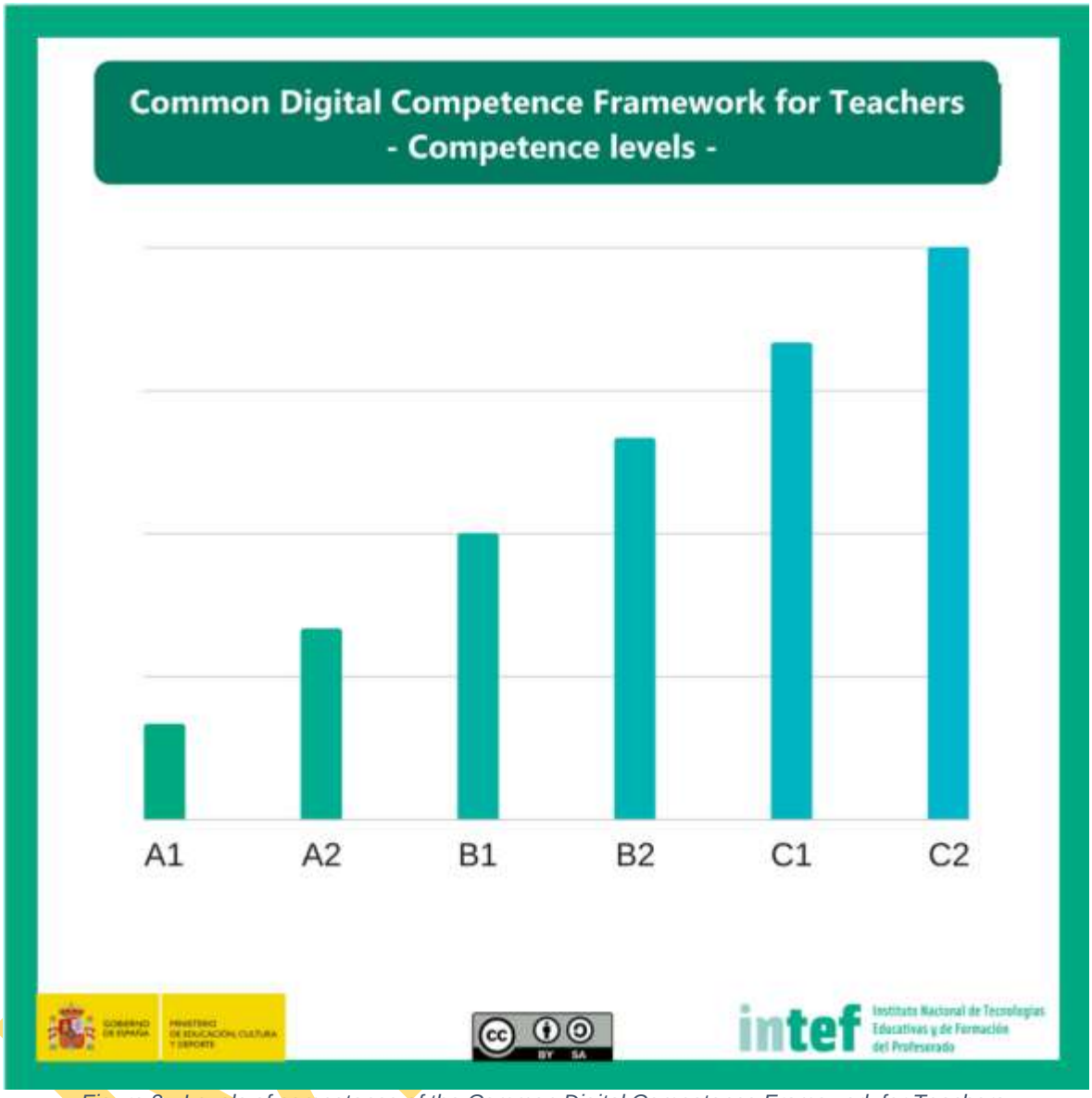

Figure 2 - Levels of competence of the Common Digital Competence Framework for Teachers.

A) Updates in the proposal on 3 levels

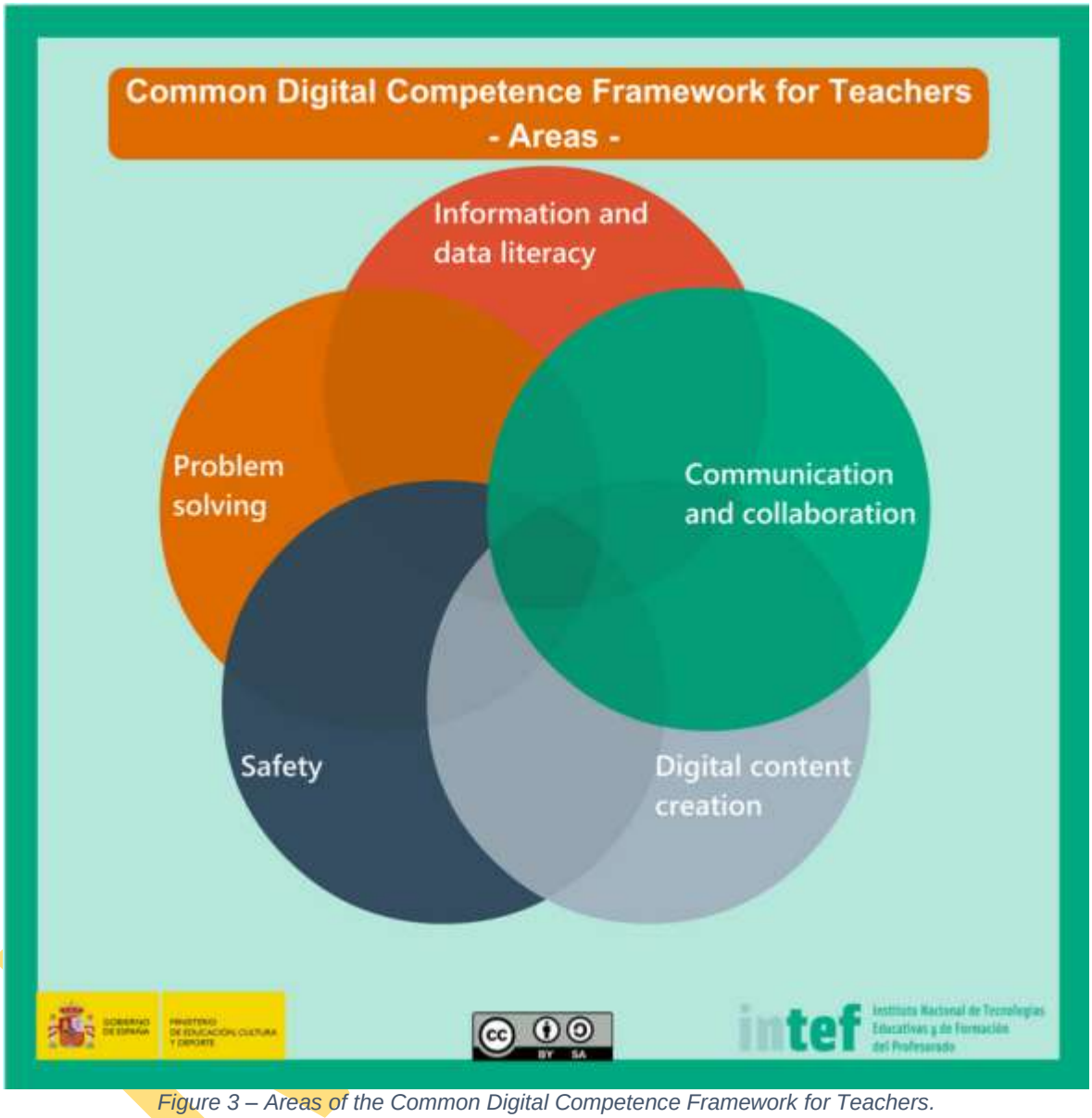

Figure 3 – Areas of the Common Digital Competence Framework for Teachers.

Area 1. Information and data literacy

Overview:

Identify, locate, retrieve, store, organize and analyze digital information, judging its relevance and purpose for teaching needs.

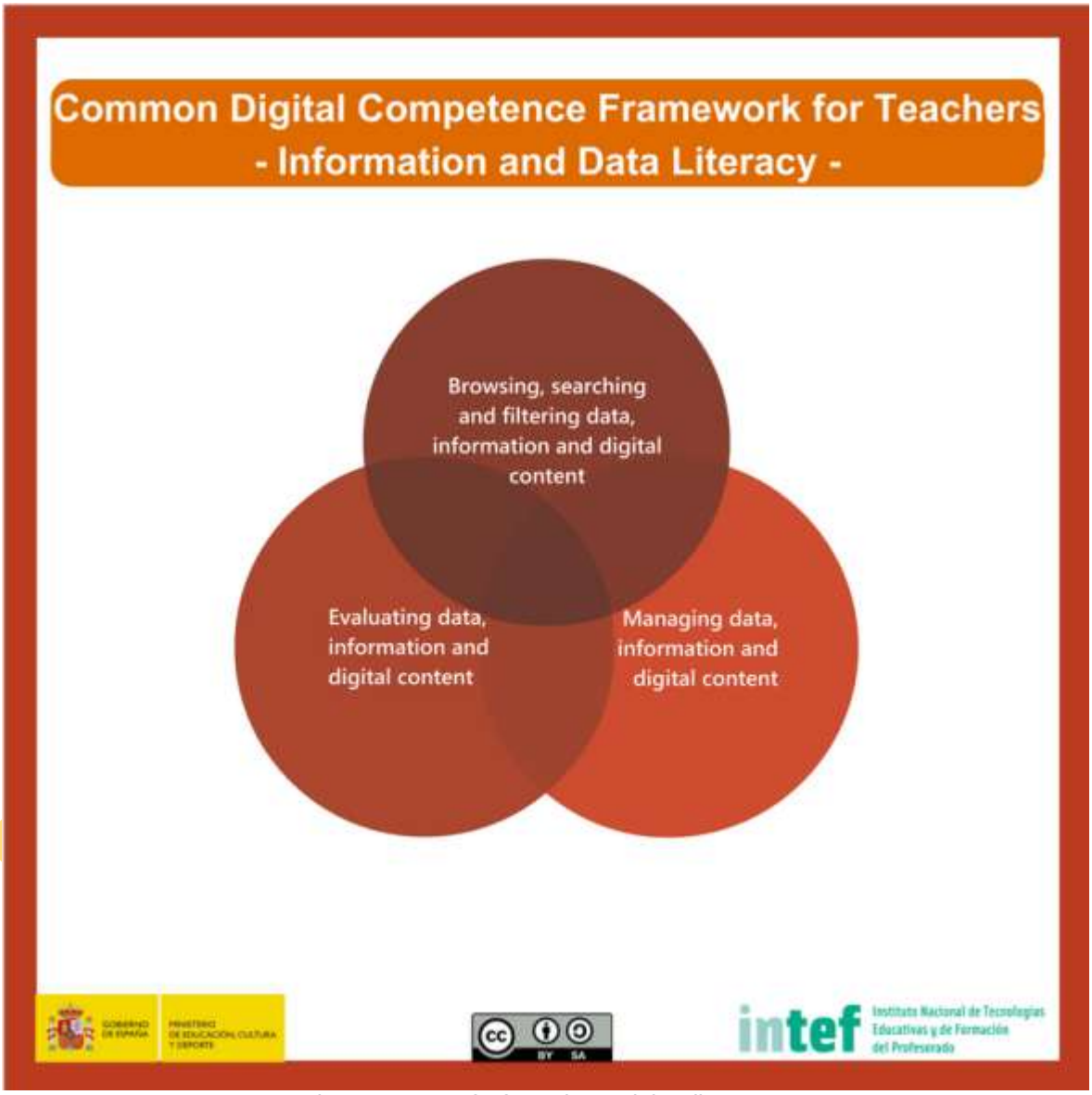

Figure 4 - Area of Information and data literacy.

Competences:

1.1. Browsing, searching and filtering data, information and digital content.

To access and search for online information, articulate information needs, find relevant information for teaching needs, select educational resources effectively, manage several sources of information, and create personal information strategies.

A - FOUNDATION	B- INTERMEDIATE	C- ADVANCED
I know that the net is a source of resources for teaching and I use it to find information, data and digital content. I know that the search results are different depending on the search engines.	I know how to browse the Internet to locate information and digital educational resources in different formats and dynamic sources of information relevant to my teaching. I express my information needs in an organized manner and I know how to select the most appropriate information I found and resources adapted for educational use.	I know how to use advanced search tools and filters to find appropriate information and resources regarding my educational needs. I am able to design a customized strategy for searching and filtering information, data and digital resources for continuous updating of resources, best practices and educational trends.

1.2. Evaluating data, information and digital content.

To collect, process, understand and assess information, data and digital content critically.

A - FOUNDATION	B- INTERMEDIATE	C- ADVANCED
I know that there is much information and educational resources on the Internet, but also that everything is unreliable and can be reused. I can make a basic assessment of the websites or resources before using them in the classroom by analyzing some data as the author, source or origin.	I know the use licenses which allow reuse or distribution of resources on the internet. I asses the quality of educational resources on the internet in terms of accuracy and alignment with the curriculum.	I am critical with sources of information, personal profiles that I follow and the communities to which I belong. I have a clear, effective and efficient procedure for evaluating information.

1.3. Managing data, information and digital content

To manage, store and organise information, data and digital content for easy retrieval.

A - FOUNDATION	B- INTERMEDIATE	C- ADVANCED
I have basic competences about storing digital information in my teaching. I am able to organize teaching resources, even though I am aware that I do not control all devices or possibilities for this.	I know how to save and tag files, content and information and have my own storage strategy. I know retrieving and managing information and content that I have saved.	I have a social strategy, connected to experts, colleagues and students through digital media, with appropriate methods to organize, store and retrieve information for educational use. I combine local storage with cloud storage, both to organize the digital information in the process of updating teaching, as in a classroom and at school level.

Area 2. Communication and collaboration

Overview:

To communicate in digital environments, share resources via online tools, connect and collaborate with others through digital tools, interact and participate in communities and networks; intercultural awareness.

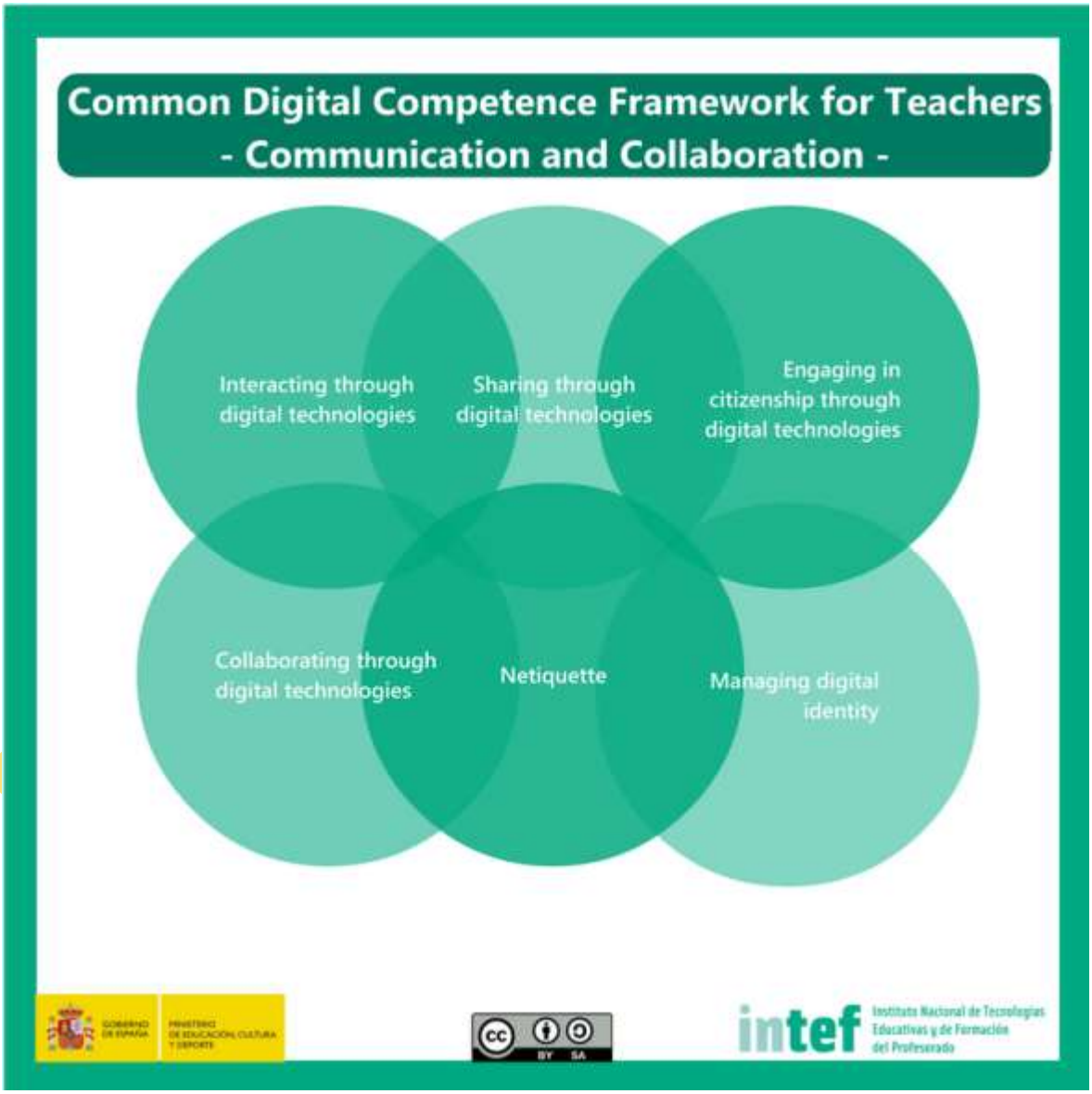

Figure 5 – Communication and collaboration area.

Competences:

2.1. Interacting through digital technologies

To interact through various digital devices and applications, understand how digital communication is distributed, presented and managed, understand the appropriate use of different forms of communication through digital media, see different communication formats, and adapt strategies and modes of communication to specific recipients.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I know that the net is a source of resources, applications and platforms for communication in general, and particularly with peers, students, families and educational administration. I Interact with others using the basic features of communication tools.	I communicate and interact smoothly across various applications and digital communication services both synchronously or asynchronously. I choose the appropriate tool for digital interaction based on my interests and needs as a teacher, as well as recipients of communication.	I use a wide range of applications and services of interaction and digital communication, with varied typology, and has a combined selection strategy to use them, which changes depending on the nature of the interaction and digital communication needed each time or that my partners needed.

2.2. Sharing information and digital content through digital technologies

To share the location of the information and the digital content found, be willing and able to share knowledge, content and resources, act as an intermediary, be proactive in the dissemination of news, content and resources, meet practices of citation and references and integrate new information into the body of the set of existing knowledge.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I share files and content through simple technological media.	I participate in social networks and online communities, where I transmit or share content, knowledge and information.	I actively share information, content and resources through online communities, networks and collaborative platforms.

2.3. Engaging in citizenship through digital technologies

To engage with society through online participation, search for technological opportunities for empowerment and self - development in terms of technology and digital environments, and be aware of the potential of technology for citizen participation.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I know that technology can be used to interact with different services and I make a passive use of some of them in the educational environment.	I actively use some intermediate aspects of online services for teaching (e.g. electronic offices, educational management systems, etc.).	I am a regular and active user for online communication and participation in any type of social, political, cultural, or administrative action I am a person who is involved and express my opinion in different educational virtual spaces (social networks, newspapers, discussion forums, etc.).

		I develop projects and activities to train students in digital citizenship.

2.4. Collaborating through digital technologies

To use technologies and media for teamwork, collaborative processes and for creating and building common resources, knowledge and content.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I collaborate, in a very simple way, using digital resources and applications that enable teamwork with other teachers for exchanging files or creating shared documents.	I discuss and develop educational products in collaboration with other teachers and my students, using various tools and through not very complex digital channels.	I am regular user of digital spaces for collaborative work with other teachers performing different functions: creation, management and / or participation. I confidently and proactively use various digital collaborative tools and media. I promote and facilitate the active participation of the educational community in digital collaborative spaces integrating them in my teaching.

2.4. Netiquette

To be familiar with the standards of conduct in online or virtual interactions, be conscious in relation to cultural diversity, being able to protect myself and others from possible dangers online, and develop active strategies for identifying inappropriate behavior.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I know the basic rules of access and behavior in social networks and communication channels in digital media. I am aware of the dangers and inadequate behavior in which Internet can affect my students, and the need for preventive education.	I have the skills to communicate digitally following and respecting the rules of netiquette and I am aware and respectful of cultural diversity in the scope of digital communication.	I apply various aspects of netiquette to different spaces and contexts of digital communication. I have developed strategies to identify inappropriate behavior online.

2.5. Managing digital identity

To create, adapt and manage one or more digital identities, be able to protect my own digital reputation and manage data generated through various accounts and applications used.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I know the benefits and risks associated with digital identity.	I know how to create my own digital identity and track my own	I manage different digital identities depending on the

	digital fingerprint. I manage data generated in several spaces with multiple accounts, and various digital channels.	context and purpose. I am able to monitor the information and data produced through my interaction online, and know how to protect myself and others' digital reputation.

Area 3. Digital content creation

Overview:

To create and edit new digital content, integrate and rebuild prior knowledge and content, make artistic productions, multimedia content and computer programming, and know how to apply intellectual property rights and licenses.

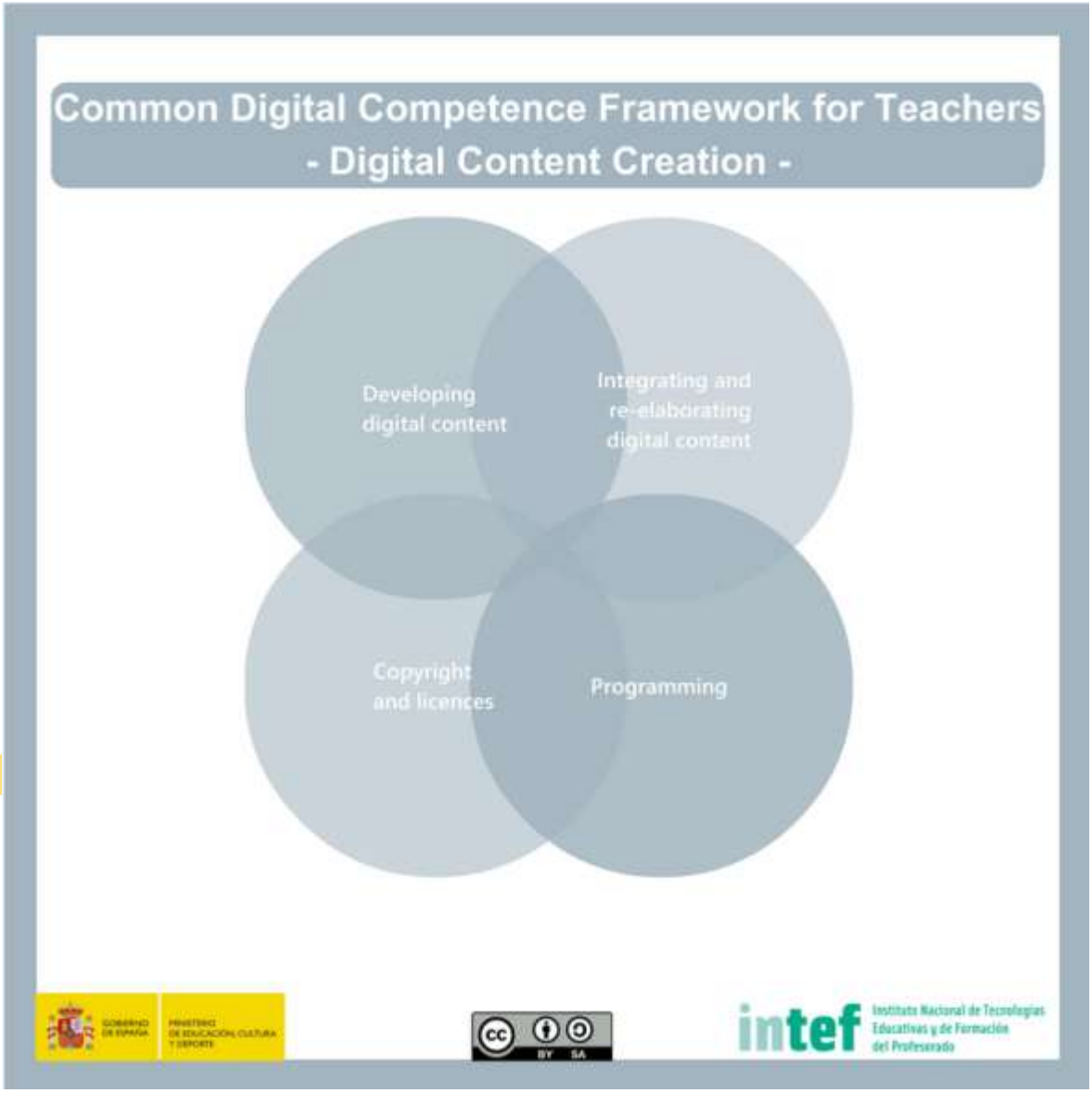

Figure 6 – Digital content creation.

Competences

3.1. Developing digital content

To create digital content in various formats, including multimedia content, edit and improve own content creation or others', and express themselves creatively through digital media and technologies.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I search, create, save and edit simple digital content.	I produce digital content in different formats, such as text documents, multimedia presentations, images, video or audio recordings, using online applications. I encourage this type of production among the student population.	I create online digital teaching materials in a wide range of formats and publish them in varied digital spaces (blog format, interactive activity, Web site, virtual classroom, etc.). I develop digital educational projects that involve the educational community to be the protagonists of the development of digital content in various formats and expressive languages.

3.2. Integrating and re-elaborating digital content

To modify, refine, improve and combine existing resources to create digital content and new, original and relevant knowledge.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I am aware that the Internet is a huge library of resources that can be reused for educational purposes. I search and select online resources and digital objects for educational purposes, I organize them into a personal digital space and make simple modifications.	I know and use online resource repositories, libraries and material from both general and educational purposes. I modify and adapt my own resources or others' to adapt them to my students' learning needs.	I prepare activities, materials and educational resources from the juxtaposition or mixing of digital objects from different online spaces, both from myself and from other authors. I generate my own teaching-learning spaces in virtual environments and insert different digital objects.

3.3. Copyright and licenses

To understand how copyright and licenses are applied to information and digital content.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I am aware that some content distributed on the Internet are copyrighted. I respect copyright both to access and download files.	I know the basic differences between open and privative licenses and how they affect to digital content. I develop classroom tasks and activities to train and educate my	I learn how different types of licenses are applied to information and resources that I create. I develop educational projects for my students to publish their

	students regarding to copyright of distributed content on the Internet.	content with open access licenses.

3.4. Programming

To make modifications to software, applications, settings, programs, devices, understand the principles of programming, and understand what lies behind a program.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I know the concepts and basics of computing and mobile technology in education. I modify some simple software functions and applications, in a basic configuration level.	I make several modifications to educational computer programming applications to suit the learning needs of my students with respect to computational thinking.	I modify open source software. I have advanced knowledge of the basics of programming and I write source code. I often plan and develop educational projects involving my students modifying and developing applications, generating games or creating standalone machines.

Area 4. Safety

Overview:

Protection of personal information and data, digital identity protection, digital content protection, security measures, responsible and safe use.

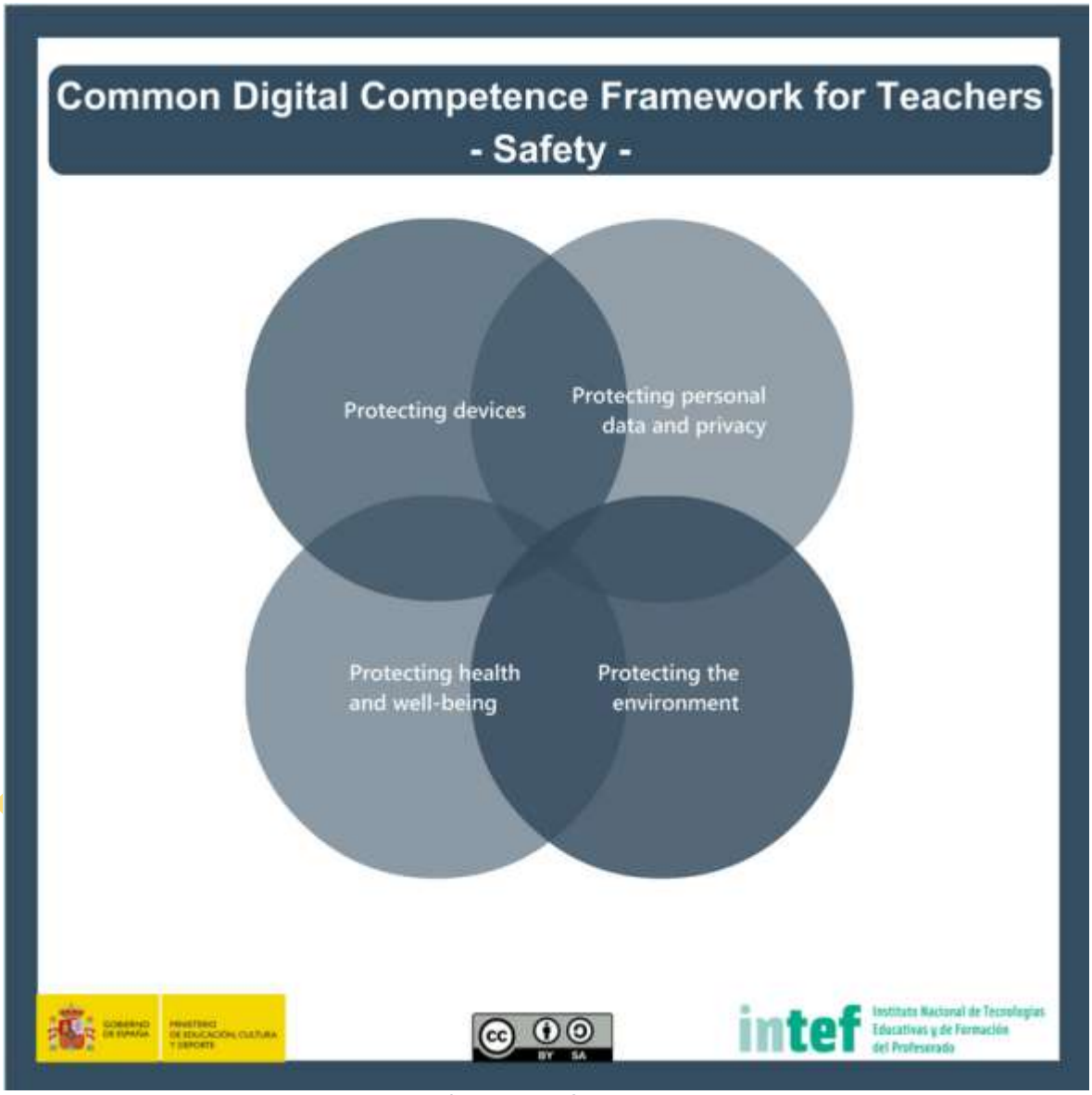

Figure 7 – Safety area.

Competences:

4.1. Protecting devices

To protect personal devices and digital content, understand the risks and threats online and know safety measures.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I perform basic actions to protect various digital devices that I use (passwords, install antivirus software, battery charging, etc.). I set up safety measures on owned and saved content both in my devices and online.	I search for information and I update my knowledge about digital dangers in my devices. I properly manage the safety measures of the technology that I use for teaching and for the learning process of my students.	I check, test and update my digital devices to identify vulnerabilities or operating failures and seek appropriate solutions. I have strategies for action on device safety and protection with the educational community.

4.2. Protecting personal data and privacy

To understand the usual terms of use of software and digital services, actively protect personal data, respect the privacy of others, and protect myself from threats, fraud and cyberbullying.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I am aware that in online environments I can share only certain types of information about myself and others.	I know how to protect my own and others privacy online. I generally understand issues related to privacy and have a basic understanding of how the data is collected and used. I create digital educational activities on protection of personal data.	I often change the default privacy settings of online services to improve my privacy protection. I have extensive knowledge about privacy issues and know how to collect and use my data. I develop educational projects designed to train students in the habits of digital protection and the respect for the privacy of others.

4.3. Protecting health and well-being

To avoid health risks related to the use of technology in terms of threats to the physical safety and psychological well-being.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I know that technology can affect my health if misused.	I know how to protect themselves and others from cyberbullying. I understand the health risks associated with the use of technologies (from ergonomic aspects to addiction to technologies).	I am aware of the proper use of technologies to avoid health problems. I know how to find a good balance between the online world and the traditional world.

4.4. Protecting the environment

To take into account the impact of technology on the environment.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I know how to reduce energy consumption in the use of digital devices and have available information about the environmental problems associated with their manufacture, use and disposal.	I have informed opinions about the positive and negative aspects of the use of technology on the environment and know how to optimize the use of the devices.	I organize strategies for efficient uses of digital devices and I make decisions about the purchase and proper disposal of such devices, according to educational activities carried out with them.

Area 5. Problem solving

Overview:

Identify needs in the use of digital resources, make informed decisions about the most appropriate digital tool depending on the purpose or need, solve conceptual problems through digital media or digital tools, use technology creatively, solve technical problems, and upgrade my competence and of others.

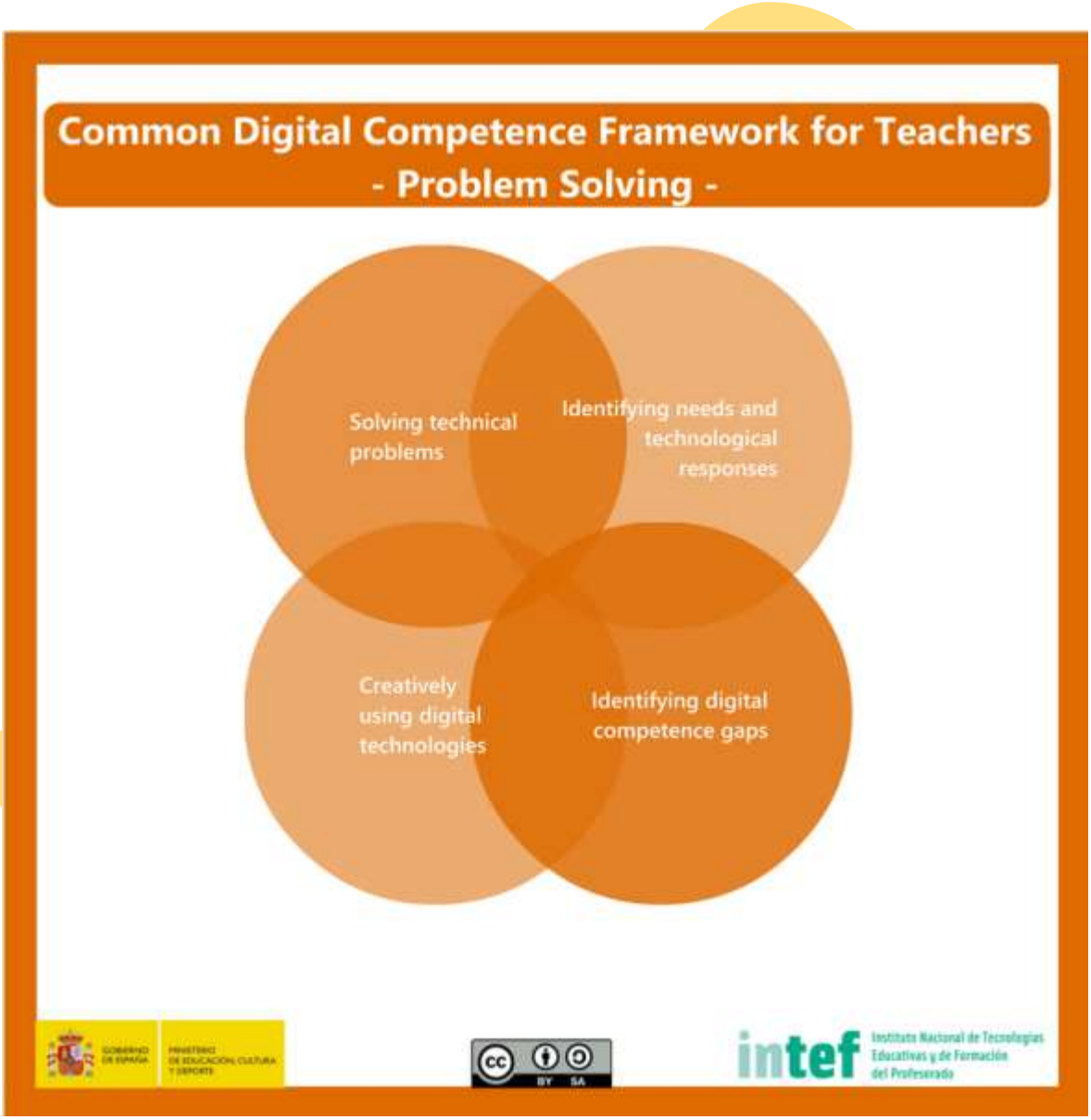

Figure 8 – Problem solving area.

Competences:

5.1. Solving technical problems

To identify possible technical problems and solve them (from basic troubleshooting to solving more complex problems).

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I know the features of the devices, tools, environments and digital services used regularly in my work as a teacher and I am able to identify a technical problem explaining clearly what is the cause of the malfunction.	I solve noncomplex technical problems related to common devices and digital environments in my professional tasks with the help of manuals or technical information available.	I have a sufficiently advanced knowledge of the features of devices, digital tools and environments used and I can autonomously solve technical problems as they arise. I help other members of the educational community and collaborate with them to solve technical problems in the routine use of devices, tools and digital environments. I use collaborative learning spaces and participate in communities to find solutions to technical problems.

5.2. Identifying needs and technological responses

To assess and identify own needs, to assess, select and use digital tools and give possible technological responses to solve them.To adjust and customise digital environments to personal needs.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I use some digital tools and resources to meet learning needs and solve technological problems related to my usual teaching. I make decisions when choosing a digital tool for teaching as a routine activity.	I critically assess the different possible environments, tools and services offered to solve technological problems related to my teaching work and select the most appropriate solution to the needs in every moment.	I make informed decisions when choosing a tool, device, application, program or service for a task with which I am unfamiliar. I stay informed and updated about new technological developments. I understand how the new tools work and I am able to critically assess which tool fits best with my teaching and learning goals.

5.3. Creatively using digital technologies

To innovate using digital technology, actively participate in collaborative digital multimedia productions, express themselves creatively through digital media and technologies, generate knowledge, and solve conceptual problems with the help of digital tools.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I know I can use digital technologies in my usual professional work to seek alternative and innovative solutions that facilitate learning tasks. I often use them creatively.	I use digital technologies to analyze needs in my daily work, managing innovative solutions, create products and participate in creative projects, adapting and complementing dynamically digital media offered by my organization to my teaching duties, but I do not take the initiative.	I know a wide range of creative and innovative ways to use digital technologies to apply them in teaching and I creatively update them according to the evolution of digital media and learning needs. I actively participate in professional communities of teaching practices that share creative and innovative educational initiatives in the use of digital media, and disseminate best practices and initiatives in the educational community.

5.4. Identifying digital competence gaps

To understand the needs for improvement and updating of the own competence, support others in developing their own digital competence, and keep up-to-date with new developments.

A - FOUNDATION	B - INTERMEDIATE	C - ADVANCED
I Identify the weaknesses of students in the use of digital media for learning as well as my own weaknesses concerning the use of technology.	I search, explore and experiment with emerging digital technologies that help me to stay updated and cover possible gaps in the digital competence needed for teaching and professional development.	I organize my own system of updating and learning, and I make changes and methodological adaptations for continuous improvement of the educational use of digital media, which I share with the educational community, supporting others in the development of their digital competence.

B) Development of descriptors in six competence levels

Area 1: Information and data literacy: Identify, locate, retrieve, store, organize and analyze digital information, judging its relevance and purpose to the teaching needs.					
Competence 1.1. Browsing, searching and filtering data, information and digital content: To access and search for online information, articulate information needs, find relevant information for teaching needs, select educational resources effectively, manage several sources of information, and create personal information strategies.					
Levels					
A- FOUNDATION: I know that the net is a source of resources for teaching and I use it to find information, data and digital content. I know that the search results are different depending on the search engines.		**B- INTERMEDIATE:** I know how to browse the Internet to locate information and digital educational resources in different formats and dynamic sources of information relevant to my teaching. I express my information needs in an organized manner and I know how to select the most appropriate information and resources adapted for educational use.		**C- ADVANCED:** I know how to use advanced search tools and filters to find appropriate information and resources regarding my educational needs. I am able to design a customized strategy for searching and filtering information, data and digital resources for continuous updating of resources, best practices and educational trends.	
Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I understand that Internet is a good source of information and I resort to it to find any educational resource.	I use the Internet to find information, resources and tools for teaching.	I use tools for marking and labeling information relevant to my teaching.	I use filtering tools to select different types of resources and find information in different digital media devices that I afterward adapt for my classrooms.	I frequently use advanced search tools and filters to find information and teaching resources in various formats to implement them in my classroom	I know how to design and apply a customized search strategy and filter information for updating resources, best practices and educational trends.
I use e-mail to obtain information relative to my school.	I share information and resources with my fellow teachers incorporating links to emails or attaching files in different formats.	I know the websites where teachers find useful information, and sometimes seek and explore to find new portals.	I can use RSS feeds and subscriptions for easier access to information as well as managing these flows of information to update my teaching.	I know how to identify online resources to incorporate them into my teaching, and I develop a personal PLE with the best sites I know to easily access the information that is valuable for my teaching.	I elaborate and participate in networking with other teachers to share resources and information useful in teaching practices.
I know that there are different types of search engines and websites where I can find educational resources.	I consult the bulletin board and news on the web or blog of the educational center to which I belong.	I know how to browse Internet to locate information and educational resources in different formats and sources of information.	I surf the Internet and share resources and information relevant with my fellow teachers in my workplace.	I use tools in class to find and filter the data and information flow on the Internet.	I select and adapt various resources and information I find to meet the needs of my students and the curriculum.
I understand that on the Internet I can find lots of information and resources for the classroom and I access to recommended web portals.	I surf on the web by clicking from a link to another looking for resources of different characteristics.	When I ask the students to seek information on the Internet, I recommend them places to search (search engines, repositories, specialized websites, etc.).	I am able to modify the search for information based on the results, strategies variables to get the results I need for my teaching.	I know how to analyze the information and resources I find on the internet to filter them according to the source, origin, copyright licenses and purpose for my teaching.	I identify not only resources but also good practices on Internet to incorporate them into my daily professional activity.
I know how to search the information I need in the inbox of my email.	I use keywords in different search engines and portals to access information.	I search for information using keywords to limit the number of results.	I introduce specific vocabulary, sometimes in other languages, and vocabulary and symbols combinations to find relevant information in different search	I always find on Internet what I need through search engines, filters and thanks to the participation in educational communities.	I search and filter information, resources and educational experiences useful in teaching communities in which I

			tools for my teaching practice.		participate.
Competence1.2. Evaluating data, information and digital content: To collect, process, understand and assess information, data and digital content critically.					
Levels					
A- FOUNDATION: I know that there is a lot of information and educational resources on the Internet, but also that everything is unreliable and can be reused. I can make a basic assessment of the websites or resources before using them in the classroom by analyzing some data as the author, source or origin.		**B- INTERMEDIATE:** I know the use of licenses which allow reuse or distribution of resources on the internet. I asses the quality of educational resources on the internet in terms of accuracy and alignment with the curriculum.		**C- ADVANCED:** I am critical with sources of information, personal profiles that I follow and the communities to which I belong. I have a clear, effective and efficient procedure for evaluating information.	
Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I know that there is a lot of information and teaching resources accessible through search engines.	I know some web portals where to find resources and information, and I once cursory analyzed them to be used in the classroom.	I maintain a critical attitude towards the information and educational resources on Internet before putting them into practice.	I assess the quality of the educational resources found on Internet in terms of accuracy and alignment with the curriculum.	I participate in educational communities to access information previously filtered and assessed by their members, which I then analyze and assess in depth.	I often visit different social spaces where I follow profiles of experts and professionals that share interests, which I value critically.
I understand that it is necessary to compare sources of information and educational resources found on the Internet.	I often delegate the evaluation of information on experts that I follow on social networks, using the resources they share.	I am able to choose the most appropriate response to my professional needs among various sources.	I analyze the origin, reliability, authorship and license use of the resources online meeting before using them in my teaching.	I work with my students the critical analysis of resources and information sources available on Internet.	I maintain a critical attitude to sources and personal profiles that I follow on social networks and educational communities, and I share this attitude with my students.
When I search for online resources I take a moment to check their origin and authorship.	When I find resources on Internet, I assess their value and interest and I attempt to select the most appropriate depending on its origin, format and other data.	I assess the usefulness, accuracy and completeness of the information I found for my teaching.	I analyze and assess the experiences I find on Internet from other schools and teachers to incorporate them into my classroom.	I assess the adequacy of resources I find to the curriculum, discussing them with other members of my virtual teaching staff to exchange opinions and experiences.	I have a well-defined strategy which combines technological and non-technological resources to assess information, optimizing the time I spend on this activity.
I perform, on occasion, searches of educational resources on the official web portal of the Ministry of Education and Departments.	I perform, with some regularity, searches of educational resources on the official web portal of the Ministry of Education and Departments.	I compare, contrast and integrate regular information from different sources as suited to use it in my classroom.	I know the licenses that allow reuse and dissemination of resources on Internet and try to use free to use resources in my teaching practice.	I am constantly aware of the importance of licenses when choosing any content to use in the classroom.	When I produce content I share online, I worry about choosing a license that fits the type of content and recipients to which it is addressed.

I value the usefulness of the resources I find on Internet for my teaching.	I appreciate and assess the adequacy of the resources I find on the Internet to the curriculum.	I assess the adequacy to the curriculum of the resources I find discussing them with my staff to exchange opinions and experiences.	I subscribe to mailing lists of web portals that regularly send information and resources useful for my teaching practice, and I analyze and assess them.	I participate in some space or teaching network that reports on quality educational resources and then I assess and bring them to the classroom.	I develop training for other teachers about the evaluation criteria of the quality of educational resources on Internet.

Competence 1.3. Managing data, information and digital content: To manage and store information, data and digital content for easy retrieval.

Levels

A- FOUNDATION: I have a basic competence about storing digital information in my teaching. I am able to organize teaching resources, even though I am aware that I do not control all devices or possibilities for this.	**B- INTERMEDIATE:** I know how to save and tag files, content and information and have my own storage strategy. I know how to retrieve and manage information and content that I have saved.	**C- ADVANCED:** I have a social strategy, connected to experts, colleagues and students through digital media, with appropriate methods to organize, store and retrieve information for educational use. I combine local storage with cloud storage, both to organize the digital information in the process of updating teaching, as in a classroom and at school level.

Descriptors

A1	A2	B1	B2	C1	C2
I do not know the storage systems of all devices that I use regularly.	I understand how information is stored on different devices and I use some of them for my learning needs	Before storing interesting content for my teaching, I consider if I will store it publicly or privately.	I create a copy of the files I need before storing interesting content either publicly or privately.	I understand the benefits and risks of local and online storage, trying to share this information with the rest of my teaching staff and students.	Both students and teachers have services to store digital content that we create in the center as a result of the learning process.
I know who to turn to if I am not able to retrieve information stored in a device, whether personal or property of the educational institution..	I know there are online tools to save and organize information in different formats, but I have not used them.	I have a profile with available space in a storage system in the cloud, and sometimes I store some files there.	I try to store online those documents or files that have been completed in order to use them in the future if needed.	I use applications and extensions installed on my browser to label and store resources in cloud services.	I have a strategy of use for both local and online storage that I share with my students and my virtual teaching staff.
I store the resources that are of interest to me for the class locally, in folders on my computer.	I am aware that it is possible to store messages in the email, although it is not a common practice for me.	If I am away from home and I open a work email, which I want to carefully review at home, I mark it as "unread".	I use filters and labels in the email to organize and retrieve more effectively the information I need.	I use various web services to manage my reading lists, thus favoring my access to information and the update to my teaching practices.	I know that quite often web applications have a desktop version if the device malfunctions.

I organize information into folders in my computer, but I know I could do it more efficiently to retrieve the information later.	I do not usually transfer files between mobile devices, and if I do it, the only option I have is to send them by email.	I use and dispose devices and portable external storage units that allow me to transfer files from one device to another in the event of an Internet connection failure.	When I work with the devices at my workplace, I store everything I produce or download in my external drive.	One of my favourite tools is the cloud storage that I use to share documents of all kinds with my educational center and students.	I select the information that may be of interest to the educational community and I store it generally using social services.
I once have accidentally deleted an educational resource of my interest, but I have been able to restore it from the bin.	I am aware that I can back up my files to avoid losing them by mistake, but I do not usually do it.	I sometimes receive compressed files and I have managed to open them with a few difficulties.	I am aware of the importance of compressing files to optimize storage space as each course generates a lot of digital content during classwork.	When a school activity generates multimedia material, photographs or videos, I store those files in the cloud.	I use various connectivity technologies for transferring files and information between devices.

Area 2. Communication and Collaboration: To communicate in digital environments, share resources via online tools, connect and collaborate with others through digital tools, interact and participate in communities and networks; intercultural awareness.

Competence 2.1 Interacting through digital technologies: To interact through various digital devices and applications, understand how digital communication is distributed, presented and managed through, understand the appropriate use of different forms of communication through digital media, see different communication formats, and adapt strategies and modes of communication to specific recipients.

Levels

A- FOUNDATION: I know that the net is a source of resources, applications and platforms for communication in general, and particularly with peers, students, families and educational administration. I Interact with others using the basic features of communication tools.	**B- INTERMEDIATE:** I communicate and interact smoothly across various applications and digital communication services both synchronously or asynchronously. I choose the appropriate tool for digital interaction based on my interests and needs as a teacher, as well as recipients of communication.	**C- ADVANCED:** I use a wide range of applications and services of interaction and digital communication, with varied typology, and has a combined selection strategy to use them, which changes depending on the nature of the interaction and digital communication needed each time or that my partners needed.

Descriptors

A1	A2	B1	B2	C1	C2
I have at least an email account that I check several times a week both for sending and receiving messages.	I quite frequently check my email to receive messages from a professional context (educational administration, school management, other teachers, etc.).	I often check information from my professional context and I post comments on educational social networks occasionally and publicly.	I often check information from my professional context and often comment on educational social networks publicly.	I always communicate with my students and their families via email or by using any social network.	I am permanently connected and I interact socially with my students, their families and my peers through different online communication services.
I check my accounts at least once a week to receive messages from my	I share information and resources with my fellow teachers by e-mail which	I frequently send and receive information and files from my fellow teachers by e-mail or	I send, upload and download different file formats made by me to different audiences	I created a specific group for my students in a social network for them to	I create and manage communication networks between groups of teachers for

educational institution and my fellow teachers.	include links or attached files in different formats.	any social network.	and in different media.	communicate with me and among themselves constantly.	professional development.
I use my accounts in one or two social networks at least weekly.	I frequently access social networks where I have an account, but I do not actively participate in them.	I am registered in specialized educational social networks, but I participate very little in them.	I communicate frequently with my students and their families via email or any social network.	I have created a specific group or community for my students in a social network and I ask them to do learning activities involving the use of forums and social networks.	I organize classroom or school projects, tasks and activities involving the use of social networks for collaborative work among students, classrooms and institutions.
I own and use instant messaging services several times a week.	I have an account on multiple instant messaging services that use daily for private and professional purposes.	I know how to disseminate information or a received message in an instant messaging service or in a social network either public or private.	I select the communication tool or application most appropriate according to my recipients (whether they are students, teachers, families, administration, etc.)	I use a communication strategy adressed to each audience both in real-time and non-real-time.	I design a personalized communication strategy combining multiple applications and platforms, depending on the nature of the training activity developed.
I value positively the potential of Internet as a communication tool.	I like being connected and exchanging messages, information and files with other users.	I am aware that what matters is communication between people, not the tool or application used.	I am amazed by the number and variety of tools and applications that exist for online communication and I use each one depending on my teaching objectives.	I search and test new applications and online communication tools always with the aim and motivation to improve teaching-learning processes.	I keep myself up-to-date and I encourage the development of intercultural values in students through the use of services and applications of digital communication.
Competence 2.2. Sharing through digital technologies: To share the location of the information and the digital content found, be willing and able to share knowledge, content and resources, act as an intermediary, be proactive in the dissemination of news, content and resources, meet practices of citation and references and integrate new information into the body of the set of existing knowledge.					
Levels					
A- FOUNDATION: I share files and content through simple technological media.		**B- INTERMEDIATE:** I participate in social networks and online communities, where I transmit or share content, knowledge and information.		**C- ADVANCED:** I actively share information, content and resources through online communities, networks and collaborative platforms.	
Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I write and send information in digital communication environments.	I forward information received in digital environments to either a person or a group incorporating comments.	I often use specific communication mechanisms in social networks in which I participate.	I am a user who frequently redistributes information considered relevant in different social networks as a content curator.	I create files and documents online and share them in digital channels with specific individuals providing different user roles (edit, read, comment).	I regularly publish information with relevant educational content in social networks.
I use the Internet to access	I share links to documents or	I easily access files and	I follow teachers and experts	I encourage my fellow	I critically analyze, assess and

information and educational resources that other teachers shared with me.	files in order to distribute them in online spaces.	documents that have been shared with me in a restricted online space.	who frequently share information of educational interest in Internet and I spread it.	teachers and my students to assess, distribute and disseminate valuable educational information in digital media.	value the information I have access to in digital media and then redistribute it and spread it among my followers and the people I follow.
I establish communicative interactions in virtual spaces.	I share knowledge in online spaces with a reduced number of fellow teachers.	I distribute and forward messages, photos, videos, links and other information on the social networks in which I participate frequently.	I am aware of the cultural diversity in online communication and I am respectful at the same time to spread and share information and digital content.	I regularly forward and distribute messages, news or links that I consider to have educational interest in social networks in which I participate.	I keep a critical attitude with the sources and personal profiles I follow in social spaces or educational communities.
I know how to share data, files or information online with a person or group.	I share information and resources with my colleagues via Internet.	I have some contacts that sometimes redistribute my messages and files on Internet	I always assess the interest and relevance of an information or link before distributing it.	I regularly share information and resources with others via Internet.	I collaborate via Internet with a large number of colleagues to form a personal learning network (PLN).
I use Internet occasionally to work collaboratively with other teachers.	I use online spaces for collaborative work with my fellow teachers.	I am a user who sometimes writes reviews and post messages on social networks.	I regularly use online spaces to share resources and post messages on social networks.	I collaborate and share relevant content for my extensive educational community of followers.	I select, filter and share relevant content for my extensive educational community of followers.
I have an open account in applications that allows me to work collaboratively on the same file or document.	I use applications to work collaboratively on the same file or document.	I access my applications and share them with my colleagues.	I have a personal online space for publication dedicated to education in which I seldom write.	I establish professional and friendly ties with some people whom I interact with almost every day through technology.	I make use of various services and spaces on Internet where, as curator of content, I often publish news and information about public education.
Competence 2.3. Engaging in citizenship through digital technologies: To engage with society through online participation, search for technological opportunities for empowerment and self - development in terms of technology and digital environments, and be aware of the potential of technology for citizen participation.					
Levels					
A- FOUNDATION: I know that technology can be used to interact with different services and I make a passive use of some of them in the educational environment.		**B- INTERMEDIATE:** I actively use some intermediate aspects of online services for teaching (e.g. electronic offices, educational management systems, etc.).		**C- ADVANCED:** I am a regular and active user for online communication and participation in any type of social, political, cultural, or administrative action I am a committed person and express my opinion in different educational virtual spaces (social networks, newspapers, discussion forums, etc.).	

				I develop projects and activities to train students in digital citizenship.	
Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I am registered to access my data online as a teacher at my school or educational administration, but I rarely access it.	I access my data online as a teacher at my school or educational administration.	I know and use the different access online to check my data as teachers at my schools and / or educational administration.	I often make online arrangements of various kinds and services related to my teaching practice.	I participate actively in virtual spaces related to digital citizenship that are useful for my teaching and to my teaching-learning process.	I cooperate actively with other professionals in virtual spaces, related to digital citizenship and closely linked to teaching and teaching-learning processes.
I am aware that Internet allows me to make arrangements with the educational administration.	I am in possession of my personal digital signature.	I make use of my digital signature to handle educational administrative services.	I usually get involved with public services for some aspects of my teaching through digital environments that are at my disposal as a citizen.	I perform activities in the classroom to work with my students the operation of the online economy, e-government and digital citizenship.	I organize educational projects and encourage my students to participate and express themselves properly as citizens in digital spaces.
I know websites that inform or offer recommendations on applications and educational resources.	I use websites that inform or offer recommendations on applications and educational resources.	I search and read documents, articles, reports about trends and educational uses of ICT to improve my teaching practice.	I participate in web spaces (newspapers, associations, thematic search engines, etc.) where, on occasion, I publish opinions about my experience as a citizen and professional teacher.	I develop educational activities to make my students aware of their rights and obligations as citizens of the digital society.	I develop and participate in educational projects with other professionals in my school or others aimed at developing student's digital citizen awareness and competence and intercultural values.
I access some applications for educational administrative procedures.	I know existing applications or plugins to perform educational administrative procedures online with my digital devices.	I use digital devices to perform educational administrative procedures online.	I continually use my digital devices to perform educational administrative procedures online.	I suggest classroom and / or institution activities where students are the protagonists of their own learning in relation to digital citizenship.	I am an active member of an association or online network of teachers, in which I actively participate and in which I spread educational projects related to digital citizenship.
Competence 2.4. Collaborating through digital technologies: To use technologies and media for teamwork, collaborative processes and for creating and building common resources, knowledge and content.					
Levels					
A- FOUNDATION: I collaborate, in a very simple way, using digital resources and applications that enable teamwork with other teachers for exchanging files or creating shared		**B- INTERMEDIATE:** I discuss and develop educational products in collaboration with other teachers and my students, using various tools and through not so complex digital		**C- ADVANCED:** I am a regular user of digital spaces for collaborative work with other teachers performing different functions: creation, management and / or participation.	

documents.		channels.		I confidently and proactively use various digital collaborative tools and media. I promote and facilitate the active participation of the educational community in digital collaborative spaces integrating them in my teaching.	
Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I am aware that via Internet I can develop group tasks for people who are physically or temporally away.	I have an account in various applications and online collaborative workspaces but I use them sparingly.	I access to collaborative documents and online spaces applications without difficulties.	I often participate in online spaces or shared online documents to which I am invited.	I grant different roles (editing, reading, and commenting) to users that I invite to online collaborative spaces.	I search, try and constantly experiment new applications or collaborative work resources that have potential for my teaching or for collaboration with other colleagues.
I have participated at some time in an online space to which I received a link to enter or download a file.	I have accessed on several occasions documents or shared spaces to which I have been invited, but without editing them.	I have occasionaly created a document or file in an online space and I have shared it with other users.	I often use shared web spaces both as a creator and editor to work with my fellow teachers.	I present classroom projects and activities to my students involving collaborative work using online tools.	I participate with my students in educational projects involving online collaboration with other educational institutions.
I can send and receive attached files and folders through applications and services to exchange them with other teachers.	I have occasionally participated, in online discussions through applications or tools like forums, chats or videoconferences.	I have participated at least once in the process of creating or reviewing documents and folders through online spaces for the development of collaborative educational projects.	I organize activities to stimulate my students' use of online resources for collaborative work.	I consider relevant to encourage the development of intercultural awareness and values in students when working on shared digital spaces.	I plan and put into practice in the classroom tasks and activities so that students learn and experience various tools of collaborative networking.
I know that there are documents or shared spaces that I can be invited to by others to collaborate.	I am able to download or upload files to online spaces (virtual hard disks, public file sharing systems and similar, etc.).	I have accessed a shared document to add comments.	I have accessed a shared document to view and track the history of the different versions of the same document.	I create and share documents; I give read or edit permissions and help my colleagues on how to perform these actions.	I control, share and apply different documents online to work with my other colleagues.
I still feel some uncertainty about the applications and online collaborative spaces.	With the help of my teammates I am starting to feel safer with applications and online collaborative spaces.	Every time I feel more confident and secure when I use applications and collaborative online spaces.	I feel safe and confident when using applications and collaborative online spaces.	I really like online collaboration and I am always encouraging and training my colleagues and students about it.	I love everything about online peer collaboration and I help my colleagues and students to feel safe when doing so.

Competence 2.5. Netiquette: To be familiar with the standards of conduct in online or virtual interactions, be conscious in relation to cultural diversity, being able to protect myself and others from possible dangers online, and develop active strategies for identifying inappropriate behavior.					
Levels					
A- FOUNDATION: I know the basic rules of access and behavior in social networks and communication channels in digital media. I am aware of the dangers and inadequate behavior in which Internet can affect my students, and the need for preventive education.		**B- INTERMEDIATE:** I have the skills to communicate digitally following and respecting the rules of netiquette and I am aware and respectful of cultural diversity in the scope of digital communication.		**C- ADVANCED:** I apply various aspects of netiquette to different spaces and contexts of digital communication. I have developed strategies to identify inappropriate behavior online.	
Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I know and use some written or iconic rules or conventions of communication between Internet users.	I am aware that there are rules or conventions in online writing and communication.	Before sending a message intented for online communication, I reread and reflect on whether to send it to my recipient.	I consciously and selectively use emoticons and symbols to reinforce my messages	I collaborate with my students and my colleagues to graphically reinforce my messages.	I consciously handle the different rules for writing and communication in online contexts.
I am aware that there are dangers derived from Internet use.	I know the terms of spam, cyberbullying and others but in a very general way.	I define and characterize the various misuses of Internet and its negative effects on children and youth.	I read digital information on the issue of harassment and perverse uses of Internet to be updated.	I have information on how to detect and act if a case of cyberbullying among my students arises.	I have organized in my center an educational project aimed at training and alerting students about the abuses and misuses of the Internet.
I know there are cases of harassment and abuse among young people on Internet.	I know the problems about cyberbullying and I am being trained to address potential problems.	I share and discuss news on real cases of cyberbullying and online harassment in class with my students.	I select and share with my fellow teachers guides and documentation about the dangers and perverse uses of the Internet.	I have planned and developed training sessions on netiquette, cyberbullying and other abuses on the Internet with my students.	I am able to identify and act upon any case of cyberbullying that may arise among students in my class.
I try to write my messages respectfully without offending others.	I know there is a variety of smileys and gifs and I sometimes use them.	I know the existence of emoticons and I occasionally have used them in my messages.	I raise class discussions about activities around netiquette and conduct.	I apply different existing ways that exist to relate and address each other correctly.	I control and apply the correct protocols on netiquette and collaborate with my colleagues to improve them.
I am aware that, in certain social situations, I must silence or disconnect my digital devices.	I never use words or images that may be offensive or misinterpreted by recipients of my messages.	I know the basic rules of education when I communicate with my peers.	I avoid using words, phrases, images or videos that could be sexist, racist or discriminatory in any way.	I am involved in the development of educational programs for the use of netiquette in children and youth.	I organize educational activities and projects to develop intercultural awareness and respect among students.
It bothers me when I receive or read messages where	I feel discomfort and rejection of any kind of	When I feel discomfort or rejection I try to change	I consider relevant to teach my students to learn how to	I understand that there are types of discrimination,	I actively collaborate with my colleagues without making

netiquette is attended.	discrimination, harassment or improper use of technology.	things.	consciously disconnect from technology.	harassment or perverse use of technology and I do activities with students to solve those problems.	discrimination, harassment or improper use of technology.
Competence 2.6. Managing digital identity: To create, adapt and manage one or more digital identities, be able to protect my own digital reputation and manage data generated through various accounts and applications used.					
Levels					
A- FOUNDATION: I know the benefits and risks associated with digital identity.		**B- INTERMEDIATE:** I know how to create my own digital identity and track my own digital fingerprint. I manage data generated in several spaces with multiple accounts, and various digital channels.		**C- ADVANCED:** I manage different digital identities depending on the context and purpose. I am able to monitor the information and data produced through my interaction online, and know how to protect myself and others' digital reputation.	
Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I have created accounts on different services, platforms and Internet applications safely	I know and understand the concept of digital identity and I apply it when browsing Internet.	I am aware that the image others have of me is shaped by what I write or publish on social networks.	I use the same username that identifies me as the same person in different services or social networks.	I know and can define the concept of digital reputation.	I value relevantly and care about the image or reputation that I show in the digital networks and online spaces in which I participate.
I have safe strategies to preserve safety in the various online services I use (e.g., I avoid matching the password and username).	I generate keys or passwords that combine numbers, signs and letters.	I change user passwords in the different services or platforms on a regular basis.	I dispose and apply a personal strategy or safety protocol to generate keys and passwords of my different accounts (and I can remember them).	I have installed security software or firewall in all my devices.	I apply safety protocols in all actions performed on Internet and teach others in the classroom and in the center.
I never give personal or compromised information about my digital identity or other (e.g., my keys or passwords to strangers).	I avoid using passwords that are easy to identify (numbers or consecutive letters, birth year, first or last name, etc.)	I avoid repeating the same password on different services or online applications.	I access and manage my accounts, data and login from any device at any time and anywhere without difficulty.	I avoid giving permission for some applications or online services to appropriate and manage my identity through user keys I own in other accounts. I teach my students to do the same.	I am aware of what cookies are and how to manage them. In addition, I encourage my students to do proper management of them.
I am able to complete my profile data of user account (photo, education, age, etc.) in digital spaces, tools and services.	I am aware of the dangers of others taking or manipulating my digital identity keys or my devices.	I provide personal data only in secure and trusted sites.	I easily identify deceptive mass messages, like scams that ask for personal information or to open attachments.	When I access an account or personal service from a foreign device I never keep the same password, and I always close the applications	I use specific software to store and retrieve safety keys of my accounts.

				I use.	
I have opened social media profiles without setting all privacy options.	I am respectful with the identity of my recipients protecting, when required, the anonymity of them.	I have turned on different security measures in my browser.	I often take care of the image I project online and I encourage my colleagues and my students to do the same.	I control my image online, being aware at all times of my self image and others on Internet.	I avoid posting photos, videos or text which may damage my personal reputation and others in the present or future. I promote this attitude among my students and my school.
I share a lot of information over Internet with known people.	I am starting to worry about my privacy and that of my peers.	I am worried and sensitized to the proper management of my digital identity.	I never provide own or others sensitive data by digital media.	I search information and constantly update myselft on the field of online data management and digital identity to implement it in the classroom.	I develop classroom training activities and educational projects for students to know how to create and manage their personal accounts and their digital identity.

Area 3. Digital content creation: To create and edit new digital content, integrate and rebuild prior knowledge and content, make artistic productions, multimedia content and computer programming, and know how to apply intellectual property rights and licenses.					
Competence 3.1. Developing digital content: To create digital content in various formats, including multimedia content, edit and improve own content creation or others', and express themselves creatively through digital media and technologies.					
Levels					
A- FOUNDATION: I search, create, save and edit simple digital content.		**B- INTERMEDIATE:** I produce digital content in different formats, such as text documents, multimedia presentations, images, video or audio recording, using online applications. I promote this type of production among students from school.		**C- ADVANCED:** I create online digital teaching materials in a wide range of formats and publish them in varied digital spaces (blog format, interactive activity, Web site, virtual classroom, etc.). I develop digital educational projects that involve the educational community to be the protagonists of the development of digital content in various formats and expressive languages.	
Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I know and use text processing programs at a basic user level and I prepare presentations, but almost always offline.	I edit texts and presentations at advanced user level, but mainly offline.	I frequently create, store and edit all kinds of text files and presentations, both online and offline.	I often use different programs and services for editing and creating texts and presentations, on any device, both offline and in the cloud, and then I publish them.	I encourage my students and my center to create digital presentations and texts that I assess and monitor.	I participate with other teachers in the shared document creation and online presentations in various professional communities.
I save and store in organized	I save, store and retrieve	I use programs and services	I design, create and edit	I design digital materials	I create, develop and

folders, documents and presentations elaborated on my devices.	digital documents and presentations prepared by myself and others, both offline and in the cloud.	for image, icon material, audio and video editing, both offline and in the cloud to adapt and reuse digital material.	images, iconic materials, videos and audios owned by me, both locally and in the cloud, and then I publish them.	using audiovisual formats and tools like, for example, infographics, concept maps, podcasts or videos. I share these materials with my fellow teachers.	maintain digital spaces in the cloud aimed at learning, as, blogs, sites, etc., where I publish and share educational projects that include digital materials of different types and I promote the participation of students in them.
Sometimes I search online tutorials on how to use applications for creating digital educational content.	I know the PLE concept (Personal Learning Environment) and I use it for learning when I edit digital content. I represent it in a detailed and orderly manner.	I promote my students to be involved in the creation of digital educational materials involving the design and editing of text, videos, presentations and audios, helping them to create their own PLE.	I have a channel or personal space in online applications or services where I publish, throughout the course, text files, video, presentation and recording audio and video programs in which my students have been involved.	I plan, develop and assess online teaching activities that will insist on using different content creation tools (texts, maps, tag clouds, hypertexts, videos, audio recordings, etc.). Also, I encourage the students to create their own e-portfolio.	I collaborate with other teachers to create open educational portals or platforms to share the digital materials created.
Competence 3.2 Integrating and re-elaborating digital content: To modify, refine and combine existing resources to create digital content and new, original and relevant knowledge.					
Levels					
A- FOUNDATION: I am aware that the Internet is a huge library of resources that can be reused for educational purposes. I search and select online resources and digital objects for educational purposes, I organize them into a personal digital space and make simple modifications.		**B- INTERMEDIATE:** I know and use online resource repositories, libraries and material from both general and educational purposes. I modify and adapt my own resources or others' to adapt them to my students' learning needs.		**C- ADVANCED:** I prepare activities, materials and educational resources from the juxtaposition or mixing of digital objects from different online spaces, both from myself and from other authors. I generate my own teaching-learning spaces in virtual environments and insert different digital objects.	
Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I sporadically perform Internet searches for reading or video resources for my classes.	I occasionally search for online resources for my students, but I select only those that could be relevant to classroom activities.	I often search and locate materials and educational resources on specialized portals and repositories, that I then use in my classes.	I know and have used occasionally a program or application that has allowed me to modify any resource or educational material from Internet	I often use software or applications to create my own online interactive exercises or activities, by mixing other digital educational objects.	I encourage mixing digital educational products by my students with products developed by me to involve their families.

I save and store resources or files that I have selected for my students in my digital devices.	I save / store in an organized way resources or files that I have selected for my students in my devices and in the cloud.	Almost every time I download digital content for my classes I make some modification or adaptation to them to my teaching needs and the goals that my students have to achieve.	When I search, select and download and store digital resources or contents, I do it based on the needs or adequacy to the learning tasks that I will develop in the classroom with the students.	I frequently organize activities in the classroom that require students to create productions based on the mix of digital objects (murals or posters, multimedia presentations, timelines, blogs, etc.)	I didactically plan a web space or virtual classroom for a course or online training project.
I know and occasionally access some platform or media content portal (for commercial use or open use) to find files or resources for my teaching.	I know and frequently access platforms or portals of educational contents from which I download and store digital educational resources for teaching use.	I frequently revise and update versions of downloaded and adapted educational materials.	The educational material that I select for later adaptation is always updated to the latest version found online.	I have participated, occasionally, in the collaborative creation of digital educational resources for the students with the partners of my center.	I participate with teachers from other educational institutions in projects of collaborative creation of online learning resources and materials.
I am able to introduce active links into texts or presentations that I create for my students.	I have occasionally modified a file or resource I downloaded from the Internet slightly to suit the needs of my students.	I plan classroom learning activities for my students based on the resources or contents that I have selected from the Internet.	I plan, design and elaborate open educational digital objects, from others' materials, to use them later in the classroom.	I encourage the design and development of open educational digital objects by my students.	I promote the collaborative creation of open educational digital and inter-center objects.
I consider that I should adapt the materials o digital learning resources that I find on Internet for my students.	I insert some images, videos or sounds files legally downloaded from the Internet into a document or personal presentation for educational purposes.	I have occasionally organized online learning activities for students to produce a digital product or content from other digital objects on the Web.	I have my own storage space in the cloud with resources and digital learning materials where I organize what I select, adapt and plan from the materials found in Internet.	I have a space on Internet (blog, wiki, website, etc.) where I publish my productions of digital educational contents and where students also publish theirs.	I have encouraged and collaborated with fellow teachers in the creation of shared libraries or repositories of online educational resources.
Competence 3.3. Copyright and licenses: To understand how copyright and licenses are applied to information and digital content.					
Levels					
A- FOUNDATION: I am aware that some content distributed on the Internet are copyrighted. I respect copyright both to access and download files.		**B- INTERMEDIATE:** I know the basic differences between open and privative licenses and how they affect digital content. I develop classroom tasks and activities to train and educate my students regarding to copyright of distributed content on the Internet.		**C- ADVANCED:** I learn how different types of licenses are applied to information and resources that I create. I develop educational projects for my students to publish their content with open access licenses.	

Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I am aware that information, applications, audiovisuals or any other digital product have copyright that I must respect.	I have occasionally consulted a website that offers information and recommendations on copyright and its legislation.	When I search for any image, sound, video, text or any other type of educational resource I worry about checking what type of license it has, because I distinguish between open and privative licenses.	Whenever I use some digital content of another author for my professional practice, I respect its license and I cite its origin.	I know the differences between open and private licenses, as well as the types of Creative Commons, copyright and copyleft.	I publish the educational digital contents that I create with Creative Commons licenses for open access and its reuse by the educational community.
I support the promotion of legal use of digital content in educational organizations.	I consider reprehensible any type of conduct of plagiarism or illegal use of the digital contents.	I usually search for information and I am up-to-date on the legal regulations for the proper citation and reuse of contents with copyrights.	I am a regular user of open educational resources developed by other teachers or institutions and I respect their copyrights.	I value positively that teachers publish on Internet, under a free license, the educational materials and resources that they generate.	I encourage my students to publish their digital productions on Internet by choosing the appropriate Creative Commons licenses.
I know there are public domain educational content that I can use in my teaching.	I take into account and try to respect the licenses of the digital contents that I handle in my professional practice.	I only reuse digital content that is licensed in my teaching practice.	I organize and develop in class, learning activities aimed to the knowledge of legal norms, reflection and analysis on the use of digital content and productions, to raise awareness and reflect on plagiarism and digital piracy.	I develop tasks and activities in the classroom aimed to let students know, respect and use different types of author licenses when creating or reusing digital content.	I plan and develop training projects of knowledge and shared use of copyright material on Internet, as well as on licenses, with teachers and students from my center and other centers.
I do not distribute copyrighted content on the network that I have downloaded from paid access sites.	I inform my school colleagues and my students about the necessity of respecting copyright in content downloaded from Internet.	I support that educational institutions promote sharing and facilitate open access to knowledge.	I inform families that they should be aware that their children should only download or use legal Internet content in their home.	I plan, collaborate and develop training projects on the Internet about copyright with colleagues and students of the center, aimed at the whole educational community.	I participate as an expert in conferences, seminars or events of debate and reflection on the use of licenses and copyright on the Internet.
Competence 3.4. Programming: To make modifications to software, applications, settings, programs, devices, understand the principles of programming, and understand what lies behind a program.					
Levels					
A- FOUNDATION: I know the concepts and basics of		**B- INTERMEDIATE:** I make several modifications to		**C- ADVANCED:** I modify open source software.	

computing and mobile technology in education. I modify some simple software functions and applications, in a basic configuration level.	educational computer programming applications to suit the learning needs of my students with respect to computational thinking.	I have advanced knowledge of the basics of programming and I write source code. I often plan and develop educational projects involving my students modifying and developing applications, generating games or creating standalone machines.

Descriptors

A1	A2	B1	B2	C1	C2
I know and understand the basics of electronic devices (PC, tablets, mobile).	I understand concepts such as programming, computer architecture, and telecommunications	I understand how the Internet works, its standards and its technological components	I have average experience using some software to program some digital application of augmented reality, robotics and / or video games	I know and I understand the advanced basis of informatics, telecommunications and software engineering applied to educational applications.	I have given some formative action on programming and / or educational robotics to other teachers.
I know that there are different computer programming languages.	I am interested and I search for information to update my knowledge about computer skills and educational technology.	I know some applications for software development, portals, web tools, apps and educational video games.	I am aware of the potential and possibilities of artificial intelligence in education.	I am a regular user of applications for the development of video games, robotics and / or augmented reality, and I promote its use in the classroom.	I plan, develop and assess online some educational project designed for students to create a robot, video game or application using a programming language.
When I do not understand, or do not know how to act with a digital technology I ask a fellow teacher or an expert user.	I can make small modifications to a standard template to suit my teaching needs.	I create applications and I program simple educational video games, using online tools and / or software.	I know and manage processes of computational thinking in a general way and I put them into practice in my teaching activity.	I use, in my teaching practice, computational thinking processes that involve modeling and decomposing a problem, processing data, creating algorithms and generalizing them, and I encourage it among my students.	I have programmed and uploaded educational applications to be used by other teachers, and I have promoted computational thinking in my school.
I have searched for information on how to incorporate computer programming and computational thinking into the curriculum.	I have occasionally discussed in the classroom with my students about the need to acquire and develop programming knowledge and procedures.	I know innovative educational experiences in programming and computational thinking and I have replicated them in the classroom as a simple activity.	I search for solutions to computer processes, programming, or on educational technology in Internet (in forums or networks of experts or computer specialist users'	I am a member of a community of teachers who are experts in computer programming and computer thinking with whom I interact to consult or share computer solutions.	I actively promote and participate in an online community of teachers who are experts in computational programming and computational thinking, and I participate in open

			network) in an autonomous way.		educational projects between centers.

Area 4. Safety Protection of personal information and data, digital identity protection, digital content protection, security measures, responsible and safe use.					
Competence 4.1. Protecting devices: To protect personal devices and digital content, understand the risks and threats online and know safety measures.					
Levels					
A- FOUNDATION: I perform basic actions to protect various digital devices that I use (passwords, install antivirus software, battery charging, etc.). I set up safety measures on owned and saved content both in my devices and online.		**B- INTERMEDIATE:** I search for information and I update my knowledge about digital dangers in my devices. I properly manage the safety measures of the technology that I use for teaching and for the learning process of my students.		**C- ADVANCED:** I check, exam and update my digital devices to identify vulnerabilities or operating failures and seek appropriate solutions. I have strategies for action on device safety and protection with the educational community.	
Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I have installed protection software (such as antivirus, malware detectors, antispam, etc.) on my digital devices.	I frequently check and update the specific protection software on my digital devices.	I know and frequently search for information on Internet about new risks that my digital devices may have and I carry out new security measures.	I use and install specific software (such as antivirus, malware detectors, etc.) and update it periodically to avoid new threats.	I use and manage different software (such as antivirus, malware detectors, etc.) in an advanced way, in my digital devices, in my students', fellow teachers' and those in school..	I improve the security of my digital devices, my students', my fellow teachers' and those in school giving guidelines and advice to their users to prevent possible risks.
I know the possible risks that my digital devices may have, but I am not up-to-date about them.	I am up-to-date with the new risks that my digital devices may have and I use that information at a basic level to establish protection measures in them.	I understand and search for additional information on Internet about the risks associated with the use of cloud tools and the access to certain websites and I try to prevent those risks using different strategies.	I consult experts or advanced users about the new risks that my digital devices, my students' and those in school can have to apply new security measures to them.	I handle extensive information about the best strategies to avoid risks in my digital devices, my students' and the devices in school, and I elaborate information that may be useful to other users.	I manage and elaborate useful information about security measures for digital devices, and I share them as workshops or seminars with my students and fellow teachers. In addition, I spread them in online professional communities of teachers.
I understand the risks for my digital devices associated with using tools and applications in the cloud or accessing certain websites.	I understand the risks for my digital devices associated with using cloud tools and accessing certain websites and I try to prevent them by using different strategies.	I use passwords or unlock patterns on my digital devices and those of my students; I follow expert recommendations and change these passwords or	I prevent risks associated with the use of tools in the cloud or the access to certain websites that may have my own devices and my students' devices.	I deeply know the risks associated with the use of online tools and access to certain websites, I avoid them when using my devices, and I publish online safety and	I design and carry out educational projects related to digital risks, the protection of digital devices in the cloud, in my center and in other centers, and I asses them.

		patterns periodically, in tools in the cloud and to access certain websites.		protection advices, in addition to sharing them with my students and fellow teachers.	
Competence 4.2. Protecting personal data and privacy: To understand the usual terms of use of software and digital services, actively protect personal data, respect the privacy of others, and protect myself from threats, fraud and cyberbullying.					
Levels					
A- FOUNDATION: I am aware that in online environments I can share only certain types of information about myself and others.		**B- INTERMEDIATE:** I know how to protect my own and others privacy online. I generally understand issues related to privacy and have a basic understanding of how the data is collected and used. I create digital educational activities on protection of personal data.		**C- ADVANCED:** I often change the default privacy settings of online services to improve my privacy protection. I have extensive knowledge about privacy issues and know how to collect and use my data. I develop educational projects designed to train students in the habits of digital protection and the respect for the privacy of others.	
Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I am aware that using Internet may pose some risks towards my privacy.	I am aware that my personal data and the content I publish on the Internet are stored by the company or institution providing the service.	I apply and update personal data protection strategies in the online services I'm registered in my devices (for example, I never use one password for different services).	I encourage personal data protection strategies and habits in my students for their devices and in the online services they use related to education.	I create useful pieces of information for my students and other teachers from my school about online security and digital protection of personal data.	I design and apply school based educational projects, as well as with other schools, about online security.
I understand the different privacy levels that can be found in my own digital devices and in cloud services.	I use the adequate privacy settings according to my objectives, both in my devices and in the cloud services I use.	I inform and occasionally suggest to my students some reflection activities upon the necessity of having strategies on personal data protection and on content publication on the Internet.	I encourage in classroom activities that include in a practical way personal data protection in devices and on the cloud.	I make the responsible use policy regarding the school technology, reaching an agreement with all the members of my educational community.	I share guidance for protecting personal privacy, both in my devices and in the cloud with other teaching professionals. I also publish and disseminate them.
I store locally different access data to my accounts. I know of the existence of several ways of doing it online, but I don't apply them.	I safely store and retrieve different access data to my accounts, using secure tools and apps.	I search for simple in-classroom activities that promote digital respect and personal data protection.	I design in-classroom activities that aim for the students to develop a civic awareness and democratic values towards communal living and social interaction through the Internet.	I create and share recommendations on how to intervene in digital threat situations with my school colleagues and families.	I publish and share projects focused on identifying and intervening in cases of digital fraud with teaching professional communities.

Competence 4.3. Protecting health and well-being: To avoid health risks related to the use of technology in terms of threats to the physical safety and psychological well-being.		
Levels		
A - FOUNDATION: I know that technology can affect my health if misused.	**B - INTERMEDIATE**: I know how to protect myself and others from cyberbullying. I understand the health risks associated with the use of technologies (from ergonomic aspects to addiction to technologies).	**C - ADVANCED**: I am aware of the proper use of technologies to avoid health problems. I know how to find a good balance between the online world and the traditional world.

Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I know the risks that may affect my physical and psychological health derived from the incorrect use of technology.	I know the risks that may affect my health derived from the incorrect use of technology and I browse the Internet about how to better use it.	I know the risks, both physical and psychological, that may result from the inadequate use of technology and I apply prevention strategies when working with my digital devices and/or in the cloud.	I advise other members from the educational community on how to prevent harmful habits derived from the use of technology, both physically and psychologically.	I manage technology with a positive and close attitude, managing my emotions when certain problems arise, and I try to convey it to my students in my school when I use digital devices, creating content with them in order to know how to proceed in each case.	I share healthy habits on using technology in professional teaching communities.
I know the correct postural habits and I know that an excessive use of technology may be addictive.	I adequately use technology, not allowing it to affect my personal life.	I take care of my habits regarding correct ergonomic postures with digital devices to avoid any physical harm.	I create in-classroom activities to prevent bad postural habits and addictions among my students.	I am always aware in the classroom of postural habits and behaviors related to technology with the purpose of correcting them, if necessary, as well as to avoid potential addictions.	I monitor the time spent working online with my devices and with those belonging to the educational center, creating a routine that includes breaks in small intervals as well as measures to prevent possible health issues.
I know the existence of intervention protocols to prevent health issues from an	I learn, for its subsequent in-classroom application, about adequate intervention	I develop an intervention pattern of routinely execution in order to connect to Internet	I explain intervention patterns on Internet to my students to avoid cyberbullying and to	I encourage intervention patterns in the educational community of my educational	I execute intervention patterns and guidance oriented to avoid

inadequate use of technology.	patterns to prevent myself and others from any harm due to an inadequate use of technology.	avoiding cyberbullying and being aware of my identity.	taking care of their own identity.	institution to be executed when connecting to Internet in order to avoid cyberbullying as well as to protect my students' identities.	cyberbullying and to reinforce security in my educational center network.
I know of the risks of addiction to technology, especially among the youngest users.	I inform my students about the risks of addiction to technology and I am aware of the cases that may arise.	I work with my students in the classroom using measures to avoid the addiction risks of technology.	I use a risk detection protocol for technology addiction with my students and try to correct the issue when I find a case.	I create detection and intervention protocols in case of addiction to technology that I apply in every classroom in school.	I coordinate with teams from other educational institutions for the creation and execution of detection and intervention protocols in cases of addiction to technology.
Competence 4.4. Protecting the environment: To take into account the impact of technology on the environment.					
Levels					
A- FOUNDATION: I know how to reduce energy consumption in the use of digital devices and have available information about the environmental problems associated with their manufacture, use and disposal.		**B- INTERMEDIATE:** I have informed opinions about the positive and negative aspects of the use of technology on the environment and know how to optimize the use of the devices.		**C- ADVANCED:** I organize strategies for efficient uses of digital devices and I make decisions about the purchase and proper disposal of such devices, according to the educational activities carried out with them.	
Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I know of the existence of good habits regarding ICT use that help me save energy when I use my devices.	I know and occasionally apply some energy saving measures when I use my devices.	I possess up-to-date information about the side effects of technologies against the environment and I elaborate related content to be shared with my students.	I save energy by acquiring enough environmentally friendly equipment and services.	I elaborate reports containing things to consider regarding environmental protection when the educational center is about to acquire new digital devices.	I apply, along with other colleagues, energy saving measures in school and I design and suggest digital projects about environmental awareness in order to include it in the annual curriculum.
I sometimes try to save energy consumption in the use of digital devices, both at home and at school.	I try to save energy resources by acquiring, if possible, more efficient and profitable digital devices compared to others, as well as discarding the former for recycling.	I apply recommendations that allow to save energy by optimizing the use of my digital devices and those of my students.	I convey, share and promote the necessity of sustainable use of technology among the members of my educational community.	I apply educational suggestions with my students oriented to recycle and reuse disused equipment inside my educational centers in order to make them aware of the necessity of being respectful towards the environment.	I share with other educational centers, digital spaces and networks good digital and Internet habits that help lengthen the life of devices, appropriately acquire efficient digital devices and adequately discard obsolete equipment.
I know that an efficient use of supplies (hardware, ink,	I try to make the most efficient use of supplies	I apply recommendations to reduce consumption of	I express, share and promote recommendations among my	I apply educational suggestions for conveying my	I share with other educational centers, with other digital

paper) may reduce costs, consume and emissions.	(hardware, ink, paper) in order to limit the impact of technologies on the environment.	supplies in order to limit the impact of technologies on the environment.	students to reduce consumption of supplies.	students the need of reducing consumption of supplies and I make my students aware of the environmental advantages of printing just what is necessary.	spaces and networks good digital habits that help reducing consumption of supplies in order to lessen the carbon footprint of the center.

Area 5. Problem solving area: To identify needs in the use of digital resources, to make informed decisions about the most appropriate tools according to the purpose or the need, to solve conceptual problems through digital media, to use technologies creatively, to solve technical problems, to update the own competence and that of others.

Competence 5.1. Solving technical problems: To identify possible technical problems and solve them (from basic troubleshooting to solving more complex problems).

Levels

A- FOUNDATION: I know the features of the devices, tools, environments and digital services used regularly in my work as a teacher and I am able to identify a technical problem explaining clearly what is the cause of the malfunction.	**B- INTERMEDIATE:** I solve noncomplex technical problems related to common devices and digital environments in my professional tasks with the help of manuals or technical information available.	**C- ADVANCED:** I have a sufficiently advanced knowledge of the features of devices, digital tools and environments used and I can autonomously solve technical problems as they arise. I help other members of the educational community and collaborate with them to solve technical problems in the routine use of devices, tools and digital environments. I use collaborative learning spaces and participate in communities to find solutions to technical problems.

Descriptors

A1	A2	B1	B2	C1	C2
I know the basic technical specifications of the digital devices and tools or applications which I work with in the classroom.	I effectively know the technical specifications of the digital devices, and online applications or software I work with in the classroom.	Before reporting to the ICT managers of my educational institution about technical issues, I try to solve them individually, with the support of tutorials.	I search for solutions to technical issues in digital environments that help me solve those issues and I try to help my students in the classroom.	I solve complex technical issues in the classroom and in the school in an autonomous way or relying on tools offered on Internet.	I have an online space where I regularly publish information about the troubleshooting of technical problems on digital devices and educational software.
I identify a technical problem on the digital devices or spaces, applications and environments I work with in the classroom, but I need assistance to solve it when it is complex.	I solve low complexity problems that arise in the classroom in order to prevent them interfering with my teaching.	I solve usual technical issues in the classroom with the help of teacher colleagues and online or print tutorials or manuals.	I solve at an intermediate level, and sometimes autonomously, less common technical problems related with digital devices that I use in the classroom.	I help and train my students and other members of the educational community, both in a face-to-face way and virtually in the solution of technical problems.	I actively participate in virtual communities with other teacher colleagues looking for solutions in a collaborative way.

I know that there is an ICT manager in the school and I communicate with him or her for technology related issues.	I let ICT managers of the educational institution know about complex technical issues I can't solve, explaining the issue clearly.	I sometimes have reported and solved technical issues through online communication.	I frequently communicate and solve technical issues of varied sorts through online communication, from any place and at any time.	I collaborate with the educational center ICT managers in collaborative solutions of technical problems, not only in my classroom, but in the whole institution.	I teach my educational community and others about different strategies in order to solve technical issues via Internet and by searching for shared solutions.
Competence 5.2. Identifying needs and technological responses: To assess and identify own needs, to assess, select and use digital tools and give possible technological responses to solve them. To adjust and customise digital environments to personal needs.					
Levels					
A- FOUNDATION: I use some digital tools and resources to meet learning needs and solve technological problems related to my everyday teaching. I make decisions when choosing a digital tool for teaching for a routine activity.		**B- INTERMEDIATE:** I critically assess the different possible environments, tools and services offered to solve technological problems related to my teaching work and select the most appropriate solution to the needs in every moment.		**C- ADVANCED:** I make informed decisions when choosing a tool, device, application, program or service for a task with which I am unfamiliar. I stay informed and updated about new technological developments. I understand how the new tools work and I am able to critically assess which tool fits best with my teaching and learning goals.	
Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I select digital applications to solve some problems or for usual professional needs.	I use digital tools and applications to regularly solve my problems and professional needs.	I search, identify, filter, assess and select digital tools and resources to apply them afterwards in the classroom with the purpose of an efficient management of my teaching practice.	I search, identify, filter, assess, select and adapt digital tools and resources to answer the learning needs of my students.	I critically assess the possible solutions to the needs of both my students and myself as a teacher, individually or collaboratively via online networks.	I design tasks using technologies, I virtually share them with my colleagues from my educational center and I update them accordingly using their feedback.
I know some tasks that can be done by using technologies for the improvement of teaching and learning.	I occasionally use virtual environments to solve teaching problems and to identify learning needs.	I identify needs of my students regarding the development of their digital competence and I do in-classroom activities oriented to that development.	I diagnose the extent of development of the digital competence of my students and design tasks and activities accordingly, in order to improve it.	I create digital repositories in order to respond to the needs of improvement of my digital competence and that of my students.	I participate in online networks, design improvement strategies of the learning process and assess them with the intention of answering to the needs of the educational community regarding my digital competence.
I know of the existence of the possibility of online training but is it too much of an effort to do an online	I follow online tutoring courses whose instructional design is organized and offer	I frequently participate in online virtual training spaces of different sorts.	I find motivating the educational potential of the information technologies so I regularly take courses on	I regularly take online courses that promote autonomous learning, participation in professional teaching communities and peer	I organize and develop teacher training for my peers to know how to select adequate resources for their learning

course.	customized and continuous tutor assistance.		professional teaching development, especially online.	collaboration.	needs, those of their students and of the rest of their educational community.

Competence 5.3. Creatively using digital technologies: To innovate using digital technology, actively participate in collaborative digital multimedia productions, express themselves creatively through digital media and technologies, generate knowledge, and solve conceptual problems with the help of digital tools.

Levels

A- FOUNDATION: I know I can use digital technologies in my usual professional work to seek alternative and innovative solutions that facilitate learning tasks. I often use them creatively.	**B- INTERMEDIATE:** I use digital technologies to analyze needs in my daily work, managing innovative solutions, create products and participate in creative projects, adapting and complementing dynamically digital media offered by my organization to my teaching duties, but I do not take the initiative.	**C- ADVANCED:** I know a wide range of creative and innovative ways to use digital technologies to apply them in teaching and I creatively update them according to the evolution of digital media and learning needs. I actively participate in professional communities of teaching practices that share creative and innovative educational initiatives in the use of digital media, and disseminate best practices and initiatives in the educational community.

Descriptors

A1	A2	B1	B2	C1	C2
I use digital media on a regular basis in my teaching practice.	I select and use digital and multimedia products inside the classroom that I consider valuable for my students.	I plan and develop digital activities to innovate with my teaching methodology.	I participate on virtual environments in the creation of digital educational content for my classroom and educational center.	I know and use different means of digital expression (blogs, digital magazines, web pages, etc.), with students and teaching colleagues, both from inside my educational center and others, in a creative way.	I actively participate in the online creation of innovative and creative digital educational materials.
I know some of the most used digital means of expression inside educational settings.	I create some online spaces for my students as a means of digital expression.	I generate knowledge with digital media in the application of some in-classroom activities.	I use different digital expression means (blogs, poster, webpage) to show my students' work.	I know the processes for creating digital contents in a collaborative way with my colleagues through virtual environments.	I frequently create digital multimedia objects of expression and I share them with the educational community for them to be reused by others.
I know about digital educational innovation projects developed inside schools.	I have used in-classroom digital activities in my teaching practice, coming from digital educative	I have participated in some collaborative digital projects along with my colleagues.	I participate in collaborative digital projects and share them to the rest of my educational community.	I encourage the participation of my educational community in digital collaborative projects and I run one or more in my educational	I participate in virtual communities along with other colleagues and I encourage them to join and generate

	innovation projects that I have found in the Internet.			institution every academic year, in which students are the main agent.	knowledge collaboratively through digital media.
I know of the existence of teaching related online events about digital educational innovation that can be helpful but I don't normally attend.	I search innovative solutions for my teaching practice coming from experiences shown in teaching online events about digital educational innovation.	I have attended, occasionally, online teaching events (webinars, conferences, seminars, etc.) about sharing innovative experiences about digital education.	I apply innovative digital educational experiences that I have learned through the attendance of online teaching events in my classrooms with my students.	I encourage the participation of my school in online teaching events about educational innovation that translate into relevant methodological changes in the school.	I regularly take part in online teaching events, courses, and professional conferences, where I share and teach to others about the creative and innovative use of technology and about educational digital media.
Competence 5.4. Identifying digital competence gaps: To understand the needs for improvement and updating of the own competence itself, support others in developing my own digital competence, and keep up-to-date of new developments.					
Levels					
A- FOUNDATION: I Identify the weaknesses of students in the use of digital media for learning as well as my own weaknesses concerning the use of technology.		**B- INTERMEDIATE:** I search, explore and experiment with emerging digital technologies that help me stay updated and cover possible gaps in the digital competence needed for teaching and professional development.		**C- ADVANCED:** I organize my own system of updating and learning, and I make changes and methodological adaptations for continuous improvement of the educational use of digital media, which I share with the educational community, supporting others in the development of their digital competence.	
Descriptors					
A1	**A2**	**B1**	**B2**	**C1**	**C2**
I learn through my colleagues about the latest improvements related to the digital competence to advance in my professional career.	I know the latest improvements related to digital competence, and I try to update it occasionally.	I use digital spaces in order to keep myself up-to-date, in an autonomous way, regarding the latest improvements of the digital competences.	I know and participate regularly in virtual networks to stay informed about the latest improvements related to the digital competences and to keep themselves up-to-date.	I encourage, along with other colleagues, active participation in online professional networks, with the purpose of improving collaboratively our digital competence for teachers.	I collaborate, help and teach other teachers about the best way of improving their digital competence for teachers.
I identify gaps in the digital competence of my students.	I identify, analyze and search solutions online for the improvement of the gaps in the digital competence of my students.	I plan in-classroom activities coming from different websites that may improve the digital competence of my students.	I create and develop in-classroom and educational center activities that improve the digital competence of my students.	I promote center wise educational projects in collaboration with my colleagues in order to improve the digital competence of my educational community.	I teach other members of the educational community how to update their digital competence and I share solutions for the improvement online.
I apply the information and communication technologies in a basic way, in order to improve my	I do in a basic way some simple activities through information and communication	I apply in class educational uses of ICT, in which the roles of the students are active, and I know some	I apply the ICT in educational settings in order to emphasize learning of my own students and to	I organize and apply active methodologies based on the use of ICT, modifying the roles of the educational agents of the	I promote methodological adaptations for continually improving the educational use of the digital media in my

teaching methodology and the digital learning of my students.	technologies that modify in some ways my methodology and the way my students learn.	strategies to transfer generated knowledge with my students.	maintain a digital environment in which I transfer student generated knowledge.	classroom and of the school, managing an educational digital space in collaboration with all the members of my educational community.	educational institution and those of others.

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Annex I: Glossary

(This annex is an adaptation of the glossary used by JRC)

Some basic terms that are used in this report are based on definitions recently approved. DIGCOMP Project aims to support the development of a framework and of guidance, and in order to accomplish that, some parts of the European Framework of Qualifications (EQF) have been used, including the definition of some basic terms (European Parliament and Council, 2008).

Knowledge

'Knowledge' refers to the output of the assimilation of information through learning. Knowledge comprises facts, principles, theories and practices related to a work or study field. In the context of the European Framework of Qualifications, knowledge is described as theoretical and/or factual.

Skills

'Skills' means the ability to apply the knowledge and to use techniques in order to complete tasks and solve problems. In the context of the European Framework of Qualifications, skills are described as cognitive (based on logical, intuitive and creative thinking) or practical (based on manual abilities and on the use of methods, materials, tools and instruments).

Attitudes

'Attitudes' are regarded as performance motivators, the foundation for a constantly competent performance. They include values, aspirations and priorities.

Competence

There are two definitions of 'competence', slightly different, in the recent recommendations of the European policy. In the Recommendation of the Basic Competences, 'competence' is defined as a combination of knowledge, skills and attitudes adjusted to a context (European Parliament and Council, 2006). In the recommendation of the European Framework of Qualifications, 'competence' is regarded as the higher element of the descriptors from the framework and is defined as the demonstrable capacity to use knowledge, skills and personal, social and/or methodological abilities, in work or study related situations and in personal and professional development. Additionally, in the context of the European Framework of Qualifications, competence is describes in terms of responsibility and autonomy (European Parliament and Council, 2008).

Dimensions

The concept of 'dimension', as it is used in this document, has been taken from

the eCompetence for ICT professionals' framework. In both documents, the word 'dimension' refers to the framework structure, that is, to the way in which the content of the framework is displayed. In this report, 5 dimensions have been identified: dimension 1 refers to the digital competence areas, dimension 2 to the competences that fit into each area, dimension 3 to the planned levels for each competence, dimension 4 to examples of required knowledge, skills and attitudes that are relevant in each competence, and last, dimension 5 to the purpose (or context) where each specific competence can be applied.

Purpose

In this document, purpose is understood as the context of application of each competence. Digital technologies are used increasingly more frequently in different areas (at work, at school, at home) and with different purposes (entertainment, social life, work, learning). Then, the purposes described here show a specific competence can be applied to a specific context. This is to say, the general description of the competence is translated into an example in real life. The purposes identified are: Leisure; Social; Commercial Transactions; Learning; Employment; Citizenship; Welfare. In this report it has only been included the descriptions concerning Learning and Employment.

- Leisure: use of technologies for personal issues or entertainment (for example: search of flights for holidays, games, reading of digital books, watching of live videos on the web, listening to music through digital tools);
- Social: interaction with friends and colleagues with digital tools (for example: sending emails or SMS, participation in social networks, linking with others through online communities).
- Commercial transactions: use of online tools in order to buy or sell goods, electronic commerce, online consume (for example: online purchase of a plane or train ticket, purchase of applications and software, purchase and sale of virtual goods, like the elements used in virtual words from videogame environments, participation in client to client services);
- Learning: use of technologies for lifelong learning (for example: use of citation software when writing scholar work, use of the Internet for searching information, use of specialized subscriptions in order to access scientific papers, use of online communities, such as a knowledge trade network);
- Employment: use of technologies for doing different kind of jobs (for example: use of software to record client orders in a bar and to calculate the check, use of spreadsheets to calculate a budget, understanding of the wireless configuration of mechanical machines);
- Citizenship: use of technologies to engage in the active part of civic life and use of those services (for example: online banking, electronic administration and electronic commerce);
- Welfare: use of technologies for health-related goals (for example: medical appointments, revision of online information for health-oriented issues, use of data tracking regarding sport activities);

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