

School Digital Plan

Description and Guide



This document aims at aiding schools in their process of designing a Digital Plan tailored according to their needs, circumstances and characteristics.

This School Digital Plan is meant to be an instrument that should favor and promote the use of digital resources, both in the teaching-learning processes as well as in the rest of the school management processes, always keeping the final goal in mind, which is being involved in the overall development of the student. Therefore, this tool must be integrated into the Educational Project, the School Leader Project and the Annual Academic Program. In addition, it is essential to include a core focus on the use of available digital pedagogical resources to make the most of their possibilities, thus ensuring that the Digital Plan is a project that will be shared by all members of the educational community, providing coherence and guidance on the use of technologies. It will be a key instrument within the Educational Project, the School Leader Project and the Annual Academic Program.

- The first part of this document contains a brief proposal related to the structure and elements that should make up the School Digital Plan, heavily based on the European Framework for Digitally Competent Educational Organisations of the Joint Research Centre (JRC) in Seville, Spain.
- The second part of the document includes a guide to develop this structure and elements in the Digital Plan, as well as some basic guidelines for their design and preparation.

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School Digital Plan

The Schools Digital Plan is the instrument that will pave the way for a personalized use of digital media in the teaching-learning process, encompassing a full and comprehensive student development.

The use of digital learning resources must be a core approach, fully exploiting the available options and resources, in order to make this a shared project with the rest of the educational community, providing coherence and guidance on the use of technologies. **It will be a key instrument within the Educational Project, the School Leader Project and the Annual Academic Program.**

The fundamental reference for schools to develop their digital potential through the use of this Plan is the [European Framework for Digitally Competent Educational Organisations](#) (DigCompOrg), developed by the [Joint Research Centre](#) (JRC) of the European Commission. This *Framework* is part of the *Furthering Innovative Education* study, set in motion by the [European Commission's Directorate General for Education and Culture](#) and the [Joint Research Centre \(JRC\) - Institute for Prospective Technological Studies](#) (IPTS). This European Framework was drawn up with other prevailing frameworks in mind, such as OPEKA (Finland), Microsoft SRT, School Mentor (Norway), Vensters (Holland), Speak Up NRP (USA) or HEInnovate, among others. Similarly, and related to this Framework, the European Commission has developed the **SELFIE self-assessment tool**, available free of charge to all educational centers, which generates an online self-assessment report (SELFIE Report) for schools. In addition, at a national level, other programs and experiences that are being carried out at regional levels were consulted.

Structure and description of the different components of the School Digital Plan

1. INTRODUCTION: SCHOOL DEFINITION

- Context: basic information of the school
- Infrastructure: technological resources, connectivity, platforms and available digital services and maintenance
- School Digital Plan Basis
- Drafting Process
- Contribution of the Digital Plan to the School Educational Project of the (and to the Annual Academic Program)

2. SCHOOL CONTEXT ANALYSIS

The analysis of the situation of the school will attend to the three dimensions established by the **European Framework for Digitally Competent Educational Organisations** (DigCompOrg): pedagogy, technology and organization. The European Framework proposes an **analysis of the school based on seven different components**: Infrastructure, Leadership and Governance, Teaching and Learning, Professional Development, Assessment, Contents and Curriculum, and Support and Collaboration Networks. Each school may add other elements according to its specific characteristics.

For additional support, it is recommended that schools use the **SELFIE self-assessment tool**, which provides a status report and is available to all schools. Based on the SELFIE Report, a **SWOT analysis will be generated** for each school, which will aid in reflecting on its situation in order to better prepare the School Digital Plan, in terms of objectives and actions.

3. OBJECTIVES

Objectives will be drawn up, based on the situation of each school, focused on moving forward. They will be determined for specific periods (preferably each academic year within a framework of a multi-year plan) and in collaboration with the pedagogical coordination bodies of the school. The objectives must be specific, realistic and measurable.

One fundamental objective of the Plan will be to address the existing digital divide.

4. ACTIONS AND GUIDELINES

Necessary actions will be decided upon in order to achieve the objectives that the school has proposed, among which include **Protocol to provide for the transition of face-to-face teaching to distance learning**.

While drawing up the different actions, the agents involved will be taken into consideration, as well as any anticipated procedures, the necessary resources and achievement indicators. The actions should take into account the elements found in the **European Framework for Digitally Competent Organizations**:

- *Infrastructure*: technological endowment, connectivity, necessary maintenance, platforms and digital services, among others. The Plan will include an analysis of the means and technological resources available in order to plan the teaching and learning processes, encompassing not only those of the institution itself, but also of the resources that families/students have for learning at home, as well as their real accessibility as to the learning process (devices and connectivity). This analysis will be carried out by the school, with the necessary support system (local inspection services and educational psychologists, etc.) and will be used as a definition for the rest of the actions.
- *Leadership and governance*: measures and protocols of the School (information, communication and coordination in the pedagogical use of ICTs, network protection and security, internal procedures, etc.), organizational aspects (spaces and schedules, tasks and responsibilities of educational community members), etc.
- *Learning and teaching*: teaching methodologies and strategies, planning the development of students' digital competence and related key competences, among others.
- *Professional development*: full development of digital teaching competence as well as the training of school leaders, teachers, guidance instructors and administrative and service personnel, for a commitment to the development of the Plan, among others.
- *Content*: accessibility and quality criteria, Open Educational Resources (OER), learning levels, among others.
- *Assessment*: aspects to be assessed, achievement criteria and indicators, assessment procedures, among others.
- *Support and collaboration networks*: strengthening and promoting teaching networks and schools, digital literacy and support for families, cooperation with local entities, among others.

5. TIMELINE PROPOSAL FOR ACTIONS

The timeline planning will establish the necessary milestones to progressively achieve the School's digitization objectives. It will be used as a guide, as well as to check and visualize the evolution of the actions.

- It is important to plan reasonable deadlines so that the actions taken will have a real impact on the organization.
- The implicit work that the actions entail must be taken into account at all times, and the interaction between interdependent actions must be respected.
- The planning of the milestones should be flexible in order to accommodate the needs of each School.

6. ASSESSMENT OF THE PLAN

The Plan must include achievement indicators to carry out an annual assessment of the progress of the School Digital Plan.

- ✓ The indicators will indicate the degree of achievement of the objectives in order to make any necessary adjustments or improvements.
- ✓ The Plan will be assessed based on the results obtained, within the framework of the planned objectives and deadlines, and how they have been applied.
- ✓ The progress report will be part of the **School Annual Report**.

At the end of the course or multi-year period, **once the actions have been established, the School digital competence must be globally re-assessed** using the SELFIE tool. This assessment will preferably be carried out at the end of each school year, with a cadence of at least two years, and will lead to a review and update of the School Digital Plan.

Guide to design the School Digital Plan (SDP)

This guide aims at providing some basic guidelines for the design of the School Digital Plan (SDP).

Introduction: school definition

School basic information

Information about the School: in this section, you can include a brief description of the School, such as its geographical location, educational level, students, faculty, socio-economic level of the families, institutions &/or administrations that may contribute to the objectives of the Plan (such as libraries, social schools, neighborhood associations, museums, etc.).

Vision: a much more specific concept that reflects on where we see our School at a certain moment in the future. You should specify how to make sure the vision has been achieved within the allotted timeframe.

Values: represents the framework within which our school should be at all times. It reflects on what is and what is not allowed in order to achieve the objectives, through a set of principles that indicate the code of conduct and the framework within which the school commits to act in order to achieve its vision. You can ask yourself (or ask yourselves, if you work as a team) questions, such as:

- What do you consider the purpose of education to be?
- What do you think are the hallmarks of a good school?
- What things do you do and what would you really like to do?

It is important that the entire community shared and strived for these ideas.

School Digital Plan basis

The SDP will contain a set of actions that should be carried out to improve the digital competence of the organization. Although the development and diffusion of technology is unstoppable, a number of resources, tools and services seem to have already been established, that can aid in improving educational processes, not only those that occur in the classroom, but also all those that contribute to the possibility of educational schools fulfilling their educational function. Taking into account the world in which we live, technology must be addressed from a global perspective, looking at the School as the processing unit, while designing improvement plans that can be developed with the School management team acting as a stimulus. The European Framework for Digitally Competent Organizations allows us to make an analysis of the reality of our schools and to design an action plan from a holistic perspective.

Technology and education

Schools are in permanent evolution in an increasingly digitalized society and labor market. For this reason, educational centers must respond to those needs and demands of the society and labor market in order to endow these future citizens with the necessary skills to function in a digitalized environment. The use of technology in the various practices taking place in schools and the educational system at large (whether they be related to organizational issues or form part of teaching and learning processes), is already unavoidable.

Education is a key resource to ensure social equality, empowerment and, more generally, the improvement of the living conditions for communities and individuals. Therefore, the 2020 European Strategy recognizes the need for a transformation in the Education and Training systems that will guarantee an acquisition of digital skills, which in turn will allow for more opportunities in the future.

On the other hand, educational organizations must review their strategies in order to improve their capacity to promote innovation and make the most of IT technologies, as well as educational and digital resources.

The aim of this Schools Digital Plan is to:

- Assess the state of the school regarding the use of ICTs in the different key elements included in the European Framework for Digitally Competent Organizations, in order to then to design and begin a transformation process in the School.
- Consider the School Digital Plan to be a key resource towards planning the digital strategy of an educational organization.
- Transform the educational school into an organization that learns, which will only be possible if it is a digitally competent organization.
- Consider the implications of school organizations in developing a digital culture inside them.

Drafting process and resources

The design of the School Digital Plan must gather any main ideas, determine the priorities and establish planning levels (programs, projects &/or actions) that establish the work plan of the school during the process of change and improvement. The participation of school leaders in the process of the design and implementation of the School Digital Plan is key, due to the global vision they are able to contribute (in the design phase), such as the ability to mobilize the organization's resources or to generate distributed leaderships that allow for change according to democratic principles (in the implementation phase).

The Schools Digital Plan should permit the educational community to:

- Visualize the future of the School.
- Understand the current state of the School.
- Trace the path that leads from one state to the next.

Contribution of the Digital Plan to the School Educational Project

The purpose of an educational school is for students to learn, be trained and develop as individuals in the society in which they live. Consequently, the organization itself needs to better itself through practice and reflection, as well as through its relationship with its surroundings.

The School Digital Plan must fit into a broader institutional context included in other institutional documents, such as the School Educational Project, and both documents must be fully consistent and complementary.

School context analysis

Self-analysis regarding the current use of technology in the processes

To carry out this analysis, we recommend using SELFIE, organizing the information according to the blocks or areas included in the report generated by this self-assessment tool:

- Leadership
- Professional development
- Infrastructure and equipment
- Teaching and learning practices
- Evaluation practices
- Students' digital competence

SELFIE

What is SELFIE?

SELFIE (an acronym that stands for “Self-reflection on Effective Learning by Fostering the use of Innovative Educational technologies”) is a free online tool that aims at helping schools think about how they use digital technologies to achieve effective and innovative learning.

Based on the European Commission’s Framework for Digitally Competent Organizations (DigCompOrg), SELFIE helps pinpoint what works, where improvements are needed, and what priorities schools should have. With SELFIE, schools can obtain a snapshot of where they are as to the use of digital technology, taking into account the opinions of teachers, students and school leaders. This process of self-reflection can help create a dialogue within the School on possible areas of improvement. SELFIE also lets the schools monitor their progress over time. This tool is currently available in the 24 official languages of the European Union, with more languages expected to be added soon.

SELFIE gathers, anonymously, the opinions of students, teachers and school leaders, as to how technology is used in the School. To do this, short questions and statements and a simple rating scale are used. The statements cover areas such as leadership, infrastructure, teacher training or the digital competence of students. Based on the information gathered, the tool generates a report – a snapshot or “selfie” - of the strengths and weaknesses of the school, regarding the use of digital technologies for teaching and learning. The higher the participation, the more accurate the SELFIE of the educational school will be. In addition, the results are intended only for each specific school and will not be shared unless the school decides to do so.

These results may help the School get a clearer picture of its situation so a dialogue can be initiated as to the use of technologies, and so an action plan can be developed for the school. In this way, the SELFIE Report can offer information on the strengths and weaknesses of our educational organizations in terms of their digitalization, as well as how said digitalization can contribute to improving student learning. Finally, SELFIE can be used later on to assess progress and adapt the action plan, if necessary.

SELFIE Questionnaires

There are three different types of questionnaires that SELFIE generates for self-diagnosis, depending on what is being addressed. These three questionnaires contain a series of basic (and mandatory or closed) questions that are organized into six areas of common practice:

- Area A: leadership
- Area B: infrastructure and equipment
- Area C: continuous professional development
- Area D: teaching and learning
- Area E: assessment practices
- Area F: digital skills of the student body

Most of the questions are answered on a scale of five points, in which '1' is the lowest and '5' is the highest. Several different scales are also used, depending on how the question is asked, and there are a small number of questions that users must answer in their own words.

Additionally, SELFIE allows you to adapt the questionnaires, add optional questions or even create your own questions to meet any specific needs that each school may have.

Adaptation of the SELFIE questionnaires

The questionnaires can be adapted by selecting the option 'Customize the questionnaires' from the main menu.

This will allow you to add optional questions or create new questions.

In addition to adding optional questions, it is possible to create up to eight new questions. To do this, it is necessary to select the option 'Create your own questions', choose the educational level, select the option 'Create question' and enter the question and the help text that you want displayed.

SELFIE to assess the School Digital Plan (SDP)

In order for this tool to be used, the entire educational community and especially those members who have participated in SELFIE, must be familiar with the SDP. It is a way for them to recognize and value the impact that their participation has had. Once the SDP is available to the entire educational community, the time will come to implement the actions included in the action plan. SELFIE allows us to make the initial diagnosis, and once our Digital Plan has been defined and implemented, it will become the instrument that will help assess the achievement of the objectives of our Plan, as well as the effectiveness of the actions we have designed.

From time to time, and keeping in mind a few reasonable deadlines for the actions to really have an impact on the organization, we can use the SELFIE tool again. In this way, we will

begin a new cycle of analyzing the School state (compared with the data generated by the prior SELFIE report), as well as a possible redesign of the Action Plan and implementation of the updated version of the SDP.

Throughout the entire improvement process, thanks to SELFIE, it is possible that some aspects are identified that the tool does not cover, or that it only does so partially or incompletely. This can occur, for example, when members of an organization involved in SELFIE analyze the data for the first time, or during the execution of an Action Plan. There is no need to be concerned about this. It should be taken into account that the Framework for Digitally Competent Organizations (DigCompOrg) includes the possibility of incorporating new areas depending on the particular characteristics of each educational organization.

SWOT Analysis

Thanks to the SELFIE 'snapshot' and the report on the School situation, we then carry out a SWOT Analysis.

SWOT is an analysis tool that studies internal (strengths and weaknesses) and external (threats and opportunities) characteristics.

This Analysis must be carried out as clearly and sincerely as possible, exposing the specific and current reality of the School. Some comments that could emerge from this analysis include:

- Shortage of technological infrastructures
- Obvious differences in terms of teacher and student digital competence
- Reluctance to update methodologies on behalf of the teaching staff
- Favorable attitude towards the use of technologies as a means of improving the teaching-learning process
- Shortage of professional development in the use of educational technologies
- Collaboration through technologies to enrich the teaching-learning process

Analysis of the technological means and resources of the school and families

Here it is necessary to identify opportunities to improve the infrastructure (digital and physical) of an school.

The school has technological means that come from different sources and are of different characteristics. Some of them are associated with specific classrooms (such as computer science or technology), others with classrooms in general (such as interactive whiteboards and projectors or interactive screens), and still more are associated with educational programs (such as those used for Classrooms of the Future, Open Classrooms or those derived from collaborative programs with technology companies).

It is vital that the school, when preparing its Digital Plan, has carried out a complete inventory of their available technological devices, as well as their basic characteristics and location.

This will establish strategies and regulations towards an effective use, subject to the pedagogical interests that are carried out, while additionally providing an organizational system and access to these tools that is effective and accessible to all members of the educational community.

In this technological inventory, special attention should be paid, on one hand, to the devices that students and their families can provide (following the BYOD or 'Bring Your Own Device' model), and on the other hand, but of no less significance, the technological equipment that is owned by the school and is loanable for those students who need them for distance learning purposes (determined by each school).

The result of this Analysis will involve an inventory of available resources and a set of organizational rules for their access, as described in more detail later on in this document.

School internal analysis

The European Framework for Digitally Competent Organizations, via the three key elements (pedagogy, technology and organization) allow us to carry out an internal analysis to determine the starting point of our schools.

In particular, the information we obtain thanks to the self-diagnosis carried out through SELFIE, is key to understanding the current situation, as well as to identifying aspects of digital organizational competence that we may not have previously noticed. The information in the SELFIE report will allow us to make action-oriented decisions, moderating the efforts and the change that each action may have in the global plan.

Therefore, the SELFIE report sheds light on the current reality in the school, from the perspective of school leaders, the faculty and the students, both in terms of organizational areas and teaching, related to the use and integration that technologies offer in these processes:

Organizational dimension:

- Leadership.
- Professional development.
- Infrastructure and equipment.
- Pedagogical dimension.
- Teaching and learning practices.
- Assessment practices.
- Digital competence of the student body.

The questions on the three types of questionnaires (according to the profiles) are the same, although in some cases the students will not have access to all the questions that school leaders or teachers must answer. Ideally, we can count on three sets of data for each question, which allow us to have a more realistic vision of the current situation, as per each specific aspect of the educational organization's digital competence.

Objectives

Once our horizon has been defined (where we want to see our school in the future) and the initial situation has been analyzed, it is time to define the Action Plan. Both the analysis of the data obtained by the SELFIE report and the design of the Action Plan must be carried out by an "ICT Commission", made up of some of the school leaders (if not all), the person responsible for the School digital media, and other members of the educational community (teachers, students and families). The more collaborative the work is, the more realistic, viable and acceptable the final result will be for the entire educational community.

Once the information has been analyzed and the areas for improvement have been identified, the design of the Plan's actions involves carrying out the following steps:

- Defining the objectives to be achieved. We recommend that these goals be:
 - Specific: that is, as specific as possible. When the objective is read by any member of the faculty, they should be able to understand exactly what is intended to do and how.
 - Measurable: they must respond to measurable goals. If the objective is not measurable, we will not be able to know when it has been achieved.
 - Achievable: that is, they can and should be ambitious, but possible.
 - Realistic. We must set objectives that are within our possibilities (both according to available resources and motivation) to achieve them.
 - Time-based. This will make it easier for us to identify the different stages and milestones that will allow us to accomplish them.

- Defining indicators so that an assessment can determine whether or not the objectives have been met. The indicators must respond to numerical scales and must be accompanied by an objective or goal value, according to the objective to which they refer.
- Defining the actions (at least two for each area) that are necessary to achieve the objectives. Actions will include:
 - The resources (human, material and financial) necessary to carry them out.
 - The execution period.

Next, we are going to make a list of the actions that should be implemented in each area to achieve the objectives. It is a good idea to include both a detailed description of the actions, as well as the necessary resources, people involved, leaders and a timeline.

Actions and guidelines

Technological infrastructure

The technological infrastructure must be defined so that they are consistent with the pedagogical framework and the educational project of the School, since only this subordination of technology to pedagogy guarantees a sustainable integration that will promote learning. The following aspects of technological infrastructure are outlined:

1. Connectivity in the School (internal and external)
2. Technological equipment associated with the classroom
3. Technological equipment for teachers
4. Equipment for students
5. General equipment of the School that guarantees a quick and easy management of other processes such as enrollment, minutes, reports, letters to families, tutorials, attendance or communication with the administrations.

Educational administrations help promote innovation in schools with Information and Communication Technologies (ICT), since they are considered to be a catalyst towards methodological change, from the approach of learning technologies and knowledge in curriculum development. Therefore, its objective is to develop and enhance the digital competence of teachers, schools and students. For this, there is a possible projected provision made for certain public schools for digital tablets, interactive screens and storage and loading carts, which will be the tools that complement blackboards, projectors, Interactive Digital Whiteboards and traditional printed textbooks.

We must not forget that, for technology to enhance teaching and learning, it is necessary that the digital infrastructure be operational, reliable and secure, as well as scalable, throughout the development process. Without this, its integration will not be possible, and in its absence or its limitations, we will come across one of the most foreseeable, and yet

common, problems in the integration process. Therefore, it is especially important to reflect on the answers that each School provides to these questions:

a. Do students use personal digital devices during class?

Each School should have a policy of acceptable use of technology in digitalized classrooms that has been formally accepted by all parties, and which sets forth rules for the proper use of these spaces and equipment, including a follow-up on the educational use of said tools and devices. Furthermore, it should support and promote the “bring your own device” (BYOD) model and contain detailed and explicit criteria for an acceptable use of the Internet (Acceptable Use Policy). For their part, students should have computers &/or mobile devices with specific, individualized access settings to carry out their activities in the classroom. It is necessary to guarantee the availability and accessibility of the necessary technological resources to make sure that all digital skills are acquired by all students.

b. Are digital learning environments used?

The school should have digital services to organize teaching resources and documents that are accessible to teachers and students. Teachers should organize the educational materials and resources according to didactic and methodological criteria, and they should be stored in different educational environments and the Internet, structured according to their importance for student learning, within a planned and evaluated process. The areas in each course and classroom have developed teaching units within a VLE (Virtual Learning Environment).

c. Does any tech support exist?

The school should establish a support plan for technical issues, as well as maintenance and sustainability plans, in order for their technological resources to be operational and up-to-date. There should also be a digital list of available resources (microscopes, tablets, 3D printers and other didactic materials) that are typically used by teachers/students. This facilitates the access to the use of technology, trying to bridge the digital divide through devices on loan, financial aid and technical support to solve any day-to-day problems, to create maintenance and repair protocols, to customize learning activities, and so that teachers have a working knowledge of different technical aids for students with disabilities.

d. Do students learn to behave in a healthy and responsible way?

The School should develop sequenced educational activities in relation to issues, such as security awareness or the risks of an indiscriminate use of digital technologies and standards, to foster a more responsible behavior in online environments. The school should have a set of agreements related to the implementation of legal and ethical principles associated with the use of digital information, intellectual property rights and licenses, and should share them with the educational community. In addition, there should be a sustainability plan that includes how obsolete devices will be disposed of in a safe and environmentally friendly way.

It might be a good idea to create a specific section in the School 'social harmony' plan to work on digital identity and the prevention of behaviors that go against social harmony.

e. Is the School's digital data kept in a safe way?

The organization should adopt a code of practices and processes to carry out the safe and protected gathering of the collection, validation, storage, aggregation, analysis and reporting of student data. Security measures necessary to protect confidentiality, preservation and security of academic and educational data should be defined and structured. It is important to ensure that the access to technological resources (devices, communications and online services) is always carried out in accordance with the legal requirements of data security and protection.

Leadership and Governance

A management model must be established to promote organizational digital competence in which responsibility exists that is based on shared understanding and commitment, always in line with the idea of leadership. To do this, a dynamic approach to the technological integration process should be considered, as it includes assessment mechanisms, a measurement of impact, a comparison with similar organizations, and an assessment of the implementation, in relation to the budgetary resources and available personnel. The integration of technology in an organization to promote learning is not a simple process or one that can be improvised, so reflection, planning and proper direction can guarantee optimal goals when facing this challenge.

The deployment of descriptors, on the other hand, creates an idea of an organization that seeks to modernize its educational practices using the potential that technology can offer (descriptor 1.1); makes the definition and advantages of technology for learning known both internally and externally (descriptor 1.2); seeks empirical confirmation of the impact of technology on learning through research processes in action (descriptor 1.3); and promotes the free dissemination of the knowledge to other courses and through publications and other open digital materials. In addition, the implementation plan defined here is related to issues that include the assessment of the implementation context, the importance of facilitators of the integration of technology, the existence of possible barriers, the respect for educational community members' autonomy during the technological integration process, and the promotion of incentives and rewards in relation to the integration effort, all linked with equality policies and the struggle against the underprivileged (socio-economically or other), as well as the openness to new forms of formal, non-formal and informal learning.

School leaders who want their school to become digitally competent should ask themselves the following questions:

a. Does the school have a digital strategy?

To realize whether or not the educational school has a digital strategy, the following items must be analyzed and substantiated:

- The role that informative, communicative and pedagogical technologies play is reflected in the institutional documents (educational project, school regulations, 'social harmony' plans, training plans, didactic programs, etc.)
- The school has a plan for the integration of educational technologies which, among other things, includes a series of school-wide policies on the use of the internet, health and safety, the correct use of software, etc., which are shared with the entire educational community.

- The school has a strategic plan for the organization, management and use of spaces, equipment and digital resources. In addition, it has established guidelines regarding the acquisition, renewal and updating of digital devices and technologies.
- The Plan includes the planned and structured integration of technological devices and didactic applications for the personalization of learning and educational inclusion.
- The necessary resources for implementing appropriate guidelines when using educational technologies that are clearly identified and contemplated in the personnel needs of the institution.
- The school has a coordinator or a coordination team focused on the implementation of educational technologies.
- Creation of a specific support project that favors an inclusive, accessible environment for students with special educational needs.

b. Are the results of the use of digital technology reviewed in the school?

The school will systematically assess the integration of digital technologies in all administrative and educational processes, favoring continuous improvement. The School will have a protocol to review, will collect contributions and will report periodically on the results, quality and impact of the integration of digital technologies.

c. Will the benefits and challenges be openly discussed?

There should be a training plan for the development of digital teaching competences included in the annual curriculum ("Improvement Plan", "ICT Plan", etc.). The school should have an ICT commission &/or designated teachers who, among other functions, streamline and coordinate training.

The school has defined the work lines, guidelines and objectives oriented towards the application and integration of digital technologies in all its processes.

d. Are educational technologies used to make learning more effective??

In the curricula, how its different elements (activities, methodologies, content, evaluation, use of digital resources and technologies, digital learning spaces, etc.) contribute to the development of digital competence is highlighted. The school should have coordination strategies to unify teaching programming criteria for the development of digital competence.

e. Are digital technologies used to actively involve students?

Digital technologies should be used to provide real and contextualized activities. The students, depending on their educational stage, should acquire the skills and attitudes

necessary for the use of digital tools in relation to data protection, the respect for basic rules of the social use of ICTs, and a critical use of information.

Teaching and Learning

Curriculum design and organizational decision-making at the school require a shared vision and a great deal of leadership. However, they also require all members of the school to agree upon and advance towards these new concepts. Therefore, one of the steps we must take is to begin meaningful dialogues that can help us make changes that go beyond a simple label (ie. objectives, goals, subject or area).

The institution must put together dynamics and mechanisms that include the production and use of online (preferably open) content, the creation of spaces to display this content, actions to promote their use and the action of sharing them inside and outside the School. The idea is to add value to what is developed at school, both the analogical products (for example, murals) and the digital ones that use new tools and technological skills.

In addition to what is produced in the schools, it is important to promote the use of resources that have been shared by others. One good idea could involve an institutional content sharing program: collaboration in the creation of a larger public archive, or the creation of a school-wide archive; measures that can help promote the use of digital content and preferably open educational resources.

What actions can be taken in order to put all this into practice?

The didactic units can be developed within a VLA (Virtual Learning Environment).

Teachers can prepare and monitor the curricula with digital notebooks. In the curricula, reference is made to digital skills that include resources like standard activities, websites and platforms. Criteria for the assessment of digital competence are included, based on the educational framework in force.

The educational areas and departments use the digital resources defined by the School. The activities are related to the resources and competences that the School has sequenced, according to level. The students produce OER-type content, depending on the resources and competencies defined by the School. Students and teachers use common, shared archives, where their productions are cataloged and collaborative so that contributions, annotations and participatory comments by the rest of the educational community can be made.

Professional Development

Digital technologies have posed great challenges and possibilities for the professional development of educational institutions. When referring to the professional development of its members, we would have to mention the two-fold influence of technology: on one hand, one of the basic pillars to ensure that our organization is digitally competent is that its members are digitally competent at all levels, both when using and teaching with technology, which makes their professional development essential. However, on the other hand, digital technology has created huge possibilities for professional development and institutions;

especially for schools that learn through the development of their learning ecologies, demonstrated in their Personal Learning Environments (PLEs), defined as the set of elements (resources, activities, information sources) used for managing personal learning and their Organizational Learning Environments (OLEs), which is understood to be the set of sources of information, tools, activities, cognitive mechanisms and networks of people that an organization diligently uses for learning.

It is essential to be familiar with the different options that a School leaders dispose of to promote the professional development of its faculty. In addition, it is recommended that schools consider what answers they can provide to the following questions:

How can the Personal Learning Environment of the School members be promoted?

As an organization, there are three key aspects that could be influenced to promote the PLE of its members:

- Raising the awareness of those in the organization as to the existence of their PLE to enrich it and make the most of it.
- Providing learning opportunities that are not only isolated experiences that can be used by the members of the organization in their PLE. This means that apart from being certified and therefore more valued inside and outside of their school, they can become part of their PLE.
- Encouraging autonomy and the possibility of taking advantage of the school's resources to maintain and enrich the PLE of its members, trying to ensure that the available resources (library, WiFi network, network storage, digital spaces, etc.) and others that can be acquired or opened by the School (educational accounts in tools, institutional subscriptions to spaces, etc.), are used and exploited.

How can the Organizational Learning Environment of the organization be improved?

Some basic steps must be taken:

The first one has nothing to do with technology, but rather with unifying the vision of all members in the organization regarding the basic issues that define the School and determine what the School should be like.

Once you do that, you have to set learning goals for the organization in the short, mid- and long terms (for example, being more familiar with the PLE of its members) and, with that groundwork done, establish the information and communication flow, as well as the way we relate to them. Some possibilities include:

- Making an inventory of relevant information sources (from both in and outside the institution) that everyone should be familiar with.

- Creating “commissions” that help us “curate” relevant content or locate “resources or people” that may be of interest to the organization. This work can be incorporated into some form of internal communication.
- Recreating spaces to learn via traditional school dynamics: anything from brief work meetings to seminars in which professional experiences are shared, from workshops with external experts or training programs that can impact our organization.
- Obtaining the necessary human resources (teachers) so that each person involved can allocate part of their working hours to improve their PLE in the Learning Environment.

Does the School offer any opportunities for professional development?

The training actions developed in the field of digital competence will emerge from a School Plan and will respond to the needs detected by specific &/or standardized assessment and diagnostic tools, being integrated into the curricula and educational projects.

Some guidelines include:

- The School should plan for training in digital competence based on the needs of the teaching staff and organizational needs of each school.
- The School should develop training plans aimed at developing methodological models and strategies for the use of digital technologies in teaching processes.
- The School should develop and implement training actions on the development of accessible digital educational materials and on the didactic integration of digital skills.
- The School should have a committee focused on digital competence &/or designated teachers who, among other functions, streamline, advise and coordinate training.
- The school should have an integration, mentoring and support plan for recently-hired teachers who have more limited experience in the integration of digital technologies &/or little digital competence, in order to ease their adaptation process in the classroom.
- A large percentage of the personnel (both teaching staff from all areas and departments and non-teaching staff) should participate in the training activities offered.

Are there any opportunities for professional development outside the school?

The School should promote the self-assessment and reflection on digital teaching competence, as well as the use of the digital portfolio of digital teaching competence to record the experiences of teaching, learning and training in order to plan the participation in training activities depending on the identified needs. The School should have coordinated organizational strategies to stimulate and motivate the dissemination of the training actions

that take place both in and outside the school. The School should organize &/or participate in knowledge exchange activities and events that promote teaching innovation.

Assessment

In terms of how technology affects assessment institutionally, it is necessary to discuss three main levels:

1. The assessment of student learning.
2. The certification of student learning.
3. The assessment of teaching programs and processes that are carried out within the institutions through learning analytics.

Therefore, a School that intends to become a digitally competent organization must ask itself these questions:

a. Is the assessment carried out from a competence approach?

The institution should promote the use of assessment tools that are varied and accessible online (rubrics, learning targets, learning journals, etc.) in which skills, competencies and attitudes are taken into account, in addition to knowledge acquisition. The School should promote the use of methodologies, techniques, tools and instruments through technologies that can provide information that will produce an immediate or real time result to students and teachers. The Annual Academic Program should include criteria for the assessment of digital competence, based on the educational framework in force.

b. Are the digital technologies used for self- and peer assessment?

Digital assessment formats that integrate digital technologies should be promoted, encouraging the use of different types of assessment, such as summative, self- and peer assessment, among others.

The development of a peer mentoring program will encourage the development of digital competence.

c. Do students use digital technologies to document their learning?

The use of learning diaries that foster reflection and documentation on the students' own learning processes (portfolio) should be encouraged.

d. Is the digital competence that students acquire outside the school itself valued?

The School should provide indicators that allow students to evaluate their own digital competence and organize their own learning itineraries. The School should evaluate students' skills depending on their use of digital technologies, along with certificates and open digital credentials, as proof that certain skills have been acquired by students.

e. Is the digital information analyzed to improve learning experiences?

The school's strategic plan should be based on evidence provided through digital information. The organization should use learning analytics to optimize individual and group learning outcomes and organizational performance. The School should apply digital technologies in its main academic management procedures, such as report cards, attendance, assessment minutes, curricular adaptations, guidance services, mentoring, the management of libraries or the management of extracurricular activities.

Contents and Curriculum

As previously mentioned, a digitally competent institution is capable of establishing dynamics and mechanisms that allow for the creation and use of digital content, encouraging them to be open. Therefore, the following questions should be considered:

a. Do teachers create digital content?

Teachers should develop &/or adapt digital teaching materials for the development of their teaching process within the School. The school should encourage and support staff in the creation of subject-specific digital content, for their use in both formal and informal curriculum areas. The teaching staff should pay close attention to diversity and other aspects related to accessibility for all digital materials that are created &/or adapted.

b. Are user licenses taken into account and, when possible, is free digital content used with open licenses?

The School should establish policies and procedures regarding licenses for content (ie. e-books, journals), software, applications, platforms, and other educational resources purchased from commercial publishers/vendors. The school should promote the creation, use and reuse of open educational resources (OER). Students and teachers should use common, shared archives in which their products are cataloged and include the possibility of adding contributions, annotations and participatory comments by the rest of the educational community. The students produce OER-type content according to the resources and competencies defined by the School.

c. Do students learn about the proper use of sources (avoiding plagiarism)?

The School should have policies and procedures in place to ensure that all those involved are well-informed about copyright and intellectual property rules when digital content is acquired, used, recombined, or created. The school should develop sequenced educational actions, according to student age, related to the proper use of and reference to the sources of information used.

d. Are digital technologies used taking into account their transversal and comprehensive nature?

The School should encourage and support staff and students to be creators and consumers of digital content that is inter-curricular and specific to each subject, for their use in both formal and informal areas of the curriculum. The possibilities of more integrated learning models provided by technologies should be explored: ubiquity in learning, integration of content from various subjects, transversal learning, interdisciplinary project work, etc.

e. Does the student body create digital content?

The school should encourage and support students to be creators of subject-specific and cross-curricular digital content, for their use in both formal and informal curriculum areas.

f. Do students develop their digital competence from all areas or subjects?

In the academic programs, reference is made to the digital competences and include digital resources such as activities, websites and platforms. Criteria for the assessment of digital competence are included, based on the educational framework in force. The activities involving student use of digital technologies involve creative and collaborative aspects.

Support and Collaboration Networks

Digital literacy should be fostered and based on the construction of common knowledge within the organization and the openness to contributions that other outside agents can make to the school's competence. We need to put value on how important networking, the pooling of resources and collaboration is for educational organizations. Schools that want to advance towards becoming a digitally competent educational organization should consider the answers to the following questions:

a. Is there an exchange of information on the use of digital technologies within the organization itself?

The school should have a plan for the digital exchange of knowledge and information. They should also have a mentoring plan for newly-hired teachers that promotes the improvement of digital competence and the use of digital technologies within it. The school should have a figure (coordinator, commission, etc.) in charge of stimulating and disseminating the implementation of innovative projects among the faculty.

b. Do teachers participate in professional development networks?

Teachers should be part of &/or participate in networks, portals and educational &/or professional communities. Actions aimed at methodological innovation supported by the use of ICT should be part of the School's annual program &/or training plan. The ICT commission should encourage and spread the implementation of innovative projects among the faculty. The school should collaborate with other organizations (other schools, institutions or companies) in innovation projects. The School should organize &/or participate in knowledge-exchange activities and events that promote teaching innovation.

c. Are different communication tools used within and beyond the educational community itself?

The School should prepare and create an explicit communication strategy, providing and encouraging interactive environments through institutional social media that promote communities in networks linked to the School. The school should have a technological infrastructure, Internet or intranet services and organization to support the communication and interaction within the Educational Community (such as emails, desks, virtual classrooms, social media, etc.). The school should have integrated technological procedures to promote personalized institutional communication and interaction among educational and administrative users. Technology use should be well thought-out, structured and systematic, targeted at personal environments (mobile and home devices), and aimed at educational interaction (onsite, remote and continuous). The communication outside of the School with the educational community and other entities should be carried out on different web applications that allow for bidirectional communication (permits users to make comments, complaints, suggestions and contributions), a digital agenda and social networks.

All documentation on accessibility, tutoring and guidance (if applicable) should be accessible to students, teachers and families through an online web application. The online content and digital activities that support tutoring and guidance should be highlighted so students and families can access them. The information on continuous assessment and statistics should be accessible online, and in a relevant manner, to students, families and teachers.

The School should collaborate with other organizations (other schools, institutions or companies) in innovation projects. The school should develop informative, guidance and training actions on the proper use of information and communication technologies for the educational, administrative and social processes for students and other users of educational services. The school should propose training activities for the development of the digital competence of families. The school should make installation and Internet access resources and office tools available for students and families.

Establishing stable lines of cooperation with public or private organizations that connect student learning with real-life should be fostered, including with museums, associations, foundations and NGOs.

Timeline proposal for actions

The final part of the Schools Digital Plan will include the different actions that will be carried out, including the necessary resources (human, material and financial), the effort they require (ie. whether or not they are approachable in the mid- or long-term), the agents involved, a timeline for each action and the time needed to carry them out, as well as the targets and indicators to assess each action's level of achievement.

Assessment of the Plan

Indicators for the annual assessment of the School Digital Plan and the actions.

A set of descriptors will be needed for any school that intends on achieving excellence in the integration of digital technologies (in the organizational, pedagogical and technological dimensions). Each of the descriptors has been assigned to a specific question within one of the key elements of DigCompOrg, although it is true that, due to their comprehensive and transversal digital competence nature, some of them might provide answers to other questions, as well.

These indicators may be used and reviewed at the beginning of each academic year in order to adapt them to each school specific conditions.

School Digital Plan

Description and Guide



GOBIERNO
DE ESPAÑA

MINISTERIO
DE EDUCACIÓN
Y FORMACIÓN PROFESIONAL

SECRETARÍA DE ESTADO
DE EDUCACIÓN
DIRECCIÓN GENERAL
DE EVALUACIÓN
Y COORDINACIÓN TERRITORIAL



INSTITUTO NACIONAL DE
TECNOLOGÍAS EDUCATIVAS Y DE
FORMACIÓN DEL PROFESORADO