

## CHAPTER II

### Support for specific training plans in the algerian university system: new teachers and online teaching

MERCEDES LÓPEZ-AGUADO

*University of León (Spain)*

mmlopa@unileon.es

FRANCISCO JAVIER HOYUELOS ÁLVARO

*University of Burgos (Spain)*

fjha@ubu.es

FRANCISCO JOSÉ GARCÍA-PEÑALVO

*University of Salamanca (Spain)*

fgarcia@usal.es

#### 1. INTRODUCTION

The execution of the Twinning Proposal between the Regional Ministry of Education of Castilla y León (Spain) and the Ministry of Higher Education and Scientific Research (MESRS) of the People's Democratic Republic of Algeria, has as its main objectives to support the Algerian Ministry in the development of three major components or lines of work.

In the first place, in the design of the methodology for the creation of new training offers, for Bachelor's and Master's degrees and PhDs, based on the methodology for the development of the training offer adopted within the framework of the "PAPS-ESRS" (Support Programme for the Sector Policy for Higher Education and Scientific Research).

Secondly, in the development of the necessary methodology to accompany the implementation of these teachings through the promotion and development of new pedagogical practices and a conception of the change through the training of teachers and the promotion of innovation in teaching.

And, thirdly, support for pedagogical governance and didactic management aimed at school managers, administrators, training teams and heads of Pedagogical Committees of Algerian Universities.

This document describes one of the actions carried out within the second line, which is called *méthode d'ingénierie pédagogique renforcée par l'accompagnement des enseignants dans le développement de leur pratique pédagogique et la conception du changement* (A pedagogical engineering method reinforced by support for teachers in the development

of their pedagogical practice and the design of change), the main objective of which is to support the process of designing actions aimed at the professional development of Algerian teachers/researchers.

This line is developed around eight activities that cover all facets of both the organisation and design of training plans and the specific training actions necessary for the comprehensive professional development of Algerian teachers.

Structure of a training unit and design of teacher training plans.

Implementation of hubs for online teaching in Algeria (at least three hubs) -infrastructure for online teaching and training programmes for teachers.

- Teacher training in teaching methodologies.
- Teacher training in teaching technologies.
- Teacher training in personal and social development.
- Teacher training in research skills.
- Teacher training in internationalisation.
- Courses on demand for university centres.

This chapter describes one of the actions framed in supporting the development of training units for teacher professional development. It involves the continuity of work for the design of general training plans, establishing the bases for the design of two **specific** training plans: the training plan for online teaching and the training plan for new teachers.

The expected products of this action are:

- Establishment of inter-university coordination systems through the creation of inter-university groups that promote collaborative work and the optimisation of time and resources.
- Progress made in the design of general teacher training plans.
- Initial design of specific training plans: new teachers and online teaching.
- Training of trainers for:
  - New teacher training.
  - Teacher training for online teaching.

The rest of the chapter is organised as follows: Section 2 explains the work methodology; Section 3 presents four good practices related to the training of new teachers, the strategic vision of online teaching and the training of teachers to face the challenge of changing or adapting their teaching paradigm to the virtual context.

## 2. METHODOLOGY

The work methodology used was based on the following elements:

1. Ensuring that the learning process enabled the training recipients to become trainers of trainers.

2. Experts Dr Mercedes López Aguado, Dr Francisco Javier Hoyuelos Álvaro and Dr Francisco José García-Peñalvo made presentations related to the models and specific training plans for new teachers and for online teaching in Castilla-León universities:

- Online training models.
- The training plans for newly hired teachers at the universities of Burgos and Salamanca.
- The model of common referents for Castilla y León of non-face-to-face official degrees.
- Examples of online teaching in undergraduate degrees at the University of Burgos.
- Examples of online teaching in Master's degrees at the University of Salamanca.
- The skills that teachers of online subjects must have.
- The skills that new teachers must have.
- A model for teacher training plans for online teaching.
- The advantages of inter-university coordination.

3. Collaborative workshops were also held to reflect on and further explore the following aspects:

- Promotion of the construction of the general training plan and the specific one for online teaching.
- Possibilities for inter-university collaboration and the generation of stable work groups for cooperation and exchange of resources.
- Analysis of the necessary skills of teachers who will teach online.
- Proposal of training axes for online teaching.
- Instructional design of an online meta subject.
- A model for the New Teacher Training Plan. The training competencies of Order No. 932 of 28 July 2016 of the People's Democratic Republic of Algeria "Establishing the pedagogical support conditions for newly hired teacher-researchers" (with those proposed by the state university teaching network RED-U). The training plan for new teachers at the universities of Burgos and Salamanca was presented.

The methodologies used were the following:

- Master presentations: Through specific talks, the most significant aspects of the models for online teaching were addressed, as well as the changes of skills that they entail for the teaching staff and therefore the need to include specific training for online teaching in the general permanent training plans.
- Workshops: Various training workshops were held to put into practice some of the aspects discussed and to make progress in the development of the general training plan which each of them has to develop in their workplace in the coming months.

The keynote presentations made it possible to share with attendees the organisational models of the universities of Castilla y León and activities relating to the training of new teachers and training for online teaching.

Another action carried out was to promote the creation of inter-university work groups oriented towards collaborative work and the optimisation of time and resources.

The workshops held and the objectives achieved are listed in chronological order in Table 1.

Workshop	Objectives achieved
<i>Workshop 0: Summary of assigned task, development of a training plan</i>	— Determine the degree of progress of the proposals
<i>Workshop 0-1: Analysis of the possibility of inter-university collaboration</i>	<ul style="list-style-type: none"> <li>— Determine the Permanent Training Plans that the participants are designing and their level of development</li> <li>— Establish groups to develop inter-university collaboration procedures</li> <li>— Determine the resources that each University is developing in order to establish channels of collaboration and re-use of resources and materials</li> </ul>
<i>Workshop 1: Inter-university cooperation on teacher training</i>	<ul style="list-style-type: none"> <li>— Raise awareness about the need for the various universities to work in a coordinated way</li> <li>— Specify the possibilities for collaboration and the resources that are already available in the various Universities</li> </ul>
<i>Workshop 1-1: Analysis of the skills of the online teacher by reference to Order 932</i>	<ul style="list-style-type: none"> <li>— Describe the skill profile of the online trainer</li> <li>— Establish the axes along which the specific training plans should be developed</li> </ul>
<i>Workshop 2: Instructional design of an online meta-course</i>	
<i>Workshop 2-1: Presentation of the instructional designs carried out</i>	<ul style="list-style-type: none"> <li>— Establish the structure of an online course</li> <li>— Relate and describe the basic elements for an online course</li> </ul>
<i>Workshop 3: Viewing of the videos produced</i>	<ul style="list-style-type: none"> <li>— Strengthen the motivation for the establishment of stable Algerian inter-university cooperation groups</li> <li>— Present the work carried out by the various Algerian universities</li> <li>— Increase inter-university transfer and collaboration</li> <li>— Generate embryonic inter-university training units</li> </ul>
<i>Workshop 4-1: Two activities were proposed with the help of QR codes to answer a series of questions. After answering them they were shown how the answers are stored in Excel documents, which avoids having to transcribe the answers. These activities were carried out using the Windows Forms application</i>	

**Table 1.** List of Workshops and objectives achieved.

### 3. GOOD PRACTICES

#### 3.1. Training model for new teachers at the University of Burgos (UBU)

Teresa Pagès (2014) coordinated a study in which 15 Spanish universities participated, for the State Network of University Teaching (RED-U), concluding that universities should ensure that teachers, especially new ones, have training that focuses on the teaching model of their university.

Casado and Delgado (2011) point out that a large proportion of new teachers do not have sufficient didactic training to teach their subjects, which generates feelings of insecurity, although they are highly motivated in their teaching careers.

The University of Burgos has been developing the Specific Training Programme for New Teachers (PFPN) since 2009, aimed at teachers hired in the last five years and scholarship holders with assigned teaching support tasks (Universidad de Burgos, 2015a).

Each new teacher chooses a mentor to monitor his or her progress. In the work carried out by Saz Roy *et al.* (2016) most new teachers see the mentor as a point of support and guide.

The requirements for being a mentor at UBU are:

- to be a full-time teacher;
- to belong to a innovation in teaching Group;
- to have obtained an “outstanding” or “very outstanding” grade under Docentia.

The Mentor is given recognition in the evaluation of his or her teaching within the Docentia Programme, and for each year of participation also has a reduction of 0.5 ECTS credits.

The contents of the New Teacher Training Plan (PFPN) are divided into the following blocks:

1. Being a teacher at the University of Burgos.
2. Teaching in the current university context.
3. Information and communication technologies.
4. Research.
5. Promotion of teachers' health.

With several thematic units in each of them.

To obtain the Initial Training Certificate in University Teaching, new teachers need to complete a total of 75 hours of training and present an innovation in teaching project with the work developed as a final report, which is evaluated by his/her mentor and two members of the Teacher Training Committee, applying the practical guide prepared for this (Sáiz *et al.*, 2015). Hoyuelos, Cámara and Sáiz (2017) point out that since the introduction of the practical guide to evaluating the report presented by new teachers, the grades obtained by the reports have been homogenised and do not depend on the evaluator.

A total of 130 applications have been received, with 56 of the applicants being given PFPN certification, as shown in Table 2.

In the other universities of Castilla y León, a training programme is also being developed for new teachers, sharing the spirit and main lines of design of that presented by the University of Burgos.

Order No. 932 of 28 July 28 2016 of the (Ministère de l'enseignement supérieur et de la recherche scientifique d'Algérie, 2016), established the conditions of pedagogical support for newly hired teacher-researchers in Algerian Universities. In which a framework of skills is proposed for university teaching staff and an adaptation of the training plans according to the twelve teaching skills established. Many of these skills are proposed in Spain by the State Network of University Teaching (RED-U) (Pagès, 2014).

Academic year	Applications admitted	Certificates issued
2009/10 <sup>1</sup>	47	27 <sup>1</sup>
2010/11 <sup>1</sup>	4	
2011/12 <sup>1</sup>	20	
2013/14 <sup>2</sup>	8	4
2014/15 <sup>2</sup>	8	7
2015/16 <sup>2</sup>	6	6
2016/17 <sup>2</sup>	9	4
2017/18 <sup>2</sup>	4	1
2018/19 <sup>2</sup>	10	7
2019/20 <sup>2</sup>	6	They will be evaluated in the 2021/22 academic year
2020/21 <sup>2</sup>	8	They will be evaluated in the 2022/23 academic year

<sup>1</sup> Initial training programme for new teachers-March 2009.

<sup>2</sup> New teacher training plan (PFPN) - December 2012.

<sup>3</sup>Two of them come from the previous plan.

**Table 2.** List of applications admitted by academic year and PFPN certificates issued.

### 3.2. Online learning model of the University of Salamanca

In the context of the PAPERS twinning project, a presentation was made of the University of Salamanca's online learning model, which is based on the eLearning reference model in face-to-face universities (García-Peñalvo, 2020, 2021a) and takes as its

starting point the unstoppable digital transformation of higher education institutions (Cabero-Almenara & Llorente-Cejudo, 2020; García-Peñalvo, 2021b) which if anything has been further intensified and accelerated by the COVID-19 pandemic (García-Peñalvo & Corell, 2020).

The digital transformation implies a series of profound and coordinated changes in culture, staff and technology that allow new educational and operational models in order to transform the operations, strategic directions and the value proposition of an institution (Grajek & Reinitz, 2019).

A model for non-face-to-face or online (including blended) teaching, will make sense only if it is based on the strategic perspective of the educational institution and is congruent with its mission and vision.

From this starting point the next step will be to install the necessary ethical and service pillars and those of the technological infrastructure and the pedagogical model (see Figure 1).

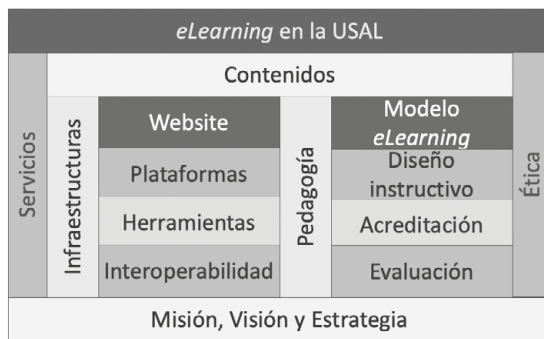


Figure 1. Pillars of the remote training model of the University of Salamanca (USAL).

eLearning en la USAL	eLearning at USAL
Contenidos	Contents
Servicios	Services
Infraestructuras	Infrastructure
Website	Website
Plataformas	Platforms
Herramientas	Tools
Interoperabilidad	Inter-operability
Pedagogía	Pedagogy
Modalidad eLearning	ELearning mode

<b>eLearning en la USAL</b>	<b>eLearning at USAL</b>
Diseño instruccivo	Instructional Design
Acreditación	Accreditation
Evaluación	Evaluation
Ética	Ethics
Misión, Visión y Estrategia	Mission, Vision and Strategy

On this basis, a layered model is proposed (Buschmann *et al.*, 1996) which is represented in Figure 2.



**Figure 2.** Structure of the reference model for online education. Source: (García-Peñalvo, 2021a).

Política y estrategia	Policy and strategy
Identidad y comunicación	Identity and communication
Ética, privacidad y seguridad	Ethics, privacy and security
Adaptación de los servicios académicos	Adaptation of academic services
Modelo educativo	Educational model
Contenidos	Contents
Infraestructura	Infrastructure

To apply an online education strategy, it is necessary to have a technological infrastructure with three dimensions: management and governance, physical infrastructure and logical infrastructure (Piattini Velthuis & Mengual Pavón, 2008).

The physical infrastructure to support online teaching must cover the various needs of connectivity, servers, storage space, audiovisual content production, etc.

The logical infrastructure must be directed to defining the university ecosystem (García-Peñalvo, 2018) so as to maximise inter-operability, evolution of the ecosystem software components and the user experience of the people who are also part of this ecosystem (García-Holgado & García-Peñalvo, 2018).

Contents must be given special consideration since, together with the pedagogical guidelines, they will be the key to the development of the instruction. In an online education programme, contents by themselves do not guarantee the quality of the training process, but they are nonetheless very important. Ensuring institutional contents that have a periodic update programme is one of the key points for universities, as well as being a risk factor due to the obsolescence of content due to poor management of the creation and update flow.

The layer dedicated to the educational model is where the delivery of the training actions is designed. Together with the contents, services and technology, it is the key element for sustaining the quality of an online offer. There must be a close connection with the institutional strategy on online education, to mark the degrees of freedom that teachers will have and the configuration of student groups, which will be directly related to the number of teachers necessary to preserve the quality of teaching, based on ensuring interaction among participants, in the face of the effect of massification, which, on the other hand, may be desirable in other online course formats, such as MOOCs (*Large-Scale Open Online Courses*) (García Aretio, 2017).

The academic services of the universities must adapt to the reality of the non-face-to-face academic offer because the services cannot be duplicated so as to attend to both face-to-face and non-face-to-face courses in a differentiated way. Thus, among others, regulations and workflows must be modified for the verification of degrees, enrolment, quality evaluation, online classroom reservation, online practices, examination regulations, regulations for the defence of end-of-course projects or theses, information to students, privacy regulations, etc.

The layer of ethical aspects and the guarantee of privacy and security is the institution's guarantee against abusive practices and lack of transparency in the management of personal data of all those involved in the teaching/learning process.

Confidentiality and respect for the privacy of individuals must prevail over any other criteria in non-face-to-face education. In this area, institutional regulation must be based on the existing legal framework, such as the General Data Protection Regulation (GDPR) (European Parliament & Council of the European Union, 2016).

The purpose of the identity and communication layer is to define a brand that identifies this training offer within a more powerful brand which is the name of the physical university. It is a matter of making best use of the competitive advantage of having a physical university whose name will already be positioned in the higher education sector, but which must be given specific weight in the online education sector.

Finally, the adoption of an online education model requires a commitment from the University as a whole, starting with its governance team. Therefore, the definition of a strategy on non-face-to-face education (both online and blended) in a public university must be an institutional project, not an isolated or personal project, and must be reflected explicitly, not merely in passing, in the institutional strategic plan. This strategy must be aligned with the global policy on the digital transformation of the institution, because several administrative procedures will be affected by the launch of online degrees. Accordingly, the institutional strategy must be aligned with any other existing strategy in this field in the Administration with powers in Education and with the existing higher order regulations.

From an internal perspective, the strategy to be defined with respect to online education must be of the “win-win” type, in which all the actors involved (teachers, students and service personnel) win and the university wins. In this regard, recognition of online teaching work must be fully covered and encouraged if the initial resistance to the acceptance of a new paradigm for a significant part of the teaching staff is to be overcome.

This strategy must be based on a set of technological incentives and facilitators (technological ecosystem designed to maximise the user experience, useful and easily accessible tools and services for all participants, etc.), methodological (promotion of mass courses, use of the flipped classroom, etc.) and university policy (recognition in the template model, staff reinforcement, both for professors and technicians, indirect incentives in the form of internationalisation, innovation projects, teaching publications, etc.).

As a final recommendation, the university’s governing council has the responsibility of making sure this strategy reaches all members of the university community, permeating and involving all the vice-chancellors and affected services in defining an ecosystem of university services for online education.

### 3.3. Online learning model of the University of Burgos

A strategic line of the University of Burgos is the delivery of official Bachelor’s degrees in online mode. To begin teaching, in September 2014, the first four online degree courses programmed by the University of Burgos, a training plan in eLearning methodology, was designed and implemented, entitled “Teaching in the 21st century: Strategies for online teaching”, composed of three modules: the first one Methodological, with three training courses and taught by professors of the Open University of Catalonia (UOC), the second Technological, with 11 courses, and thirdly a Training Day on Intellectual property.

The Virtual Teaching Training Plan (PFEV) (Universidad de Burgos, 2015b) was approved by the Governing Council of the University of Burgos on 20 February 2015. The PFEV offers Teaching and Research Staff a general qualification in online training, in all aspects ranging from the use of technology itself, through training planning, teaching action, content creation and evaluation. In addition, this plan must also serve to meet the specific needs of teachers, which differ according to their level of initial qualification in the subject, the area of knowledge, the different didactic methodologies applicable in their corresponding subjects, etc.

The general objective is to provide comprehensive training in the professional field of eLearning, so that teachers and researchers are in a position to efficiently undertake the process of “virtualising” their subjects.

The specific objectives are:

- Train in the use of the main technological tools and solutions, both present in the virtual campus and outside of it, so that teachers can shape their own technological environment for their training actions.

- Provide specific and practical training on the different aspects involved in teaching or tutoring in virtual environments.

- Stimulate the creation of quality digital content for educational use by learning different tools and technological solutions, as well as strategies for the correct development of said content.

- Stimulate the ability to search for quality digital content already prepared for educational use.

- Provide indications and strategies for a correct design of training actions, as well as their evaluation.

The PFEV is structured in five modules, as can be seen in Table 3:

- Module 0. Transition to online teaching.

- Module 1. Technology.

- Module 2. Content creation.

- Module 3. Teaching action.

- Module 4. Training design and evaluation.

- Module 5: Digital identity and intellectual property.

The complete PFEV programme consists of 310 hours of training and is grouped into a set of training actions of different types, such as:

Short face-to-face courses for each degree lasting 2 hours, with additional autonomous work of about 20 hours.

Face-to-face training actions on UBUVirtual (*Moodle* platform), taught by UBU trainers.

Online training actions, through the use of the virtual space of the UBU, with a duration of two weeks each, 30 hours of work estimated online.

Teachers can take the courses in any order they wish, except in some cases where it is essential to have taken “UBUVirtual: Tools A” before UBUVirtual: Tools B” and in others where it is advisable to take a certain course before any other of those belonging to that module.

Table 4 shows the number of training actions carried out by the PFEV and the total number of training hours throughout the different academic courses of the plan.

Despite the stable and permanent nature of the PFEV, due to the exceptional situation caused by the COVID-19 pandemic, the Institute for Training and Educational Innovation (IFIE) of the UBU organised several courses and digital seminars so that teachers could adapt their face-to-face courses to an emergency online format, these courses being integrated into the PFEV. Specifically, five digital seminars were established, with 21 webinars in total, the objective of which was to help teachers in the management of essential tools for this teaching model. Some of the webinars were very well received and were the PFEV actions most in demand in the 2019-2020 academic year.

	<b>Module 0</b>	<b>Module 1</b>	<b>Module 2</b>	<b>Module 3</b>	<b>Module 4</b>
A	M0. Five Short Face-to-Face Courses	M1A UBUVirtual: Tools A	M2A Creation of educational digital content	M3A Concept of eLearning and introduction to the work of the virtual teacher	M4A Design and management of training actions
B		M1B UBUVirtual: Tools B	Basic skills to create didactic still and moving image documents in online teaching	M3B Efficient use of the tools available to the virtual teacher	M4B eActivities for skills development
C		M1C Google Tools in educational contexts		M3C Strategies and dynamics of communication and interaction in virtual contexts	M4C Evaluation and quality management in eLearning
D		M1D Social media and education			M4D Qualifications at UBUVirtual
E		M1E Blogging and educational microblogging			

Module 0	Module 1	Module 2	Module 3	Module 4
Module 5: Intellectual Property at the University The university professor of the 21st century: Teaching Identity in Teaching				
Training Day on Online Teaching based on experience in official UBU degrees				

**Table 3.** Structure of the Training Plan for Virtual Teaching. In columns, the modules that make up the plan are shown, labelled as M0, M1, M2, M3, M4 and M5. In rows, the training actions of each module, labelled with the letters A, B, C, D, E.

Academic year	No. of training actions	Total hours offered
2014-2015	9	168
2015-2016	10	136.5
2016-2017	14	190
2017-2018	18	173
2018-2019	7	95
2019-2020	39	143.5
2020-2021	12	79

**Table 4.** Evolution of the number of training actions offered within the PFEV per academic year.

The data for the 2020-2021 academic year were extracted on 4 June 2021.

In conclusion, 86% of the UBU teaching and research staff have carried out at least one PFEV activity.

### 3.4. Recommendations for the design of online teaching

The public universities of Castilla y León collaborate on Training and Innovation through the Work Group for Teacher Training and Innovation in Teaching (FIUniCyL). There are many aspects that have been worked on during the more than 10 years of life of this group, such as the exchange in the field of University teacher training, or in different aspects related to innovation in teaching.

During the years 2018 and 2019, this group made a special effort to coordinate online teaching, which has crystallised in the preparation of different documents. Among them, a guide to basic concepts for non-face-to-face (blended or online) teaching, defined by a flexible interaction between teachers and students (FIUniCyL, 2019). Some of the most salient elements of this document are described below:

University teaching can take place in three different modes (Ministerio de Universidades, 2021):

1. Face-to-face teaching: the interaction between the teacher and the student requires the physical presence of both in a certain place and at the same time.

2. Blended teaching: combines face-to-face and online methodologies, the latter assuming between 40% and 60% of the total credit load of the degree.

3. Virtual teaching: the virtual teaching methodology applied to the curriculum of an official Bachelor's or Master's degree consists of the articulation of the teaching activity through academic interaction between the teaching staff and the student body without requiring their physical presence. This mode of university education is characterised fundamentally by being based on the intensive use of digital information and communication technologies. In terms of credit load, a Bachelor's or Master's degree may be defined as taught in virtual mode when at least 80% of the academic credits (ECTS) of which it is composed are taught in virtual mode.

The basic elements that must be designed to define suitable virtual environments are described in Figure 3.



**Figure 3.** Essential elements for the definition of virtual learning environments.

<b>Elementos para definir entornos virtuales adecuados</b>	<b>Elements to define suitable virtual environments</b>
Guía docente de la asignatura Estructura y Cronograma de trabajo Materiales de estudio/aprendizaje Mecanismos para la realización de tutorías Actividades de adquisición de competencias Criterios de evaluación de actividades y, en su caso, pruebas de evaluación	Teaching guide of the subject/course Structure and work schedule Study/learning materials Mechanisms for conducting tutorials Skills acquisition activities Activity evaluation criteria and, where appropriate, evaluation tests

The basic element for the design and organisation of any subject is, as in the case of face-to-face teaching, the Teaching Guide. In this organisational resource the objectives, the skills, the contents, the schedule of learning activities (tasks), the tutoring tools and

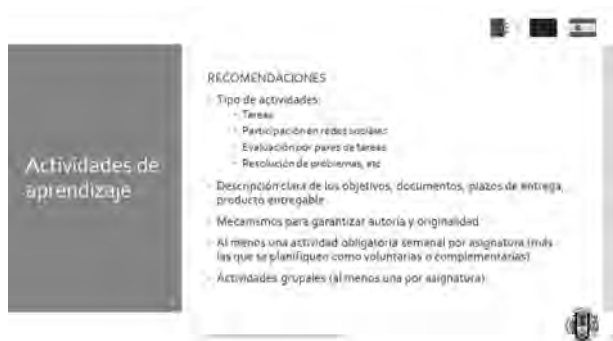
the procedures, criteria and standards for evaluating the skills, as well as the documentary sources, are set out. It is highly recommended to accompany this guide with a Student Manual, which will develop or expand it.

In the case of non-face-to-face teaching, it is also especially important that the work structure, as well as the schedule for carrying out the different learning tasks, readings, viewing of videos, deliverables, tests, etc., be clearly defined and identified with precision from the start.

One of the essential aspects of non-face-to-face teaching is the creation of appropriate learning content. The most recommended are, for example, Knowledge Pills (educational material in video format preferably of short duration), external resources (hyperlinks), learning and/or evaluation activities with deliverable products, self-assessment activities, and textual content materials (hypermedia and with extension links), which may include—where appropriate—the script of the knowledge pills. The compilation of all the textual content materials of a certain subject, with the addition of an index and a cover, constitute the so-called Student Manual.

The mechanisms for conducting tutorials must also be clearly defined. In these learning ecosystems it is essential to have one or more forums in which students can raise questions about the subject and of course they can make inquiries through private messaging.

Recommendations regarding the design of learning activities for non-face-to-face teaching are described in Figure 4.



Actividades de aprendizaje	Learning activities
RECOMENDACIONES	RECOMMENDATIONS
Tipo de actividades:	Type of activity:
Tareas Participación por pares de tareas Resolución de problemas, etc	Tasks Participation by pairs of tasks Troubleshooting, etc.

Actividades de aprendizaje	Learning activities
Descripción clara de los objetivos, documentos, plazos de entrega, producto entregable	Clear description of objectives, documents, deadlines, deliverable product
Mecanismos para garantizar autoría y originalidad	Mechanisms to ensure authorship and originality
Al menos una actividad obligatoria semanal por asignatura (más las que se planifiquen como voluntarias o complementarias)	At least one compulsory weekly activity per subject (plus those planned as voluntary or complementary)
Actividades grupales (al menos una por asignatura)	Group activities (at least one per subject)

**Figure 4.** Recommendations for the design of learning activities.

Finally, it is essential to clearly establish all aspects related to the evaluation (Abella García *et al.*, 2020; García-Peñalvo *et al.*, 2020):

- Mode (continuous/final, self-evaluation/peer evaluation/hetero-evaluation, etc.).
- Products to be evaluated (written tests, essays, projects, exercises, problems, etc.).
- Evaluation criteria and standards.
- Assessment instruments to be used (check lists, guides, scales, practical guides, etc.)
- Qualification system, weight of each element in the final qualification.
- Tools to be used to detect plagiarism and its consequences.

#### 4. CONCLUSIONS

Activity 2.1 “Structure of a training unit and design of training plans for teachers” falls within Phase 2 “Adoption of a pedagogical engineering method reinforced by the accompaniment of teachers in their pedagogical practice and their conception of the change” of the twinning project “Support for the Ministry of Higher Education and Scientific Research in strengthening the pedagogical skills of teachers-researchers and governance capacities of administrators (PAPERS)” between the Ministry of Higher Education and Scientific Research of Algeria and the Ministry of Education of the Regional Government of Castilla y León, Spain; activity that was carried out by experts Dr. Mercedes López Aguado, Dr Francisco Javier Hoyuelos Álvaro and Dr Francisco José García-Peñalvo.

In this mission, it was sought to share good practices in the training of university teachers, with a special emphasis on the remote mode, which were developed in the Public Universities of the Autonomous Region of Castilla y León in Spain, as well as to carry out a set of practical workshops with Algerian university teachers to facilitate the adoption and transformation of the practices presented to the situation in Algeria.

Specifically, in the good practices section the following were shared:

- Analysis of the online teaching model in Castilla y León.
- Analysis of the specific training plans in Castilla y León with respect to newly hired teachers and for online teaching.
- Comparison of the training plans for new Algerian and Spanish teachers.
- Analysis of teaching skills related to online training.
- Of the workshops developed with Algerian university professors, we wish to highlight:
  - Creation of a group video on the possibilities of inter-university collaboration in training matters.
  - Creation of a group video about the materials and resources that have already been prepared by the various universities and that could be shared.
  - Determination of the axes to be developed by training for online teaching.
  - Realisation of an instructional design of an online meta subject.

To close this activity, analysis and prospective meetings were held in the Ministry of Higher Education and Scientific Research, most notably with the participation of the Director General of International Cooperation of the Ministry, Mr Arezki Saidani.

From the conversations held, the strategic objective of the Ministry of transforming Algerian universities with the 2030 horizon stands out. This has to be based on a profound digital transformation (García-Peñalvo, 2021c), with a perfectly defined roadmap (García-Peñalvo, 2021c), especially at the teaching level to incorporate distance education (Crisol-Moya *et al.*, 2020) and thus be able to face an expected increase in university students, which would exceed three million by that date.

The Ministry perceives the need to make progress in substantially improving technological infrastructures and, above all, those related to network communications. A second aspect to take into account is the development of digital educational content to cover the offer of online degrees. The third axis is made up of the human resources necessary to handle this training offer. Primarily, a transversal legal framework is required that grants the same validity to face-to-face degrees and to online degrees. Secondly, continuous training plans for teachers to be able to meet the specific requirements of online teaching, which are complementary to those demanded by face-to-face teaching and which must take into account the reference documents of the Ministry based on the skills that every teacher must develop.

From the perspective of the experts, the need to define said strategy and the roadmap on a quality assurance system for the qualifications, both in person and online, was emphasised in order to further the equivalent consideration of both. In addition, the importance of the human factor was highlighted, that is, the teaching staff, who must have their commitment to this teaching methodology recognised and have at their disposal both the best possible technical support and training plans that are adapted to

the evolution of learning technologies. Technology and the professional development of teachers are two aspects that must be developed in parallel, because technology without people is useless and people without the appropriate technological means will not be able to develop any established online education strategy.

Regarding the human factor, much emphasis was placed on the need for innovation groups to be formed within universities, and also inter-university, to lead this transformation. These groups must lead Algerian university teachers to empower online education in the country. These groups may be accompanied by international experts, the twinning project and other universities, to jointly advance in achieving the objectives set in the ministerial strategy for online education.

The entire quality assurance process must be consistent with international guidelines that support open knowledge in content development and respect for an ethical framework that includes all actors in the process.

With the perspective of the passage of time and when contemplating the work carried out and the results obtained, the team of experts considers that the objectives initially set were achieved, with special emphasis on having promoted inter-university cooperative work and involving the political and decision-making level. of decisions in order to optimise time and resources. In addition, steps were taken to advance in the definition of teacher training plans for Algerian universities, with specificities for the particular cases of new teachers and digital skills to tackle online teaching, focusing on the need for “train the trainers” programmes.

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