

EFFECTS OF COVID-19 ON THE ONLINE INFORMATION AND DOCUMENTATION DEGREE AT THE UNIVERSITY OF LEÓN (SPAIN): THE ADVANTAGES OF MORE THAN A DECADE TEACHING BLENDED AND ONLINE

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Abstract

The Degree in Library Science and Documentation of the University of León started during the 1990- 1991 academic year. This first curriculum suffered from a large presence of humanistic subjects and a low rate of experimentation granted to many subjects, caused by the integration within the Faculty of Philosophy and Letters. In the first courses, there were a high number of students. Subsequently, the decrease in the number of students in our degree caused us to initiate the change to the blended and online modalities.

The Librarianship and Documentation Area of the University of León (ULe) already has a long experience in blended teaching, firstly, with the Degree in Librarianship and Documentation since the 2006/2007 academic year, using the platform aul@unileon. Currently, with the Degree of Information and Documentation in the modality blended since the 2010/2011 academic year, and in distance mode, since the 2014/2015 academic year.

The new technologies have been fully introduced in university education and have facilitated the teaching-learning process through the use of interactive programs from the Internet.

The main objective of this communication is to know and study what kind of multimedia tools were used by the professors of the Bachelor of Information and Documentation at the University of León in the teaching-learning process and in virtual teaching before the Covid-19; and on the other hand, observe what new tools have been introduced by the University for this reason. We will study student-teacher and student-student interaction to help promote communication and participatory learning through chat, forum, email, hangout, Skype, Meet, videoconferences, etc.

In order to carry out this study, two types of methodologies will be implemented: the satisfaction surveys hosted in the Quality Office of the ULe will be studied to know the degree of satisfaction shown by students and teachers; second, the study of the annual memories.

Keywords: Blended education, Information and Documentation Science, multimedia tools online teaching, Universidad de León (Spain), virtual learning environments.

INTRODUCTION

Librarianship and Documentation began to be taught in León during the 1990/1991 academic year (Royal Decree of August 30, 1991, *BOE* of October 10, 1991). The teachers' offices and classrooms were integrated into the Faculty of Philosophy and Letters. Its beginnings coincided with a time of few investments of money in the new studies. The preparation of Expo 92

(Seville) and the 1992 Olympics (Barcelona) coincided in the country. This situation led to the implementation of the new degree without budget. The best way to start, at that time, was to go to professors of the careers of the Faculty of Philosophy and Letters. Despite this situation, there were at some point one hundred new students. In 1997, it was funded with a budget consistent with the new study plan. However, the number of students began to decline progressively (Rodríguez López, & Rodríguez Bravo, 2000). An attempt to make it easier for future students to pursue higher studies without leaving their job led to the start of the blended learning modality. The blended modality was pioneering at the national level at the University of León, implanted already in the Diploma in Librarianship and Documentation in the 2006/2007 academic year, coexisting with the teaching of these studies in person. The number of blended students was limited to 30, due to the difficulty posed for teachers by the need to combine the delivery of the classroom and semi-classroom teaching modality. The University of León, together with the private University of Vic, have been pioneers in the blended teaching of degrees in the field of Information and Documentation. The student pool was nurtured by students from our community and, mainly, from Asturias, Cantabria, Galicia, País Vasco, La Rioja and Navarra (Rodríguez Bravo & Morán Suárez, 2008).

To start teaching in blended modality, the ULe developed the *aul@unileon* platform, which was soon replaced by the Moodle Platform (<https://agora.unileon.es/>) from the 2010/2011 academic year. Throughout these years, the curriculum has been implemented and developed in a satisfactory form, applying all the necessary measures to provide an adequate formative itinerary for students to acquire the appropriate competencies for the professional performance for which the degree was designed (Gallego Lorenzo & Martín Vega, 2017).

The profile of the student of the Degree in Information and Documentation is that of a university student over the age of twenty-nine. These circumstances guarantee the high vocational motivation that translates into the choice of these studies as the first option, which results in a high level of satisfaction and a low dropout rate.

Studies in Information and Documentation have undergone many changes from its origins to its adaptation to the European Higher Education Area (EHEA). The EHEA has changed the way of transmitting knowledge to students and teachers have had to modify the way of teaching classes, incorporating various teaching techniques. This has had an impact on the use of innovative methodologies and the integration of ICTs in the new training processes.

The arrival of the Bologna Curriculum made Spain plan its new teachings with interest. The Spanish universities that taught the Diploma in Library and Documentation and the Bachelor of Documentation degrees prepared the *White Book of the Bachelor's Degree in Information and Documentation* (Libro Blanco, 2004) within the framework of the call for grants from the European Convergence Program of the National Agency for Quality Assessment and Accreditation (ANECA). The *White Book* of the studios was prepared under the leadership of the University of Barcelona. The University of León sent professors to the different periodic meetings that were held in Barcelona. From these meetings the new name for the studies was born: Information and Documentation. The ULe adopted this new name. The name change and the economic crisis that dragged the country since 2008 caused the number of students to decrease constantly. One way to improve the attractiveness of the studies was to adopt the distance modality from the 2014/2015 academic year. This modality is once again pioneering in the Autonomous Community of Castilla y León and provides the Degree in Information and Documentation at the University of León with a distinctive character. These studies were verified in a new remote mode on 30/03/2014.

On the other hand, the Degree in Information and Documentation was not taught in distance modality in good part of the Spanish territory. Only two universities, the University of Extremadura and the University Oberta de Catalunya, facilitated the degree in Information and

Documentation.

The virtual learning environment was continually improving its potential throughout these years. In the 2013/2014 academic year, the University of León acquired the Audio and Video over IP (AVIP) video conference management module, originally developed by the UNED and integrated into the University of Leon.

The ULE began to develop the regulatory infrastructure for the change of modality, drawing up a Regulation for teaching official qualifications of the University of León in online modality (*Reglamento para la docencia en titulaciones oficiales de la Universidad de León en modalidad a distancia*. Approved in Agreement with the Consejo de Gobierno 17/06/2014). And almost a year later the plan for the implementation of the system of online training (approved in Agreement with the Consejo de Gobierno 28/04/2015). In the annual plans for academic dedication, blended learning and online teaching is computed with half of the teaching staff. This has put a brake on the interest of other institutions of the ULE itself to implant suitability in this modality. Despite all the advances, in this academic course the 2020/2021 Academic Dedication Plan is established that the "Degrees that are taught simultaneously on the one hand in blended modality and on the other On Line : The blended modality will be computed in accordance with the provisions above for the blended modality of any other Degree, while the subjects taught in Online modality will be computed in accordance with Article 9.1 of the Regulation for Teaching in Official Qualifications of the ULE in Distance Mode (*Reglamento para la Docencia en Titulaciones Oficiales de la ULE en Modalidad a Distancia*. Approved in Agreement with the Consejo de Gobierno 03/03/2016): For the total number of places offered, the load will be the number of credits for the subject, otherwise proportionally. The division into groups is not contemplated" (Plan for academic dedication of the teaching and research staff and labor -PDA 2020-2021 (*Plan de dedicación académica del personal docente e investigador funcionario y laboral - PDA 2020-2021-*. Approved in Agreement with the Consejo de Gobierno 17/12/2019).

METHODOLOGY

For this paper we have reviewed regulations in force about all the different headings drawn in the text. Particularly about: the institutional structure of the ULE; Regulations for Research Centers, Departments and Institutes; Teaching; Teaching and Research Staff; Students and Scholars. This regulation is available on the ULE's website.⁷

Secondly, we have studied the information available on the website of the Oficina de Evaluación y Calidad (Evaluation and Quality Office), in its section about monitoring support.⁸ In this web we consulted the Memorias e Informes de Verificación y Acreditación (Memories and reports about verification and accreditation prepared by the Degree Commission and Verification and Accreditation Reports issued by the ACSUCyL) and the main indicators of the title, which are broken down by type.

For the section Improving Teacher Training, we have consulted the Reports of the Escuela de Formación, from 2011 to 2019, and the course calendars. All this information is available on its website⁹.

Finally, we have consulted all the references listed at the end of this work.

⁷ <https://www.unileon.es/universidad/consejo-de-direccion/secretaria-general/normativa-de-regimen-interno>

⁸ <https://seguimiento.calidad.unileon.es>

⁹ <https://servicios.unileon.es/formacion-pdi/informacion-general/memorias-de-otros-anos/>

RESULTS

New regulations about online teaching

About the first Regulation for teaching in official degrees of the University of León in distance mode (*Reglamento para la docencia en titulaciones oficiales de la Universidad de León en modalidad a distancia*, 2014), ULe was making some modifications through two new Consejo de Gobierno (Governing Board) agreements (28/04/2015 y 03/03/2016).

The next regulation of general application was on 2019, the Adaptation of the School Calendar to Distance Training (*Adaptación del Calendario Escolar a la Formación a Distancia*. Approved in Agreement with the Consejo de Gobierno 17/12/2019). However, this rule only applies the 5th article from the modified rule from 2016.

However, in less than half a year two new rules were published. The first rule was General criteria for adapting face-to-face teaching at the University of León to the non-face-to-face format (*Criterios generales para la adaptación de la docencia presencial de la Universidad de León al formato no presencial*. Approved in Agreement with the Consejo de Gobierno 08/05/2020).

Secondly the ULE Action Plan for adapting the teaching of the Academic Year 2020/21 to health requirements (*Plan de Actuación ULE para la adaptación de la docencia del Curso Académico 2020/21 a las exigencias sanitarias*. Approved in Agreement with the Consejo de Gobierno 10/09/2020). The implementation of this Plan carries a reinforced digitization strategy, an improvement in computer equipment and telematic networks of the universities, teacher training in the use of digital communication and the help from the university administration for the adequate connectivity of the students. We must not forget that looking for seeking to reinforce the student's face-to-face assistance has meant better budgets that benefit us.

Support in improving teacher training

From the beginning, the professors of the Library and Information Technology Area and all the rest of the professors involved in teaching the Degree in Information and Documentation had the need to acquire skills in online teaching. At first, the Area requested the training on its own initiative. That is why Professor Bonifacio Martín Galán, from the University Carlos III of Madrid, carried out a teaching stay during the second quarter of the 2010/1011 academic year. On these same dates, the professor Ángela Diez Diez of the ULe taught courses for the management of the teaching platforms.

From the University of León, the Teacher Training School offered, starting in 2014, a series of courses that dealt with the use of Moodle/AVIP; Resources for online teaching: shared documents, forms, exams and conference calls; Digital video editing and video tutorial development. This training was continued over time, as of 2018, the Teacher Training School offers a series of courses on ICTs as support for teaching, in which teachers who teach online in the Degree of Information and Documentation have priority. These courses allow teachers to obtain the certificate of the Online Teaching Program (30 hours), for this, it is necessary that they take three general courses and, at least, three of the six specific workshops:

- General courses (mandatory): Theory and practice of virtual assessment (3 hours); Organization of digital content (3hours); the dynamic teacher-tutor of online teaching (3hours).
- Specific workshops (choose at least three): Resources and web tools (6 hours); Virtual assessment instruments and techniques (6 hours); Recording, editing and publication of classes (6 hours); Mini-videos for learning: types, preparation and utilities in university teaching (6 hours); Creativity and design of didactic materials 6 hours, Google tools for cooperative work (6 hours); Web tools for videoconferencing

(6 hours).

Since the second semester of last year (2019/2020) the offer has multiplied. Due to the health pandemic situation, all teachers must temporarily attend their teaching online. To support this task, the Training School presented a "Training Plan to Support Online Teaching" complementary to the General Training Plan.

List of courses:

- Webinars completed and other documentation to support online teaching¹⁰
- Basic Moodle Course. April 13, 2020
- Basic video-recording. April 15, 2020
- Recommendations to face the virtual evaluation at the university. April 15, 2020
- How to pass a Power Point to video. April 17, 2020
- Recommendations Online assessment Castilla y León Universities April 17
- Video conferencing tools 1. April 19, 2020
- AVIP Conference Web. April 22, 2020
- Questionnaires with Moodle. April 23, 2020
- Questionnaires with Moodle. April 24, 2020
- How I prepare and implement exams with Moodle Questionnaires. April 28, 2020
- Moodle-qualifications. Part 1. May 21, 2020
- Moodle-qualifications. Part 2. May 22, 2020
- Microlearning: make your educational "pills". May 26, 2020
- Microlearning: make your educational "pills". September 22, 2020
- Possibilities of Moodle for online teaching. September 11, 2020.
- Digital video editing for the development of teaching materials. September 16, 2020
- Moodle tools: lessons. October 13, 2020
- Moodle tools: tasks and workshops. October 19, 2020
- Moodle tools, messaging, communication and collaboration. October 21, 2020
- Digital tools for the creation of teaching materials. October 22, 2020.

Even more exhaustive is the calendar for the months of November and December shown in Figures 1 and 2.

¹⁰ <https://servicios.unileon.es/formacion-pdi/>

 PROGRAMA DE FORMACIÓN DEL PROFESORADO ESCUELA DE FORMACIÓN				
NOVIEMBRE 2020				
LUNES	MARTES	MIÉRCOLES	JUEVES	VIERNES
2	3 16:00-17:00 Herramientas de evaluación en Moodle	4 17:00-18:00 Planificación y diseño de una asignatura online	5 11:00-14:00 Estrategias para aumentar la visibilidad e impacto de la producción científica	6 16:00-17:00 Herramientas de evaluación en Moodle
9 16:00-19:00 Herramientas de Moodle: consultas, encuestas y cuestionarios	10 16:30-19:30 Introducción a los análisis de mediación y moderación	11 11:00-14:00 Herramientas de Moodle: el libro de calificaciones, configuración de calificaciones 17:00-18:00 Planificación y diseño de una asignatura online	12 17:00-19:00 Herramientas para la creación de contenidos	13 17:00-18:30 Organización de contenidos (Programa enseñanza online)
16 17:00-18:30 Organización de contenidos (Programa enseñanza online)	17 16:00-17:00 Introducción a las rúbricas con Moodle	18 17:00-18:00 Evaluación del proceso de enseñanza-aprendizaje online	19 17:00-19:00 Herramientas para compartir y colaborar	20 16:00-17:00 Introducción a las rúbricas con Moodle
23	24	25 17:00-18:00 Evaluación del proceso de enseñanza-aprendizaje online	26 17:00-19:00 Herramientas de gamificación	27
30				

Figure 1. November courses calendar. Teacher Training School. ULe. <https://servicios.unileon.es/formacion-pdi/> CALENDARIO-DE-CURSOS-SEPT-DICIEMBRE-2020.pdf

 PROGRAMA DE FORMACIÓN DEL PROFESORADO ESCUELA DE FORMACIÓN				
DICIEMBRE 2020				
LUNES	MARTES	MIÉRCOLES	JUEVES	VIERNES
	1	2 16:00-17:00 Introducción a la evaluación virtual (o mixta): teoría y práctica (Programa enseñanza online)	3	4 16:00-17:00 Introducción a la evaluación virtual (o mixta): teoría y práctica (Programa enseñanza online)
7	8	9 16:00-19:00 Herramientas web para videoconferencias (Programa enseñanza online) Del 9 al 18 de diciembre: Creatividad y diseño de materiales didácticos (Programa enseñanza online)	10 17:00-19:00 Herramientas de curación de contenidos	11
14 16:30-19:30 Diseño de Proyectos de Innovación Docente en la universidad (Programa de Formación para la Innovación Docente)	15	16	17	18
21	22	23	24	25
28	29	30	31	

Figure 2. December courses calendar. Teacher training school. ULe. <https://servicios.unileon.es/formacion-pdi/> CALENDARIO-DE-CURSOS-SEPT-DICIEMBRE-2020.pdf

Finally, as a complement to these actions, a resource was created in the external Moodle "Ariadna", called "Resources for online teaching" which can be accessed by any professor at the ULe. On this page are available, on the one hand, all the recordings of each of the seminars and workshops and, on the other, different materials, guides and useful tutorials for teaching and / or virtual evaluation.¹¹

¹¹ <https://ariadna.unileon.es/course/view.php?id=784>

ULE ONLINE

A significant milestone has been the creation of ULe Online (Universidad de León online) in December 2015. This portal was created to provide differentiated support to online studios. Initially, two master's degrees were also incorporated and nowadays three other masters and an own degree are taught in this modality. It works as an independent access portal for information on all academic aspects. Provides information to future students and accompanies them until the end of their undergraduate studies. The performance of administrative tasks is also carried out from this portal.

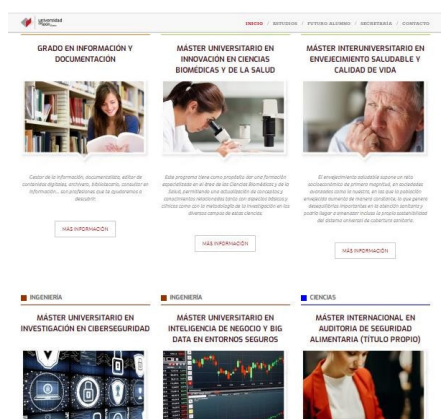


Figure 3. ULE Online portal. <http://online.unileon.es/>

Documentation

The Degree in Information and Documentation, in both modalities, blended and online learning, are being developed in accordance with the provisions. The objectives define a generalist, professional and academic orientation of the Degree, consistent with the proposal of general and specific competences that the student must acquire in the achievement of the degree of said Degree.

The growth in the number of students produced by the introduction of the online teaching modality shows highly positive rates.

Of the 14 students in the 2013/2014 academic year, still with a single modality, enrolment remained thus almost unchanged until 32 new students were enrolled in the 2017/2018 academic year, in both modalities. This increase is observed in the tables of students by academic year, the first figure corresponds to the online mode and the second to the blended mode.¹² During the 2017/2018 academic year, the number of students demanding to undertake the Bachelor's studies increased significantly, covering the number of places offered in the online mode, 24 out of a total of 30 pre- registrations, while in the blended mode, 4 students are new entrants and 12 belong to the adaptation course (first year of its extinction). In addition, 100% of those enrolled choose the title as the first option. These very favourable data allowed us to think about increasing the number of places for access to the Degree, 30 for online students and reducing the number of places in the blended mode, from 25 to 20 in total. The Viability Plan carried out during the 2016/2017 academic year with the aim of increasing the number of students, reached its objective during the 2017/2018 academic year, going from 18 to 24 students in the online mode.

¹² https://seguimiento.calidad.unileon.es/descargas/IndicadoresSeg2020-2021_0417-115-4-16-2020-11-09-18-39-14.pdf

Although there was already a clear trend towards an increase in the number of students in the online mode, compared to the blended mode, the current course, 2020/2021 reflects a considerable increase in students due to the impact of Covid-19, reaching sixty-five students enrolled.

Changes in teaching and evaluation

The great change came with the publication of the General Criteria for the adaptation of face-to-face teaching at the University of León to the non-face-to-face format (approved in Agreement with the Consejo de Gobierno 08/05/2020). The use of the following tools:

- Synchronous online teaching tools (videoconferences):
 - AVIP. As already indicated, it is available and integrated in the Moodle of the ULe.
 - Google Meet.
 - Microsoft Teams
 - Skype, Google Hangouts, Discord, GoToMeeting.
- Tools for creating videos (deferred).
 - Creation of presentations that include video or audio narrating the content, with PowerPoint.
 - Other explanation videos on YouTube, own or others, including the link on the Moodle platform.
 - Various programs / websites that help to create audiovisual material, such as screencast-o-matic.com for screen captures.
 - The ULe has a recording studio that can be used to prepare materials in video format.

Although a good part of these tools had already been used by the professors of the Degree in Information and Documentation, from this moment on, the help provided for their use has increased.

Regarding the evaluation of the students, until the 2019/2020 academic course, the call was planned to carry out the exams in face-to-face mode at the academic venues with which there was an agreement since the 2014/2015 academic year. As of this 2014/2015 course, the exams could be carried out at the University of León or at the academic headquarters of the Distance University of Madrid (UDIMA) with which a collaboration agreement was signed for this purpose. It had twelve headquarters distributed by most of the autonomous communities of the country. (Alicante, Aranda de Duero, (Burgos), Barcelona, Bilbao, Collado Villalba (UDIMA, Madrid), Córdoba, La Coruña, Las Palmas de Gran Canaria, Madrid (Centro de Estudios Financieros (CEF), Malaga, Mérida, Oviedo, Palma de Mallorca, Santa Cruz de Tenerife, Seville, Valencia, Vigo, and Zaragoza.

In the current 2020/2021 academic year, distance exams with proctoring tools and the Smowl program have already been planned. If this is interesting, the possibility of eliminating the period between calls is even more so. Since the modification of the Regulations for teaching official qualifications of the University of León in distance modality, made in 2016, a period of seven days was established between the first and second call. In this current course it has finally been possible to set the exams with two weeks of separation between calls (*Reglamento para la docencia en titulaciones oficiales de la Universidad de León en modalidad a distancia. Approved in Agreement with the Consejo de Gobierno 03/03/2016. Art. 5*). Exams are still held on weekends to make it easier for students to take them without breaking their work schedule. The document of General Criteria for the adaptation of face-to-face teaching at the University of León to the non-face-to-face format (Approved in Agreement with the Consejo de Gobierno 08/05/2020) establishes the possibility of evaluating the student in the following way:

-Synchronous tests: all students connected at the same time performing the activity:

Questionnaires with groups of students

Oral defence by videoconference

Moodle questionnaires, controlled by video through another device.

-Asynchronous tests: (most recommended) each student carries out the activities in a time frame proposed by the teacher:

Deliverable tasks

Forum discussions

Evaluation with external elements to the Moodle virtual campus, such as Microsoft Teams

Evaluation questionnaires.

Qualifier integrated and downloadable to Excel.

CONCLUSIONS

The Degree in Information and Documentation at the University of León has developed its performance with the effort of the teaching staff involved in it. The initial lukewarmness of the ULe has been changing as the results were reflected. Step by step it has been implementing the necessary improvements for the adequate development of online learning. However, 2019 has been a total turnaround. It has been seen that the university community must be ready for this way of teaching and learning. In this sense, there has been an exponential growth in the development of regulations regarding online teaching.

Even so, the degree in Information and Documentation has also benefited from the new resources for training itself in the handling of new tools. Barriers have been removed.

The space I work at home has been created with a series of facilities.¹³ Among them, we must highlight the work of the ULe Library, by making a wide catalogue of services available to the university community. with its web space called *The ULE library from home*,¹⁴ a web space that includes a collection of resources and services that the University of León library offers to the entire academic community, so that access from home is possible and the Resource Portal for Online Teaching, which includes recordings of webinars, tutorials and guides on the use of different digital tools, etc.

Despite all the improvements, the ULe still considers online teaching with lower credit recognition than face-to-face teaching.

¹³ *Yo trabajo en casa*. <https://www.unileon.es/yo-trabajo-en-casa>

¹⁴ *La biblioteca ULE desde casa*. <https://sites.google.com/unileon.es/recursosonline/página-principal>

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