Article

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Using digital platforms to learn a foreign language in times of pandemic

Uso de plataformas digitales para aprender un idioma extranjero en tiempos de pandemia

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Abstract

In 2020, the education system closed schools and migrated the face-to-face teaching-learning process to the digital world due to the pandemic. Given this situation, it is necessary to investigate how this process is in virtual modalities. The purpose of this study is to identify which digital platforms teachers and students use to learn English and French at the School of Languages, BUAP, which ones include a techno-pedagogical model, and how often these platforms are in use. Methodologically, the study was a longitudinal (spring and autumn of 2020) quantitative approach with a descriptive scope on a sample of 1729 students. The findings report the identification of eight asynchronous and six synchronous platforms classified according to their use in this research context, of which the most frequent and with the most users are Zoom, Moodle, and Teams in asynchronous and synchronous formats. Besides, the last two platforms were the only ones containing a techno-pedagogical design. In conclusion, the platform with a didactic model requires students a more frequent usage of it and usually complement it with other platforms, applications, and tools to immerse students in their learning process.

Digital platforms, Teaching-learning process of English and French as a foreign language, Techno-pedagogical design

Resumen

Durante el 2020, el sistema educativo cerró las escuelas y migró el proceso de enseñanza-aprendizaje presencial al mundo digital debido a la pandemia. Ante esta situación es menester investigar cómo dicho proceso se realiza en modalidades virtuales. Este estudio tiene como propósito identificar qué plataformas digitales utilizan los docentes y alumnos para aprender Inglés y Francés en la Facultad de Lenguas, BUAP, cuáles incluyen un modelo tecno-pedagógico y con qué frecuencia se utilizan dichas plataformas. Metodológicamente, el estudio se basó en un enfoque cuantitativo, con alcance descriptivo y corte longitudinal (primavera y otoño de 2020) teniendo como muestra 1729 alumnos. Los hallazgos reportan la identificación de 8 plataformas asincrónicas y 6 sincrónicas clasificadas según su uso en este contexto de investigación, de las cuales las más frecuentes y con mayor número de usuarios son Zoom; Moodle y Teams en formato asincrónico y sincrónico, siendo estas dos últimas las que contienen un diseño tecno-pedagógico. En conclusión, se tiene que las plataformas que incluyen un modelo didáctico demandan más frecuencia de uso de la misma plataforma y se complementan con otras plataformas, aplicaciones o herramientas para lograr la inmersión del alumno en su proceso de aprendizaje.

Plataformas digitales, Proceso de enseñanza-aprendizaje del inglés y francés como lengua extranjera, Diseño tecno-pedagógico

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Introduction

In the predominant preference for face-to-face learning and, in some cases, resistance to virtual or digital learning, the latter is gaining advantage and importance in the educational sphere as a means of working in times of contingency. The migration from one format to another, especially in the conceptualisation of the teaching and learning process, has numerous implications, especially those that have to do with the main actors in the curriculum as the role of the student and the teacher, the learning process, the teaching process, the presentation of content, the design or adaptation of materials, interactions, feedback, and the evaluation process, to mention a few. The research is justified considering the background above and the changes that teachers and students are experiencing in the educational field. That is why its purpose is to know what platforms were used in the English and French teaching-learning process in the Bachelor's Degree at the Benemérita Universidad Autónoma de Puebla, during the spring and autumn 2020 periods when the migration from on-site sessions to virtual modality took place due to the pandemic caused by the SARS-CoV-2 virus. From the objective of this study, three research questions arise: what are the platforms used for teaching English and French in the Faculty of Languages of the Benemérita Universidad Autónoma de Puebla? Which platforms include a techno-pedagogical design, and how often were these platforms used?

Theoretical framework

Teaching in virtual environments requires both a teacher prepared not only in the content of the subject and also a specialist in technology and didactics (Díaz-Barriga in Casanova, 2020) so that he could become a designer of techno-pedagogical models according to the English or French subject as a foreign language at a higher level, the context of the present research. The following lines describe the characteristics of virtual environments and their implications.

Virtual education

It is a technology-mediated form of distance education where students and teachers have classes either asynchronously or synchronously through different tools such as videoconferencing, multimedia systems, and platforms, to mention a few of them.

Thus, the use of Information and Communication Technologies has given rise to the so-called virtual modality, generating innovation in the teaching-learning process and, in general, in educational practices to promote equality in education (UNESCO, 2013). Another contribution of this modality focuses on the adaptation to the characteristics of users, allowing them a flexible learning process in time and space, low cost, with variability of strategies and teaching techniques, gamified, multifaceted, and dynamic for learning activities which can be collaborative, cooperative, synchronous and asynchronous. However, it is fundamental to mention that to obtain a techno-pedagogical design with the above peculiarities, both ICT and Learning and Knowledge Technologies (LKT) are necessary to generate appropriate learning in virtual environments.

This innovation became even more latent due to the current stage of contingency, where education migrated to a virtual format giving rise to a disruption, which happens when there is a radical and sudden change in the educational scenario (Adell and Castañeda, 2012). However, in several contexts, it has been identified that the biggest challenge for teachers has been to embed their content in a virtual modality, reducing this process to the application of the face-to-face model in a virtual one without stopping to plan and design the techno-pedagogical model, to identify the techniques, strategies, methods and in general how to do it (Gisbert, 2020). However, it is clear the disruption took both students and teachers by surprise, and there was not enough time to carry it out.

Characteristics of virtual education

The virtual modality represents one of the most *ad hoc* options for working at higher education level, or at least for the context of this study, due to its advantages:

- This modality contains a multi-faceted format that adapts to learning styles. In virtual education, those formats allow teachers to develop dynamic activities with varied resources for each user, strategies, and methods, even making it possible to adapt, readapt or design their materials at a low cost.

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- The synchronous or asynchronous communication and interaction tools foster collaborative or cooperative work between students and teachers or among themselves and contribute to the development of experiences, good practices, and the construction of meaningful learning.

- As it is a learning process based on students, they could work at their own pace in terms of space, time, and rhythm, allowing them to decide how to learn, when to learn, and with what mechanisms, contributing to the development of autonomous learning.

- In this modality, the platforms promote the development of meta-cognitive learning through the design of different integrative activities, which evidence progress in students.

- Thanks to these characteristics, and based on the results, the teacher or facilitator modifies or changes the techno-pedagogical design.

According to UNESCO (2013), other outstanding features include:

- Encouraging the creation of learning communities and a sense of belonging to them.

- Promoting the teaching-learning process with gamification and augmented reality (situated learning), supporting students with different learning styles or differentiated abilities through personalised learning.

- Providing immediate and personalised assessments and feedback.

- Contributing to equity in education and expansion of educational coverage.

A complement of this modality is the combination of asynchronous and synchronous sessions through the videoconferencing platforms, which along with the didactic strategy of the flipped classroom, results in a more productive time dedicated to the learning process.

At this point, specific changes in the roles of teachers and students are a must because although the actors in the curriculum are the same, the means and formats through which the teaching-learning process took place are varied and different. In this case, the teacher focuses on being a curator or designer of courses in virtual environments, tutor, facilitator, and guide of the teaching-learning process, providing the necessary resources and tools for the student to develop competencies that allow him to acquire not only knowledge but also skills, values, and attitudes.

In other words, he plans a learning experience, and the student executes it under his mentorship during their relationship cycle when interacting. In such a process, he must integrate tasks and theoretical knowledge to help his students solve specific challenges by creating value and social innovation (Carrasco and Baldivieso, 2016).

As far as the student is concerned, being the principal actor implies having an active role. Thus, he must develop cognitive, metacognitive, and self-regulation strategies to monitor and regulate his process, learn collaboratively, use digital competencies to carry out tasks with the help of tools, applications, or platforms, and most importantly, develop autonomous learning, a key element (Pareja, Calle, and Pomposo, 2016). In this regard, Pardo and Cobo (2020) argue that the ideal way to gain knowledge in confinement is through autonomy to promote the development of strategies to learn at all times in a personalised environment.

Although this modality presents learning in a novel way through techno-pedagogical designs with defined teaching strategies and methodologies, the modality by itself does not provide desirable performance, as it needs other elements.

Research findings also show a direct relationship between the students' active role and autonomous participation in the virtual environment through problem-solving, task completion, projects, readings, and academic performance (Domínguez, Álvarez, and Gil, 2016).

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Teaching-learning strategies in virtual environments

Teaching-learning strategies play a fundamental role, as they allow students to develop cognitive and metacognitive skills for the construction and deconstruction of knowledge thanks to the tutor's techno- pedagogical design. They also contribute to their autonomous learning, constant and active participation in the virtual environment, and application of different tools, formats, and media for knowledge representation.

In the particular case of the English and French teaching process, there are applications, tools, or platforms linked to a virtual environment that prioritise the development of the four basic skills, namely written and oral production, reading, and listening comprehension collaboratively or individually. Some examples are graphic organisers, infographics, mind and concept maps, WebQuest, comparative or double-entry tables, Grammarly app, Quizlet, discussion forums, Duolingo, Calameo, Padlet Memrise, 4Teachers, Memorama, mobile application video games, Kahoot, Pixton, Powtoon, rigorous techno-pedagogical designs in asynchronous virtual platforms, a videoconferencing platform for synchronous interactions, among others.

Moreover, there are different multimedia systems and formats to carry out the process of teaching and learning a foreign language in a virtual environment which allows for increased participation and interaction, achieving full integration in learning situations. According to several types of research (Klimenko & Alvares, 2009; Cázares, 2009; Rodríguez, 2011; Sierra, 2011; Colmenares, 2012; Chirinos 2013; Pellas, 2014), teachers and students have to develop teaching and learning strategies to achieve a successful process and results.

Teaching strategies

Teachers must develop strategies to foster academic, pedagogical, technical, digital, social, and affective competencies in the virtual modality to carry out the teaching-learning process based on a techno- pedagogical model (Mas, 2012; Koehler et al., 2015). The following lines present a classification and description of each one.

Academic-pedagogical competencies. They facilitate learning, planning, and organisation of a course in virtual environments (Torra et al., 2012) and its evaluation. This category also includes didactic mediation strategies, which refer to the techniques, methods, and procedures used in the teaching-learning process with the firm purpose of ensuring the student learns to learn and appropriates knowledge (Woolfolk, 2010).

Digital-technical competencies. These give priority to promoting autonomous work through the use of digital teaching materials, virtual communication channels for academic counselling, and digital tools and platforms (Botero et al., 2021) to deliver virtual courses that enable the innovative and creative development of a techno-pedagogical one (Koehler et al., 2015).

Socio-affective competencies. They favour respectful and friendly interaction among participants with active participation and empathy (Pertegal-Felices et al., 2011) on the part of the teacher in the conditions of study, especially in stages of confinement, such as those faced today.

Learning strategies

Students must develop cognitive, metacognitive, and self-regulation strategies to achieve meaningful learning through the techno-pedagogical model, designed with the support of different tools, applications, and platforms with synchronous and asynchronous formats. The following lines explain each one in detail.

Cognitive strategies. Students use them to focus their attention and, in turn, allow them to process information and remember it. They are also closely linked to the practical level of the process (Lupón, Torrents, and Quevedo, 2012). An example is search, information selection, and processing strategies.

Metacognition strategies. They let students control, evaluate and plan their learning; therefore, their objective is to monitor ways to achieve a goal. In this sense, three components took place: metacognitive knowledge, awareness, and self-regulation (Tamayo in Buitrago, 2012).

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Furthermore, when students use such strategies, it is easy for them to process information, and to some extent, they improve their self-knowledge to the point of self-control for the planning of their tasks as well as the means to face, solve, regulate and even self-evaluate them, as they apply what have learned in their immediate context or other similar contexts. Here, the virtual classroom and communication tools, seen as interactive metacognitive media, contribute to evidence the students' knowledge representation (Burgos, 2014).

Self-regulation strategies. These permit the development of critical thinking through flexible and autonomous learning that adapts to students' needs, learning styles, spaces, and times to successfully meet the requirements of society or their immediate background in search of quality and innovative production (Osses and Jaramillo, 2008; Barnard et al., 2010).

It is crucial to highlight that this autonomous teaching does not displace the teacher, as he recovers his vitality in the mediation between technologies and the learning process through his multifaceted roles such as facilitator and guide in the learning process in terms of content and digital technical competencies (use of applications), curator, planner, organiser, tutor, designer and evaluator (González et al., 2012).

All the elements mentioned above, together with the tools, applications, or platforms suitable for situated learning, make successful e-learning possible.

Methodology

The phenomenon was analyzed from the quantitative approach using a questionnaire (instrument) with a Likert-type scale to collect the information, organise the data, and subsequently carry out the analysis using SPSS software to answer the following research questions (RQ).

RQ1. Which platforms are used for teaching English and French at the Faculty of Languages at the Benemérita Universidad Autónoma de Puebla?

RQ2. Which platforms include a techno-pedagogical design?

RQ3. How often are these platforms used in the English and French teaching-learning process?

Sample

The sample consisted of 1729 students from the English and French Bachelor's degree programmes at BUAP enrolled in the Spring and Autumn 2020 terms.

Data collection and analysis

To obtain the data, 1729 students answered the instrument at the end of the autumn and spring terms during 2020. Subsequently, we proceeded to elaborate the analysis model from which the results will be analysed and interpreted, as follows:

(RQ)	Period	Type of platform according to its use in the research context	
		Asynchronous	Synchronous
RQ1. Platforms	Spring	Graphic 1	Graphic 3
	Autumn	Graphic 2	Graphic 4
RQ2.	Spring-Autumn	Table 2	X
RQ3. Frequency in terms of use	Spring-Autumn	Table 3	Table 4

Table 1 Analysis model
Source: Own elaboration

Results

The results indicate that the platforms used in the English and French programmes of the Faculty of Languages, BUAP are asynchronous and synchronous. The following section describes them.

Use of asynchronous platforms

Asynchronous platforms, as a host of the techno-pedagogical model, play a fundamental role in the virtual modality because, over there, students find everything related to their courses like support material, anthology, digital books, activities, individual or integrative learning evidence, evaluations, and feedback, among others.

For this study, the findings are:

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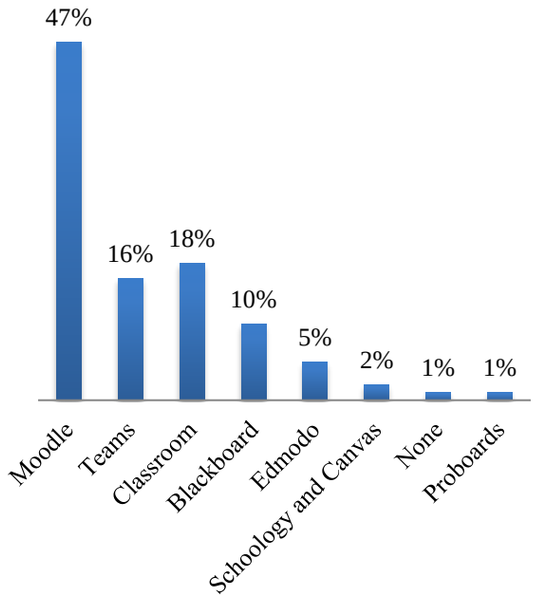
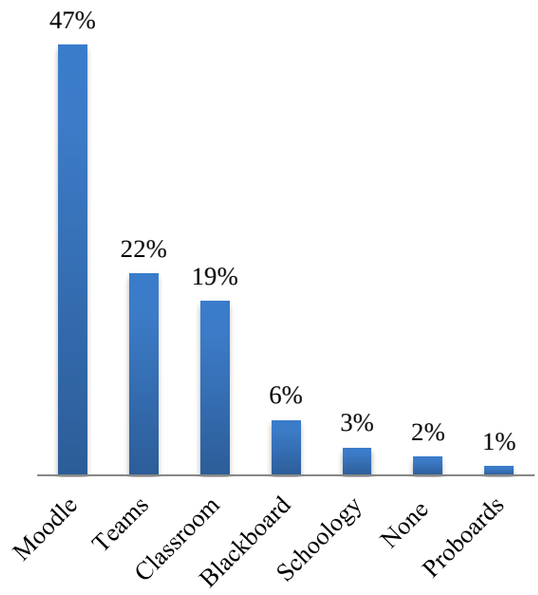


Graphic 1 Use of platforms classified as asynchronous due to the role that teachers assigned to them for the English and Fench teaching process at the Higher Education level during the spring 2020 period



Graphic 2 Use of platforms classified as asynchronous due to the role that teachers assigned to them for the English and French teaching process at the tertiary level during the autumn 2020 period

As can be seen in the graph, the most used platform was Moodle, followed by Classroom, Teams, Blackboard, Edmodo, Schoology, and Proboards. It is worth mentioning that 1% of the sample indicated that they did not use any.

In the case of Classroom, Blackboard, Teams, Schoology, Canvas, and Edmodo, students said that they mainly used them as a storage space for readings, digital books, and sending work asynchronously, although some of them offer a synchronous version through videoconferencing.

In contrast, the function of Moodle was a little more varied, since in this virtual space, in addition to storing information, the students carried out activities in forums and solved exercises in asynchronous format, attributes that contributed to the positive and high perception of the sample.

In Proboards, the work focused on receiving information as a platform for online education without synchronous sessions.

During this period, it is clear that the use of the platforms decreased to seven, and the number of students using them increased in some cases. For example, Teams registered an increase of 6%, Classroom, and Schoology 1%, respectively. In contrast, Blackboard decreased by 4%. However, Moodle (47%) and Proboards (1%) maintained the same users. It is worth noting that again 1% of the sample did not use a platform.

Concerning their use, the following tend to emerge: Moodle and Teams provided users with materials and activities aligned to the thematic contents of each subject such as reading files, PowerPoint presentations as material for the synchronous class, interactive exercises based on videos, H5P format, escape rooms, mazes, glossary of terms, individual and collaborative activities accompanied with rubrics or checklists for evaluation and self-evaluation. Besides, they also contain exams, virtual spaces to send tasks and receive feedback, hyperlinks to external applications for gamified learning such as flashcards, crosswords, video games operable on PC and mobile phones, interactive quizzes, and 2.0 and 3.0 tools, in general, attributes that consolidated them as ideal for language learning, according to the students' perception.

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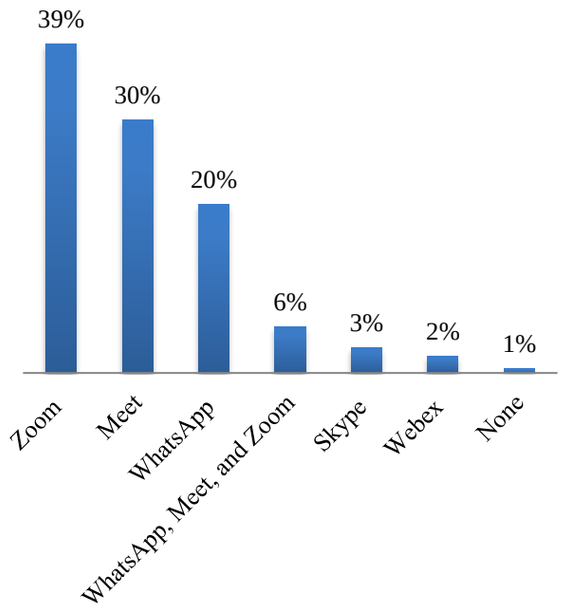
It is clear that gamification, considered a motivational and innovative element to foster the development of skills and interaction among its users (Castañeda, 2021), contributed to meaningful foreign language learning. It is because of its added value in role-play simulation, augmented reality, and dynamic learning based on collaborative models. Indeed, findings point to digital formats as triggers of motivation and interest for quality task completion (Fariña-Vargas et al., 2013; López and Silva, 2014).

The previous elements provide evidence of learning and knowledge technologies to adapt, readapt, design, and embed thematic content in a virtual modality.

For Classroom, Blackboard, and Schoology, their function focused on providing an asynchronous virtual space for sending assignments and support materials such as readings, audiobooks, and PowerPoint presentations on class topics. Finally, Proboards continued with the same utility as in the previous period, and the Canvas platform did not appear functional for users.

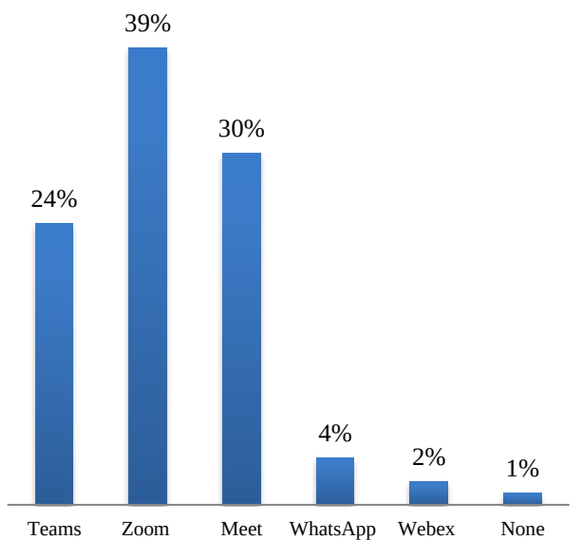
Use of synchronous platforms for videoconferencing

An essential component for the virtual modality is the synchronous interaction, as it contributes to the sense of belonging to a community and allows the explanation and accompaniment of the tutor teacher in real-time to complement the asynchronous teaching-learning process, especially in this research context where interaction is an essential element for learning English or French.



Graphic 3 Platforms used for videoconferencing, spring 2020

Although in many scenarios, the pandemic and confinement stage took the main actors in the curriculum (teachers and learners) by surprise, in this case, the vast majority of teachers responded to the emerging learning and used various synchronous platforms to continue their practices. Thus, 39% opted for Zoom, 30% Meet, 20% WhatsApp, 6% a combination of WhatsApp, Meet and Zoom platforms, 3% Skype, and 2% Webex. However, 1% chose not to have synchronous interactions with their students.



Graphic 4 Platforms used for videoconferencing, autumn 2020

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In the following period (autumn 2020), teachers made more concrete choices regarding the use of video conferencing platforms and used only 5 (one less compared to spring 2020), as follows: the highest percentage of users was recorded in Zoom (39%), followed by Meet (30%), Teams (24%), WhatsApp (4%) and Webex (2%). Furthermore, 1% of the population did not use any platform and chose to work only with an asynchronous one. It is worth mentioning that this is the same sample that did the same in the Spring 2020 period. Up to this point, the study has revealed the platforms used, but it is also fundamental to identify if those platforms included a techno-pedagogical design.

RQ2. Which platforms include a techno-pedagogical design?

Platform	Period	Complements	Inclusion of techno-pedagogical model
Moodle	Autumn	Zoom External tools Applications	X
Teams	Autumn	External tools Applications	X

Table 2 Asynchronous platforms that included a techno-pedagogical model or design

As discussed in the previous section, the platforms that evidenced a techno-pedagogical design were Moodle and Teams, only in the autumn period. In the case of Moodle, such techno-pedagogical design contained the asynchronous (Moodle) and synchronous platforms (Zoom for videoconferencing) along with tools and applications that fostered interactive and innovative exercises.

For example use of tools or applications for knowledge representation (graphic organisers, infographics, mind and concept maps), for assessment (rubiStar and checklist) for problem-based learning (WebQuest), for learning vocabulary and pronunciation (Memrise, Duolingo), for correcting texts (Grammarly app), for practising writing skills (discussion forums, Pixton, Powtoon) for presenting information (Padlet), for gamified learning (Quizlet, mobile application video games, Kahoot, Memorama) and the resources of the Moodle platform itself for developing interactive activities and exercises (H5P, file, page, glossary of terms, exam bank), as well as virtual spaces for sending tasks and feedback, among others.

Concerning Teams, it functioned as an asynchronous and synchronous platform because of the videoconferencing room. This design was composed of embedded elements thanks to the platform's resources such as files with reading material, escape rooms, collaborative and individual activities accompanied by rubrics or checklists for evaluation and self-evaluation, exams, recordings of synchronous sessions, a translator, digital whiteboard, multimedia resources, virtual spaces for sending assignments and receiving feedback. In addition, hyperlinks for external tools and applications were present to have gamified learning as flashcards, crossword puzzles, and video games for PCs and mobile phones.

These results lead to the following research question because it is crucial to know how often platforms were in use for learning either English or French since the success of this modality depends to a large extent on the constancy with which students work in these digital media and formats.

RQ3. How often are these platforms used in the English and French teaching-learning process?

The findings indicate the frequency of asynchronous platforms during the spring (A) and autumn (B) 2020 periods.

		Frequency in days				
Platform	Period	< 3	3-4	5-6	7	Total
Moodle	A	7%	20%	12%	8%	47%
	B	1%	13%	25%	8%	**47%**
Teams	A	10%	2%	3%	1%	16%
	B	0%	14%	8%	0%	**22%**
Classroom	A	10%	7%	1%	0%	18%
	B	0%	18%	1%	0%	**19%**
Blackboard	A	9%	0%	1%	0%	10%
	B	5%	0%	1%	0%	**6%**
Edmodo	A	4%	0%	1%	0%	5%
	B	0%	0%	0%	0%	**0%**
Schoology and Canvas	A	0%	2%	0%	0%	2%
Schoology	B	0%	2%	1%	0%	**3%**
Proboards	A	1%	0%	0%	0%	1%
	B	1%	0%	0%	0%	**1**%

Table 3 Asynchronous platforms: Frequency of use in the spring and autumn 2020 periods

As can be seen, the frequency of use of each platform changed from one period to another. In most cases, it increased, except for Blackboard that decreased by 6%, and Edmodo, which ceased its use during the autumn. As far as Proboards is concerned, there is no change, and its frequency of use is minimal (less than three days a week).

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Moodle was the platform with the highest current usage (25% between five and six days and 8% seven days respectively) and with the most users (47%) compared to the other platforms in both periods.

In the particular case of Teams, its usage increased by 6% of the overall percentage. During autumn, 10% used it less than three days, and in spring, 14% used it between three and four days, and 8% between five and six days respectively.

The data shows that if there is a techno-pedagogical design hosted on a platform, the demand for time, dedication, and immersion of the user (Schindlholzer, 2016) in this context will be frequent so that they can carry out their activities or tasks individually or collaboratively, of course always in a flexible environment according to their times, spaces, learning styles and in an autonomous way (Pareja, Calle, and Pomposo, 2016).

Another aspect the data shows is related to teachers who improve their teaching strategies and competencies to embed their contents in the virtual modality.

Regarding the use of platforms and their function (graph 2), it is indisputable that the content hosted in both periods shows the innovation of the teachers because, in autumn, the use of LKT to embed the content in the virtual modality is evident through digital resources and formats adapted to the students' needs (Middelbeck, 2019) and their context with the 2.0 and 3.0 tools, applications, and platforms.

Therefore, teachers must know strategies to develop academic- pedagogical, technical-digital, and socio-affective competencies (Pertegal-Felices et al., 2011; Colmenares, 2012; Torra et al., 2012; Koehler et al., 2015) to design an innovative teaching model according to the particular needs of their students, programme, and objectives (Carrasco and Baldivieso, 2016).

Classroom also showed a 1% increase in the overall percentage, with 18% using it between three and four days and 1% using it between five and six days.

Other platforms such as Schoology and Canvas recorded a frequency of between three and four days per week during period A, however in period B, one of them stopped being used (Canvas), and the other had an increase of 1%, using it between five and six times per week.

In contrast, Blackboard shows a decrease in the frequency of 4%, with 9% using it less than three days in spring and only 5% in autumn, and Edmodo ceased its use in autumn. The results of the latter platforms are possibly related to the function that teachers assigned to them, which centred on space for sending assignments, socialising materials, and carrying out synchronous sessions since if there is no previously structured teaching model according to content and programme, their use is minimal.

Synchronous platforms

		Frequency in days				
Platform	**Period**	**< 3**	**3-4**	**5-6**	**7**	**Total**
Zoom	A	37%	2%	0	0	39%
	B	0%	39%	0%	0%	39%
Teams	A	0%	0%	0%	0%	0%
	B	0%	24%	0%	0%	24%
Meet	A	30%	0%	0%	0%	30%
	B	30%	0%	0%	0%	30%
WhatsApp	A	20%	0%	0%	0%	20%
	B	4%	0%	0%	0%	4%
WhatsApp, Meet and Zoom	A	6%	%	0%	0%	6%
	B	0%	0%	0%	0%	0%
Skype	A	3%	0%	0%	0%	3%
	B	0%	0%	0%	0%	0%
Webex	A	2%	0%	0%	0%	2%
	B	0%	2%	0%	0%	2%

Table 4 Synchronous platforms: Frequency of use for videoconferencing during the spring and autumn periods 2020

According to the data obtained, the principal function of the synchronous platforms was to transmit videoconferences where the teacher explained his class, resolved doubts regarding the subject, and the students participated individually and in teams based on the readings previously done (flipped class). It leads us to deduce that teachers had more classes with real-time interaction in autumn than in spring, as in most cases, there was a considerable increase in the frequency of use.

In the case of Zoom (the platform used by teachers who worked with Moodle asynchronously), the frequency changed from less than three to between three and four days of use per week and had the same number of users.

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In the case of Meet, the frequency of use and number of users remained the same in both periods.

We also identified the use of a new platform. It was Teams (used between three and four days per week), which replaced Skype, the combination of WhatsApp, Meet, and Zoom, and a percentage of WhatsApp, as the latter had a decrease from 20% to 4% of users although its frequency remained the same (less than three days). Finally, Webex has the same number of users, but its frequency increased to three and four days.

This analysis confirmed that asynchronous platforms (Moodle and Teams) that contain a techno-pedagogical design also show a high percentage in the usage of synchronous ones (Zoom and Teams) as they complement each other.

These results corroborate that the benefits of using didactic or techno-pedagogical models in virtual environments, based on learning and knowledge technologies, contribute directly to the learning process and students' performance more than the resources selected for such a process.

Therefore, there is no point in using many tools, platforms, applications, or digital formats if they do not pedagogically align to a programme, objectives, content, and student's needs.

Conclusions

The study describes both synchronous and asynchronous platforms regarding their function and usage for the English and French teaching-learning process.

When analyzing the asynchronous platforms, Moodle and Teams demonstrated the highest frequency of usage and number of users due to the techno- pedagogical model. Therefore, that frequency is closely related to such a factor. Contrarily, the synchronous platforms with the highest frequency of use were Zoom and Teams.

Besides, a combination of synchronous and asynchronous tools provided learning outcomes like Moodle with Zoom and Teams with its videoconferencing room. It leads to conclude that the didactic model must include synchronous and asynchronous platforms and be designed under academic, pedagogical, digital, technical, affective, and social competencies because the immersion of students in a flexible and autonomous learning process mediated by cognitive, metacognitive, and self-regulation strategies will undoubtedly contribute to their academic performance.

In summary, in this particular context, digital platforms show a positive impact to continue the teaching-learning process during the confinement stage. Indeed, those digital platforms are not only a repository of information but also a learning model that enhances suitable educational practices.

Finally, this research is the beginning of the inquiry into the virtual English and French teaching process since it is still necessary to analyze different variables that take place in such a process like the students' and teachers' perceptions regarding the virtual modality or the use of synchronous and asynchronous platforms, strategies, techniques, competencies, and methods to design their techno-pedagogical model. Others could be how students carry out their learning process in the virtual modality or the possible correlation between digital formats and academic performance.

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