Working Paper

Institutional Strengthening in Technological Competencies and Instructional Design to Address the Educational Challenges Presented by COVID-19 at ÚNICA.

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Institutional Strengthening in Technological Competencies and Instructional Design to Address the Educational Challenges Presented by COVID-19 at ÚNICA.

Abstract

The study investigated how the implementation of professional development (PD) programs has influenced the pedagogical practices of UNICA teachers during their synchronous sessions. The research question focuses on revealing what those practices are after one year of participating in the PD programs of digital tools and innovative didactic methodologies during 2020 and 2021. The methodology used is qualitative, as recommended by Cresswell (2012), to explore specific phenomena in the educational field from an in-depth perspective. The participants in this study were 24 teachers from the institution who faced the challenge of transitioning to online teaching without prior experience.

The results indicate that ÚNICA teachers integrated various technological tools and the SOFLA (Synchronous Online Flipped Learning Approach) (Marshall & Kostka, 2023) to enrich synchronous sessions from a didactic perspective. The tools used included TEAMS, WhatsApp, Meet, Zoom, and Blackboard Collaborate, which were widely adopted to facilitate real-time communication and collaboration. Additionally, applications like Google Docs, Padlet, Quizziz, and Mentimeter were used to encourage active student participation, allowing for greater interactivity and dynamism in classes.

The impact of these PD programs was significant, as they not only improved teachers' technological skills but also transformed their pedagogical practices. Teachers adopted them to adapt to the educational demands imposed by the pandemic, resulting in enhanced interaction and collaboration in synchronous classes. The research concludes that the implementation of these programs was crucial for effective and participatory teaching.

Keywords: *professional development; pedagogical practices; synchronous teaching; digital tools; SOFLA.*

Resumen

El estudio investigó cómo la implementación de programas de desarrollo profesional (DP) ha influido en las prácticas pedagógicas de los docentes de UNICA durante sus sesiones síncronas. La pregunta de investigación se centra en identificar cuáles son dichas prácticas después de un año de participación en los programas de DP sobre herramientas digitales y metodologías didácticas innovadoras durante los años 2020 y 2021. La metodología empleada es de enfoque cualitativo, siguiendo las recomendaciones de Cresswell (2012), con el fin de explorar fenómenos específicos en el ámbito educativo desde una perspectiva profunda.

Los participantes de este estudio fueron 24 docentes de la institución, quienes enfrentaron el desafío de la transición a la enseñanza en línea sin experiencia previa.

Los resultados indican que los docentes de UNICA integraron diversas herramientas tecnológicas y el enfoque SOFLA (Synchronous Online Flipped Learning Approach) (Marshall & Kostka, 2023) para enriquecer sus sesiones síncronas desde una perspectiva didáctica. Entre las herramientas utilizadas se encuentran TEAMS, WhatsApp, Meet, Zoom y Blackboard Collaborate, ampliamente adoptadas para facilitar la comunicación y colaboración en tiempo real. Asimismo, aplicaciones como Google Docs, Padlet, Quizziz y Mentimeter fueron empleadas para fomentar la participación activa del estudiantado, permitiendo una mayor interactividad y dinamismo en las clases.

El impacto de estos programas de DP fue significativo, ya que no solo mejoraron las competencias tecnológicas de los docentes, sino que también transformaron sus prácticas pedagógicas. Los docentes adoptaron estas herramientas para responder a las demandas educativas impuestas por la pandemia, lo que resultó en una mayor interacción y colaboración en las clases síncronas. La investigación concluye que la implementación de estos programas fue fundamental para una enseñanza efectiva y participativa.

Palabras clave: *desarrollo profesional; prácticas pedagógicas; enseñanza sincrónica; herramientas digitales; SOFLA*

Introduction

In 2019, COVID-19 forced teachers and educational institutions to reinvent themselves; at the same time, professors had many challenges in their classes because they had to adapt their teaching practices so that learning did not stop. This working paper presents the results from the second stage of an action research project done at Institución Universitaria Colombo Americana-ÚNICA regarding the challenges teachers posed by this contingency and the institutional efforts performed to support professors in transforming their synchronous and asynchronous classes.

At the beginning of 2020, all the educational institutions were asked to teach classes via digital platforms because of the pandemic. The context at ÚNICA was challenging for this matter since the professors were not used to accessing the GSuite of Microsoft to use Teams and the institutional email, evidencing a face-to-face mindset in the institutional culture. In the classrooms, teachers had a computer to show prepared materials for the class, such as a video or PowerPoint Presentation, and the students needed access to a Wi-Fi connection. Regarding platforms, the teachers used open-access digital platforms such as Google Classroom and Edmodo as repositories of materials for the class or set assignments.

Although ÚNICA has always been a fully face-to-face institution, it faced COVID-19 with a fast and resilient response. The institutions were asked to be closed in Colombia from March 2020, so when ÚNICA was notified, there was a one-day training session on March 16th, and two days later, by March 18th, every class was supposed to happen online through Microsoft Teams. After this situation, the institution's Education Technology and Pedagogical Innovation Committee (ETPIC) was born. The group of professors on the committee was in charge of offering training on using the platform and providing tutorials for the teachers to learn to use digital tools.

This pandemic gave teachers a short period to adjust, some professors, who already used technology, started to design their synchronous sessions with the digital tools they knew. On the other hand, those not accustomed to using technology did their best teaching their sessions, but the classes lasted long periods of teachers talking in front of the

camera. Hodge (2020) describes Emergency Remote Teaching (ERT) as a response to the crisis; it refers to a characterized type of instruction in academic institutions. He defines it as "a temporary shift of instructional delivery to an alternate mode due to crisis circumstances" (2020, p. 6). Hence, the EPTIC committee aimed its professional development sessions on digital tools implementation and methodology improvement in the synchronous classes. This project was carried out in two moments; first, the EPTIC committee focused its effects on providing ÚNICA's teachers with PD programs and training sessions to integrate different technological tools in their synchronous and asynchronous sessions. Ramírez-Correa, as a member of the EPTIC committee, highlights in her article regarding the first part of the project that "... many professors transferred their instructional practices from the classroom to a virtual environment with little or no adaptation. This scenario allowed the technology committee to develop and perform interventions such as training sessions on tech tools, and the development of a digital hub for all teachers, as a result the culture of collaboration has grown rapidly".(2023, p.28). By the end of that year, with the institutional decision to continue online, a new need for teacher support emerged.

Based on the latter context and need, the second part of this project aimed to guide teachers on how to use SOFLA (Synchronous Online Flipped Learning Approach) as a methodology to enhance the synchronous sessions based on the needs the EPTIC committee found during 2020. The need to train professors in online pedagogy was revealed in the focus groups and class observations conducted during the second semester (Ramírez-Correa, 2023). Also, since professors somehow refused to relinquish their synchronous spaces with students, SOFLA was chosen by the academic direction, the president of the university, and the ETPIC as a way to preserve synchronicity and integrate an online pedagogy that could optimize learning at the institution. Hence, this research project aims to identify how the implementation of Professional Development courses impacts professors' synchronous classes in an Emergency Remote Teaching environment.

Literature Review

Considering the context and objective of this research project, there is a need to highlight research studies in this field. The following articles stressed the challenges and gains teachers experienced during the pandemic. In regard to the difficulties, teachers around the world struggled to adapt to the new reality since they had to implement new methodologies or adapt their classes; however, at the same time, these teachers experienced stress and their workload increased (Kidd & Murray, 2020; Rapanta, Bottur, Goodyear, Guardia & Koole, 2020; Juárez-Díaz, & Perales, 2021). In addition, the literature shows that institutions offered teachers PD programs for technology tool appropriation and lesson design for asynchronous and synchronous sessions (Postareff, Lindblom-Yla¨nne & Nevgi, 2007; Fabriz, Mendzheritskaya & Stehle, 2021). Hence, one aspect to highlight is a research void regarding a specific Professional Development program that tackles a specific methodology implementation that fits or boosts synchronous sessions.

In detail, some studies explored the findings related to COVID-19 effects on the teacher's role, and classroom methodologies in the higher education context. Some of these studies were based on the teachers' response to the pandemic (Juárez-Díaz & Perales, 2021). Others were focused on Professional Development programs' importance and effects on the professors' practices and methodologies adaptation when a crisis like COVID-19 struck up in the field (Postareff, Lindblom-Yla¨nne & Nevgi, 2007; Bozkurt, Jung, Xiao, Vladimirschi, Schuwer, Egorov, Lambert, Al-Freih, Pete, Olcott, Rodes, Aranciaga, Bali, Alvarez Jr, Roberts, Pazurek, Raffaghelli, Panagiotou, Coëtlogon & Bond, 2020; Rapanta, Botturi, Goodyear, Guàrdia & Koole, 2020). Also, some studies highlight how teachers adapted their classes in synchronous and asynchronous lessons mediated by technology (Fabriz, Mendzheritskaya & Stehle, 2021; Rapanta, Botturi, Goodyear, Guàrdia, Koole, 2020). In addition, two studies described the decision-making process the teachers from higher education went through when the pandemic hit the world (Rapanta, Botturi, Goodyear, Guàrdia, Koole, 2020; Kidd & Murray, 2020). All these studies significantly contributed to the main challenges and pedagogical changes and decisions in higher education when COVID-19 started. The

studies gathered were developed both in international contexts, but they all share higher education as a transversal topic and purpose. This literature review aims to show the main findings regarding this topic.

Teachers' response when COVID-19 started

Research on the teachers' response, when the pandemic started, is limited. In a study that took place in Mexico, 26 English language teaching faculty members and 32 preservice English as a foreign language teachers (Juárez-Díaz & Perales, 2021).

On one hand, the professors of the institution used an online platform to store materials or share information with the students; however, the content and evaluation moments happened in the classroom. For that reason, it was a challenging transition for the teachers since they had to change their mindset on using platforms for different purposes. On the other hand, teachers from the same study took control of their learning process; even though they had difficulties such as stress, high levels of workload, and technology illiteracy. Hence, despite facing stress, increased workloads, and technology illiteracy, teachers demonstrated resilience by taking control of their learning process and overcoming these obstacles.

Professional Development Programs' Importance and Effects

Although the COVID-19 pandemic had a significant impact on higher education institutions worldwide in terms of the urge of professors to learn, research has been done on the boost of establishing Professional Education programs in those institutions. In the study from Postareff, et al. (2007), the researchers found that 200 teachers from different disciplines at the University of Helsinki after pedagogical training affected their teaching practices. The most relevant outcome from this year's training was related to the teachers' mindset; the participants reported a shift from a teacher-centered to a student-centered approach. During this training, the teachers received "theoretical knowledge, new ideas, advice as well as new viewpoints from participation in the pedagogical training" (p.569). Participants in the study showed their willingness to apply new teaching methods. In

addition, the researchers could identify that the teachers were more aware of the problems they had in their teaching, so after the training, they could implement ideal methodologies to teach.

Along the same line, Bozkurt, et al. (2020) and Rapanta, et al. (2020) stated that the participants had the initiative to use pedagogies in online learning and teaching. However, to do that, the researchers identified that professors needed to learn how best to use technology and boost learning online opportunities. Hence, the authors highlighted that those participants needed teacher/faculty training for emergency remote education and support services such as manuals, workshops, webinars, peer support, best practice sharing sessions, etc. Finally, the researchers mentioned that the professors who participated in these programs were able to update their knowledge of effective pedagogical methods with or without the use of online technologies.

Synchronous and Asynchronous Classes Design

One of the major changes in education when the pandemic hit is related to synchronous and asynchronous methodologies and teachers' adaptation towards these online learning and teaching spaces. On the one hand, Fabriz, Mendzheritskaya and Stehle (2021) identified that 397 professors from a German University believed that asynchronous sessions facilitate social interaction; however, these sessions require more attention as well as planning to support students' interaction. In addition, the researchers could conclude from the interviews with the participants that students in synchronous sessions experience more feedback compared to the ones taking classes asynchronously. They reported that synchronous sessions increase students' interest in the course content while asynchronous sessions promote autonomy in students.

On the other hand, Rapanta, et al. (2020) concluded in their study that new online teachers need pedagogical knowledge to design worthwhile learning activities. According to the authors, these activities should be adequate based on the design approaches (synchronous/asynchronous) and they must have an objective in each space of learning and teaching, the design should be based on students' expectations and capabilities, and

they have to be related to authentic contexts, so these activities and sessions can promote collaborative work and enhance autonomy.

The findings showed the importance of both synchronous and asynchronous methodologies in online education. Synchronous sessions are essential for providing immediate feedback and increasing student engagement, while asynchronous sessions promote autonomy but require meticulous planning to ensure interaction. Effective online teaching demands pedagogical knowledge to design meaningful learning activities that align with students' expectations and authentic contexts, fostering collaboration and independence.

Teachers' acclimatization

Facing a pandemic was a challenge that the education field had to overlook. One of the most relevant ones is related to how teachers had to deal with the fact of teaching from home with the resources they had in their hands. On the one hand, in the research done by Rapanta, et al. (2020), they wanted to identify how social injustice, inequity, and the digital divide exacerbated during the pandemic in higher and K12 education. They found that teachers used different online platforms to share content or upload information. Also, the teachers recorded their sessions and uploaded them on YouTube, so students could access information when they could access the internet. Finally, they used social media such as WhatsApp to easily reach students; also, they used Facebook to have live classes or streams. The study from Kidd & Murray (2020) explores how pedagogies adapted to new online spaces. The researchers found that teachers had a positive attitude toward the new changes. The participants of the study re-invented their pedagogies and curricula. The authors highlighted that this sudden shift included developing creative and secure online practices that aligned with participants' existing pedagogical values and systems. They engaged in both synchronous and asynchronous modes of teaching to accommodate diverse student needs. Hence, these studies demonstrate that teachers from schools and professors from universities adapted their teaching pedagogies and they were willing to use technology to share content with students.

Research question and objective

What does the implementation of professional development (PD) programs reveal in UNICA teachers' pedagogical practices during their synchronous sessions?

To unveil UNICA teachers' pedagogical practices during their synchronous sessions after a year of professional development (PD) programs.

Methodology

This study has a qualitative research approach. According to Cresswell (2012), this type of research is needed to explore a phenomenon from the perspective of specific problems in the education field. In addition, the author emphasizes that this paradigm "helps educators understand problems or issues through the accumulation of knowledge" (p.26). Hence, the purpose of this study is to unveil how the implementation of Professional Development courses impacted professors' synchronous classes in an Emergency Remote Environment.

The participants of this study were 24 professors (males and females) who teach different subjects in the BA program at the institution: seven full-time, three part-time, and 14 hourly professors. The criteria for selecting participants in the study included teachers from the institution who faced the sudden challenge of transitioning their teaching modality. The institution had no prior experience with online teaching and lacked resources for the community. Consequently, these teachers had to adapt their lessons and teaching practices from face-to-face to technology-mediated synchronous and asynchronous classes by means of Microsoft Teams and free platforms such as Google Classroom.

During 2020, the professors had the opportunity to participate in PD courses. In the first and second semesters of 2020, these synchronous and asynchronous courses focused on the use of digital tools (see Table 1). There was a strong emphasis on training professors on the use of diverse digital tools to enhance interaction and collaboration among students (Ramírez-Correa, 2023).

Then, in 2021-1, the PD synchronous and asynchronous courses and workshops promoted by the EPTIC committee were focused on improving the didactic and methodological practices during the teachers' synchronous sessions. The teachers from the institution were using at least two different digital tools for the classes, but the synchronous sessions needed an organization of delivery in this Emergency Remote Teaching environment. As a result, the professors were invited to participate voluntarily in these courses and workshops, so the total range of participation was between 8 to 12 teachers, mostly full-time professors. In addition, there were three moments of synchronous workshops in which all teachers from the institution participated (see Table 1).

Table 1

Synchronous and asynchronous workshops and courses

	Synchronous courses	Asynchronous courses
Phase 1 2020	1. Choice board workshop 2. Maximize your classes in the Zoom workshop 3. How to create videos using ScreenCast o Matic workshop 4. Vocaroo y Kaizena workshop 5. Peardeck workshop (all teachers)	1. Hyperdocs asynchronous course 2. SAMR asynchronous course 3. How to use technological tools fair (always available)
Phase 2 2021-1	1. Pre-work (SOFLA*) by using Perusall (all teachers) 2. SOFLA workshop: Sign-in and Whole Group Application. 3. SOFLA workshop: Breakouts and Share-Out	4. How to use technological tools fair (always available)

*SOFLA: Synchronous Online Flipped Learning Approach

After formulating the inquiring question and objective, the researchers followed the stages from an Action Research method. Action Research is a "collaborative inquiry by reflective practitioners being accountable and making results of their inquiry public self-evaluating their practice and engaged in participatory problem-solving and continuing professional development" (Cohen, 2007, p 85). For this project, the researchers carried out two moments of implementation. Firstly, the researchers focused the implementation on providing teachers with technological tools when the pandemic started during 2020;

secondly, the researchers identified they had to focus the Professional Development moments on providing strategies aligned with methodologies for the synchronous and asynchronous sessions during 2021 first semester. Hence, the members of the committee adjusted and designed synchronous and asynchronous PD courses and workshops based on the needs or challenges professors of the institution had to face during 2020.

For this research paper, the analysis of data was focused on the second phase of the implementation to identify the implications of the PD courses and workshops about Synchronous Online Flipped Learning Approach (SOFLA®) methodology and technology use in the synchronous and asynchronous sessions. It is relevant to bear in mind that it was observed and analyzed from the first phase of this project (2020) that in most of the cases, teachers boosted their digital competence.

SOFLA emerged to provide a structured framework for both synchronous and asynchronous virtual classes, ensuring that students feel engaged during the lessons. Consequently, professors were invited to participate in three sessions. The first one had the objective to present the seven steps of SOFLA, described as follows:

SOFLA can be implemented online through seven steps (see Image 1). In the first step, the teachers design a lesson that students can complete autonomously so they arrive prepared for the lesson. During the second step, teachers begin their synchronous virtual sessions with open-ended questions related to the lesson's theme. This Sign-in activity connects the asynchronous and synchronous sessions and ensures student participation. Step three, Whole-group Application, encourages students to collaborate and apply concepts from the pre-session work, such as creating visual organizers or solving complex problems together (Marshall & Kotka, 2022).

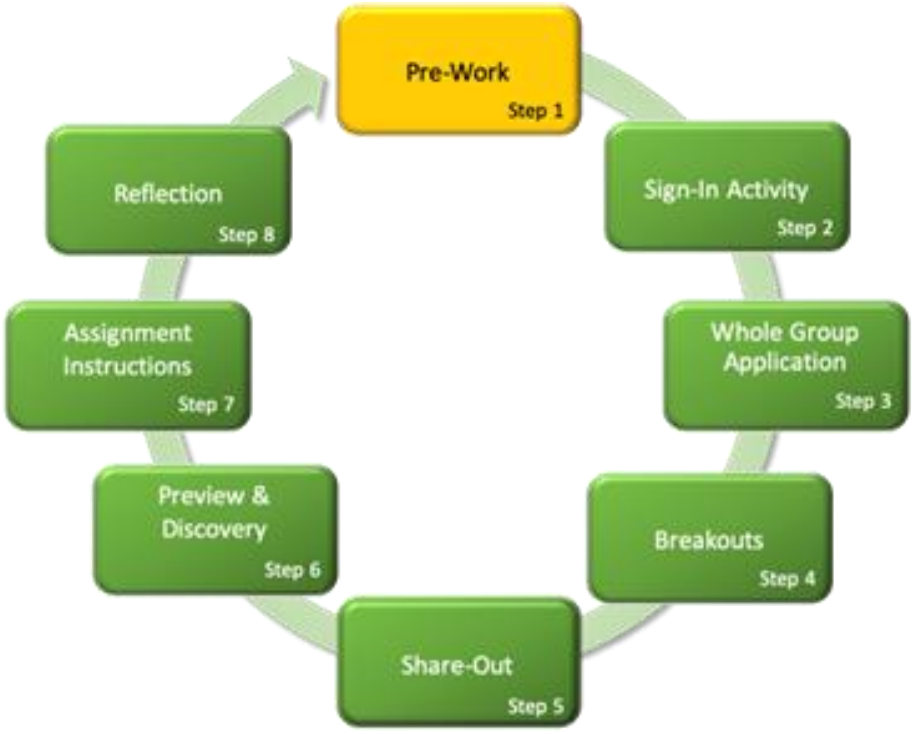
Step four allows students to work in heterogeneous or homogeneous groups based on abilities. Tasks in these groups can be uniform or follow a "jigsaw" approach where each group tackles a distinct part of the project. Detailed instructions, both verbally and written, are crucial for clarity and transparency. In step five, groups share their work, fostering a peer-instruction dynamic that reinforces the material for all students. Although time

constraints may prevent every group from sharing in each session, this step promotes accountability as students understand they must deliver tangible results. Implementing a peer feedback protocol like the Share, Help, Ask, or Comment (SHAC) approach can ensure active participation from the entire class.

Steps six and seven, Preview and Discovery and Assignment Instructions, prepare students from upcoming lessons and motive them to explore new material. Finally, in Step eight, the teacher concludes the virtual session with an open-ended prompt which works as a take-away activity.

Image 1

SOFLA steps



During the initial engagement with the PD courses and workshops, professors were given a detailed explanation of each step, its objectives, and the integration of technological tools in some steps. The ETPIC committee decided to design two more sessions to focus on Steps two, three, four, and five. This decision was based on findings from the project's initial phase, where it was observed that at least half of the professors primarily relied on teacher-

centered approaches, such as extensive lecturing and explanations, mirroring traditional face-to-face teaching (Ramírez-Correa, 2023). This practice negatively impacted student engagement, with many students opting not to activate their cameras or microphones, resulting in minimal active participation. Therefore, SOFLA steps implementation during synchronous sessions will allow students to participate more during the lesson and collaborative work with their partners, for instance, in break out rooms.

Data analysis

The data collected for this study was qualitative and the method of analysis was a process of triangulation. This means that information was collected from three instruments: a questionnaire from the second phase of the intervention, interviews, and class observation notes.

The data was analyzed using Thematic analysis which is a method for developing, analyzing, and interpreting patterns across a qualitative dataset, which involves systematic processes of data coding to develop themes (Braun & Clarke, 2022 p.4). The authors distinguish between two levels of themes: semantic and latent. Semantic themes '…within the explicit or surface meanings of the data and the analyst is not looking for anything beyond what a participant has said or what has been written.' (p.84). In contrast, the latent level looks beyond what has been said and '…starts to identify or examine the underlying ideas, assumptions, and conceptualizations – and ideologies - that are theorized as shaping or informing the semantic content of the data' (p.84). Furthermore, this is a method for developing patterns and interpretation of a set of encodings in the collected data to generate themes that serve an analytical purpose in the end. The encoding can reveal meaning from the data content, whether it is semantic or explicit.

The researcher followed the stages proposed by Braun and Clarke (2022) to code the data found from the three instruments to help her answer the main inquiry. First, the researchers started initial coding by identifying and labeling meaningful segments of the data. These codes captured important concepts, ideas, or patterns. They considered labeling codes after reading data gathered from the instruments to notice any meaning

potentially relevant. The researcher labeled data by using color coding to identify patterns related to what the implementation of Professional Development (PD) programs reveals in ÚNICA teachers' pedagogical practices during their synchronous sessions and identify preliminary themes (see Table 2).

These preliminary categories were established. In the second questionnaire, teachers mentioned the technological tools that they used for the synchronous and asynchronous sessions. Also, they described their synchronous sessions in which the researchers could identify activities that boost students' collaborative and cooperative work, sign-in activities, and closing activities, and they mentioned the time they spent teaching content. In the observation notes, the researcher labeled codes related to the technological tools the teacher used during the synchronous sessions, the activities at the beginning of the class, moments of the class where the students could participate in a whole group activity and breakout rooms. As for the interviews, the professors shared their opinions related to SOFLA and new pedagogies implementation, the way they structured their synchronous sessions, and the material they designed to monitor students' learning process.

Table 2

Color coding strategy

Instrument	Preliminary themes	Color coding
Second questionnaire	Technological tools for synchronous and asynchronous sessions Professors' methodologies	Technological tools in synchronous classes LMS to share information in the asynchronous session Collaborative work, cooperative work, and group work Teacher talking time Activities to obtain information from students Closing and Sign-in activities Active pause activity Asynchronous work
Class observation notes	Evidence of SOFLA implementation Group and collaborative work	Technological tools during synchronous classes Collaborative and group work Technological tools that enhance ss' participation Teacher talking time Closing and Sign-in activities
Interviews		Synchronous class organization:

		-Pre-work activities -Whole-group activities -Breakout room activities SOFLA structure- opinion Implementation of new methodologies and pedagogies-opinion Follow-up process: Hyperdocs use videos with comprehension questions

Then, the researcher continued with a process of interpretation called "semantic codes" in which they capture meanings of data to create themes and categories to answer the research question (See Appendix C). During this process, the researcher created extracted data from each instrument to interpret the information and evaluate the potential themes by examining their relevance and coherence within the dataset. Considering how well each theme captures the essence of the data and whether it contributes to answering the research question. The researcher used this step to refine, revise, or combine themes as needed.

After this step, the researcher named and defined themes. Defining each theme clearly and concisely helped the researcher provide descriptive labels that accurately represent their content and significance. Based on the previous step, the main theme and subthemes were created taking into account the research question and objective:

Table 3

Main theme and subthemes

The main research question and objective	Main Theme	Subthemes
What does the implementation of Professional Development (PD) programs reveal in UNICA teachers' pedagogical practices during their synchronous sessions? To unveil UNICA teachers' pedagogical practices during their	The use of technology and the SOFLA approach to enrich synchronous and asynchronous sessions from a didactic point of view.	Technological tools in synchronous and asynchronous classes
		Synchronous Classes Structuring
		Best Practices in Synchronous Instruction

synchronous sessions after a year of Professional Development (PD) program		

During the analysis process of each instrument data, the researcher needed to interpret relevant information regarding the technological tools professors from the institution implemented during the synchronous and asynchronous sessions; also, as the methodologies, strategies, or approaches they followed during the asynchronous session after a year of the Professional Development program.

After this process, the researcher identified a main category (see Table 3) related to the use of technological tools to design material for the synchronous and asynchronous and how these tools enriched the synchronous classes and the SOFLA steps teachers mainly used during their synchronous sessions. The researcher also found that these tools were implemented in three main session moments to check previous work, enhance collaboration among students, and boost participation. As described below, the authors Braun and Clarke (2022) highlight that researchers in this stage have to analyze the colored codes to come up with main themes and subthemes.

Results and Discussion

The research aimed at UNICA teachers' pedagogical practices during synchronous and asynchronous sessions after a year of Professional Development (PD) program to address challenges posed by the COVID-19 crisis in education, particularly at ÚNICA. Results from the data analysis process indicated that professors from the institution used technology and some steps from the SOFLA approach to enrich synchronous and asynchronous sessions from a didactic perspective. Participants shared their experiences through interviews and questionnaires, highlighting how technology and the SOFLA approach improved their sessions. Additionally, the researcher observed prominent SOFLA steps during synchronous sessions amid the pandemic.

Technological tools in synchronous and asynchronous classes

A prominent gain the participants highlighted was the appropriation of technological tools to communicate with students, share class content, and enhance collaboration and participation during synchronous classes.

During the implementation of the second questionnaire, the researcher queried professors about the tools frequently utilized in synchronous lessons. Among these tools, the participants mentioned that TEAMS platform was the most widely adopted, with 83% of UNICA teachers utilizing it, despite their unfamiliarity with the platform beforehand. TEAMS emerged as the predominant LMS (Learning Management System) due to its official status within the institution. Additionally, professors used synchronous tools such as WhatsApp, Meet, Zoom, and Blackboard Collaborate to maintain ongoing communication with their students. Moreover, teachers incorporate other LMS platforms like Google Classroom, Edmodo, Blackboard, and Schoology to distribute material, communicate messages, and assign tasks. This diversified approach in platform and store methods effectively managed and shared course content and activities with students. These findings are consistent with Juárez-Díaz & Perales' research (2021), which highlighted how he pandemic prompted teachers to adopt new tools and leverage LMS for storing and disseminating information to students.

Within the array of digital tools available for classroom use, ÚNICA educators exhibit familiarity with a broad spectrum of options. The questionnaire revealed that Google applications (Docs, Slides, Forms) and Padlet were popular choices, with Google Docs being the most widely employed. Padlet was recognized for its immediate response capabilities and user-friendly interface. Additionally, tools such as Quizziz and Mentimeter, facilitating participation across various devices in surveys, quizzes, or questions, were extensively used. Conversely, some tools, including Actively Learn, Wordwall, Flipgrid, Quizlet, Openboard, and the Office suite application, saw lower adoption rates. However, each of these tools served a distinct instructional purpose, demonstrating selective incorporation by teachers based on specific instructional objectives.

The technological tools and LMS highlighted in the questionnaire were also observed in some classes. Professors C, J, P, M, and A used Zoom to class topics through PowerPoint Presentations (PPPs) and supplemented these with written concepts and explanations using Zoom's tools. These teachers promoted collaboration among students through Zoom's breakout rooms, as noted in observation logs. For instance, Professor A remarked in an interview excerpt, "...Well, also in the chat... students like, the chat, yeah, using the chat for other purposes... because... they are already tired of so much Padlet and so much Jamboard." (Interview, Participant A, own translation). This tool also facilitated students' presentations via screen sharing during synchronous classes.

Furthermore, Professors D, E, S, and A used Pear Deck, Jamboard, Mentimeter, and Genially technological applications to foster students' participation and present class content dynamically. These tools enabled teachers to create moments in synchronous classes where students actively engaged, practiced and contextualized topics, thereby promoting collaboration. For example, Professor E shared in the interview that "I really like Genially...but I know it's not easy for many people to use. I love it, and for me, it's very easy...So, when I started using it, I simply started looking around and tinkering with it here and there" (Interview, Participant E, own translation). Similarly, Professor C said "... I feel satisfied and enthusiastic, and to recognize that I have a lot, a lot to learn. Regarding the use of technological tools, I have started, let's say, to use things like Padlet, Filgrip...I have found meaningful use of tools for the purpose of the content in which I have used them" (Interview, Participant C, own translation).

Based on the observations and insights from professors, there was a concerted effort to explore tools that could significantly impact synchronous sessions, aiming to enhance collaborative work and student engagement. For example, professor D implemented Pear Deck during the synchronous session to promote participation since the tool allows students to answer multiple choice or open questions or draw; so, everyone actively participated in the lesson since Pear Deck is a tool that helps teachers create interactive lessons and assess student progress. In addition, professors E and S used Genially and Jamboard to

engage students in the lesson, promote participation and collaboration, and present content. Also, professors M, J, PP and AA used Zoom breakout rooms for students work in groups.

These findings resonate with studies by Rapanta et al. (2020) and Fabriz, Mendzheritskaya, and Stehle (2021), which underscored the increased attention teachers placed on planning synchronous sessions to create interactive learning spaces during the pandemic. Moreover, in these studies, professors used different online platforms to share content and communicate with students easily. In addition, Kidd and Murray (2020) found that professors were willing to innovate their pedagogies and curricula, underscoring the challenge of adopting new technological tools and approaches.

Synchronous Classes Structuring

As was analyzed in the previous category, exposure to new tools through Professional Development encounters has enhanced synchronous classes. The questionnaire revealed a clear emphasis on integrating diverse technological tools beyond the platform used for these sessions. Educators employed tools such as Pear Deck in Slides to encourage various forms of participation distinct from open microphone interventions. Furthermore, they utilized interactive videos, phone calls, slide presentations, and other multimedia resources that complemented the class sessions. However, it is important to highlight that professors from the institution needed some guidance regarding how to structure a synchronous session using the technological tools they learned to use so that they could avoid teacher-talking time overuse. Hence, after a series of workshops and meetings, the results of the first phase of data collection revealed the need for additional training for digital pedagogy. In response to this need, the Synchronous Online Flipped Learning Approach (SOFLA®) emerged to provide a structured framework for both synchronous and asynchronous virtual classes, ensuring that students feel engaged during the lessons.

The first questionnaire carried out in 2020 revealed that professors were willing to adapt their methods by incorporating active breaks, collaborative activities, and encouraging participation through chat or shared documents. Through these PD sessions focused on SOFLA, professors were exposed to the four steps of the approach and how to

implement them. By the end of these sessions, some professors initiated the implementation of these steps during their synchronous sessions, with or without the use of a lot of technological tools.

The observations indicate that professors primarily used three SOFLA steps: Sign-in activity, Whole group application, and Breakouts. They revealed that most professors began their classes with an activity to revisit a previously covered topics or to review concepts from independent work. Five out of the 11 teachers included Step Two (Sign-in) of SOFLA, which involves starting the class with an entry exercise using open-ended questions, surveys, and a Jamboard to review previous session's topic. Although Step One was not evident in the observation sessions, interviews revealed that professors assigned texts, and a 20 min video to expand on the topic students are learning, highlighting "SOFLA as an effective framework for organizing classes" (Participant A, Questionnaire 2, own translation). Additionally, the questionnaire, revealed that participants designed classes with asynchronous sessions where students completed tasks, homework, and workshops about class content. A research study from Fabriz et al., (2021) emphasized that during the pandemic, German university professors noted that asynchronous sessions required more attention and planning and should therefore be connected to the synchronous ones.

The same number of educators also employed Step Three (Whole-group) activities to apply learned concepts and address doubts. Moreover, seven participants implemented Step Four (Breakouts) allowing students to practice, apply what they had learned, discussed, and worked collaboratively in small groups or Zoom breakout rooms. During the observations, open-ended questions were used for doubt resolution or clarification of ideas, and some teachers used these questions to promote discussion on specific topics or review previously learned concepts. Teachers also encouraged group and collaborative through online documents and Jamboards. Professors effectively utilized Zoom breakout rooms and the chat box to promote collaborative activities and participation, as some students preferred chat and a technological tool for engagement and participation.

Survey responses indicated that educators structured their synchronous classes by incorporating collaborative work, utilizing various technological tools, and assigning asynchronous tasks. There was a clear tendency to create interactive space for students at different points during the class. For instance, two professors mentioned that SOFLA Steps Three and Four offered significant advantages.

Professor A mentioned that "SOFLA allows organization of activities" and there is time to start with a video or an opening reading, then a 20-minute explanation (sometimes more on the topic), and then a practical exercise" (Interview, own translation). Participant D added that "...sometimes the whole class is spent in conversation, either in breakout rooms or as a general group. But what I have tried to maintain is constant changes. That is, if they decide on a total group, breakout rooms. Sometimes they are in breakout rooms, I stop them, we return to the general group. We have a general reflection, and sometimes they return in different groups or sometimes in the same groups, those kinds of things" (Interview, own translation). These excerpts illustrate that exploring new pedagogies adapted to online spaces through SOFLA steps implementation, evidence that professors from the institution want to foster students' collaboration among peers and participation in the breakout rooms and whole class activities. They also indicate a need to adapt classes using technology (Kidd & Murray, 2020).

Best Practices in Synchronous Instruction

The final category identified in the second part of this research process pertains to the best practices in the synchronous sessions. This finding is closely related to Professional Development (PD) pograms promoted within the institution, which emphasize two main principles: technological tools appropriation and SOFLA implementation.

The questionnaire revealed that ÚNICA's teachers had adopted structured practices in their synchronous classes to avoid teachers' talking time and promote cooperation and collaboration among students. It is noteworthy that one resourceful practice demonstrates the teachers' emphasis on student participation through various means, especially via the class chat using Zoom. It was mentioned that students, for various reasons, did not

interact with their microphones turned on, making the chat the most effective method to encourage participation. This is linked to promoting teamwork and collaborative exercises to further encourage student responses.

Another notable good strategy is the use of warm-up exercises (Sign-in, SOFLA Step One) and closing activities, which structure synchronous sessions, ensuring they have a clear beginning and end. For example, professor E commented "...SOFLA helps a lot in structuring that and it helps teachers to do it in a better way." (Interview, own translation). Similarly, professor C stated"... there is now a much more sequential methodological approach to the process, it's a bit more, I mean, not just an inventory of tools anymore, but there's actually a logical sequence that is often very useful from both a methodological and pedagogical perspective, the ones we usually work with." (Interview, own translation). Indeed, as discussed by Postareff, Lindblom-Yla¨nne, and Nevgi's study (2007), PD courses significantly impact in professors' mindsets and teaching practices by promoting student-centered sessions. Consequently, the institution's teachers were able to effectively enhance their pedagogical methods to promote student participation and collaboration (Bozkurt, et al., 2020; Rapanta, et al., 2020).

Another significant practice during the synchronous sessions is the promotion of collaborative and cooperative work. The questionnaire revealed that teachers encouraged cooperative and collaborative work using tools such as Jamboard, live documents, hyperdocuments, and Zoom breakout rooms. One participant shared "I do realize they can create things ... And make it more interactive with their peers, be more creative in certain aspects." (Interview, Participant A, own translation) Professor C also remarked "... the sense of using tools to promote interaction, production, and the creation of artifacts." (Interview, own translation). As noted in Bozkurt, et al.'s study (2020) after implementing PD programs, teachers feel motivated to incorporate new teaching methods through appropriate technological tools.

In summary, this category highlights the impact of Professional Development programs on improving synchronous session practices at ÚNICA. The teachers

effectively incorporated technological tools and SOFLA steps implementation to enhance student participation. Furthermore, the promotion of collaborative and cooperative work using tools technological tools was notable, with teachers feeling more motivated and equipped to implement these methods. This reflects the broader influence of PD programs in fostering best practices in these synchronous encounters.

Conclusions

COVID-19 contingency changed the way we consider education, especially in the university field. Professors from ÚNICA had different mindsets in terms of using technology and LMS to share information with students. The Bachelor's Degree Program is completely face-to-face, and teachers did not have an official LMS platform and most of them were not completely literate using technology. Hence, all teachers had to adapt their teaching practices from one day to another. The findings from this action research study reveal significant advancements in pedagogical practices among ÚNICA professors during synchronous and asynchronous sessions, primarily driven by their participation in Professional Development (PD) courses. This program aimed to address the educational challenges posed by the COVID-19 crisis, with a particular focus on integrating technological tools learning and implementation and the Synchronous Online Flipped Learning Approach (SOFLA) into their teaching methodologies.

One of the key outcomes of the study is the evident appropriation of technological tools by teachers to enhance communication, share class content, and foster collaboration and participation in synchronous classes. The widespread adoption of the TEAMS and Zoom platforms helped teachers to deliver their lessons. Additionally, the use of tools such as WhatsApp, Meet, Blackboard Collaborate, Google Classroom, Edmodo, and Schoology highlights a diversified approach to managing and sharing course content effectively. These findings align with existing research, such as Juárez-Díaz & Perales (2021), which noted a similar trend among educators during the pandemic.

The study also underscores the popularity of Google applications and Padlet among ÚNICA educators, with tools like Quizziz and Mentimeter facilitating interactive

participation. While some tools saw lower adoption rates, their selective use indicates a strategic approach to meeting specific instructional objectives. Observations and interviews with professors further illustrate the effective use of Zoom's breakout rooms and chat functions to promote collaboration and engagement, consistent with the study by Fabriz, Mendzheritskaya & Stehle (2021).

Moreover, the implementation of SOFLA steps during synchronous sessions played a crucial role in structuring classes and enhancing student engagement and participation. Professors employed steps such as Sign-in activities, Whole-group Application, and Breakouts to create interactive and collaborative learning environments. The study revealed that additional training in digital pedagogy is essential to fully transform online spaces into dynamic environments, so professors avoid synchronous teacher-centered sessions. This need for further guidance is echoed in the literature, highlighting the importance of continuous professional development as it was highlighted in studies by Rapanta et al. (2020), Postareff (2007) and Bozkurt, et al. (2020)

The best practices identified in the study emphasize the importance of student participation through various means, particularly via chat functions in synchronous classes. Warm-up exercises and group activities are essential to promote interaction among students and collaboration when they have to complete a task. However, the study noted that fewer than 50% of teachers provided opportunities for active breaks, indicating an area for improvement.

In conclusion, the PD program at UNICA has significantly impacted teachers' pedagogical practices, fostering a positive attitude towards integrating new tools and methodologies in most of the teachers. The adoption of technological tools and SOFLA steps has enhanced synchronous sessions, promoting student participation and collaboration. These findings underscore the broader influence of PD programs in advancing best practices in online education, ultimately contributing to a more engaging and effective learning experience for students.

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Appendices

Appendix A.

Observation chart

Fecha: 2021-1 /hora:	
Docente	
Objetivos de la sesión	
¿Cómo se está chequeando que se entienda?	
¿Cómo se genera participación activa en los estudiantes?	
Herramientas digitales utilizadas	
Dificultades con tecnología	
¿Cómo se sortearon las dificultades?	
¿Se siguen los pasos de SOFLA?	
Notas etnográficas de la clase	

Appendix B

Cuestionario Implementación Tecnológica Semestre 1-2020

El siguiente cuestionario tiene como finalidad caracterizar las prácticas realizadas por los docentes de ÚNICA durante el primer semestre de 2020.

1. Nombre completo
2. Correo electrónico institucional
3. Materias que dictó durante el primer semestre de 2020 *

Dispositivos y herramientas digitales

4. ¿Qué dispositivos tecnológicos utilizó para sus clases durante el primer semestre del 2020? *

- Celular
- Computador de escritorio
- Computador Portátil
- Tablero digital
- Tableta
- Todas las anteriores
- Otras

5. ¿Qué LMS utilizó durante el semestre? *

- Google Classroom
- Edmodo
- Schoology

- Microsoft Teams (archivos, tareas, etc.)
- Google Drive
- Ninguno
- Otras

6. Si su respuesta a la pregunta anterior fue "ninguno", por favor explique como gestionó el material en su clase.

7. ¿Cuáles de las siguientes herramientas sincrónicas usó con mayor frecuencia durante el primer semestre de 2020? *

- Whatsapp
- Microsoft Teams
- Google Meet Zoom
- Cisco Webex
- Blackboard Collaborate
- Ninguna
- Otras

8. Si su respuesta a la pregunta anterior fue "ninguna", por favor comente las razones.

9. ¿Cuáles de las siguientes herramientas digitales usó con más frecuencia en sus clases?

- Padlet
- Kahoot
- Quizziz
- Mentimeter
- Google Docs
- Google Forms
- Google Slides
- FlipGrid
- Actively Learn
- Edpuzzle
- Otras

10. De las siguientes herramientas ¿cuáles no conoce, cuáles ha visto pero no ha usado y cuáles le gustaría integrar en sus clases? *

	La he visto pero no la he usado	Me gustaría integrarla en mi clase	Ya la uso	Intenté usarla, pero no me funcionó	No la conozco
Padlet					
Kahoot					
Quizziz					
Mentimeter					
PollEverywhere					
Google Docs					

Google Forms					
Google Slides					
FlipGrid					
Actively Learn					
Edpuzzle					

Estrategias sincrónicas

11. Describa brevemente la estructura de sus clases sincrónicas *

12. ¿Cuáles buenas prácticas utilizó en sus clases sincrónicas? *

- Pausas activas
- Ejercicios de Mindfulness
- Trabajo en grupos
- Ejercicio de entrada
- Ejercicio de salida
- Ejercicio colaborativo
- Curación de contenido
- Oportunidad de evaluación formativa
- Ejercicio para obtener respuestas escritas de los estudiantes
- Oportunidad de evaluación sumativa
- Actividad de cierre
- Ninguna
- Otras

13. ¿Cuánto tiempo habla usted durante la clase? *

- 15-30 min
- 30-45 min
- 45-60 min
- 60-75 min
- 75-90 min
- 90-105 min
- 105-115 min

14. Desde que comenzó la cuarentena, ¿qué porcentaje de sus clases fueron realizadas de manera sincrónica?

Estrategias asincrónicas

En esta sección se discuten las sesiones de clase asincrónicas (proceso comunicativo que se lleva a cabo sin coincidencia temporal)

15. ¿Cuáles estrategias utilizó para las clases asincrónicas? *

- Lecciones interactivas
- Foros
- Wikis
- Trabajos colaborativos
- Hiperdocumentos

- Entregas de proyectos/tareas
- Ninguna
- Otras

Aspectos generales

16. ¿Cómo apoyó a sus estudiantes durante el semestre? *

- Tutorías individuales
- Sesiones de retroalimentación
- Retroalimentación escrita
- Otras

17. ¿Qué tipo de problemas de conectividad tuvo? *

18. ¿Cómo resolvió problemas de conectividad de los estudiantes durante las sesiones de clase?

Appendix C

The data analysis document can be reviewed below

	Herramientas tecnológicas durante las clases síncronas y asíncronas	Organización y estructuración de clases síncronas	Buenas prácticas en las clases sincrónicas
Cuestionario 2	¿Cuáles de las siguientes herramientas sincrónicas usó con mayor frecuencia durante el primer semestre de 2020? Dentro de las herramientas para las sesiones sincrónicas se encontró que la plataforma TEAMS es la más usada por los docentes de UNICA, el 83% de los docentes usa TEAMS. Por otro lado, se evidenció que los docentes no solo usan una	• La encuesta revela que los docentes estructuraron sus clases sincrónicas siguiendo algunos o todos de los siguientes componentes: integración de trabajo cooperativo, uso de diferentes herramientas tecnológicas o asignación de trabajo asincrónico. Se encontró que hay una visión de generar espacios de interacción para los estudiantes en	• La encuesta demostró que los docentes de ÚNICA han implementado buenas prácticas en sus clases sincrónicas. Cabe resaltar que hubo una en particular que evidencia que los docentes dieron mucha importancia a la participación de los estudiantes en diferentes maneras, especialmente por medio del chat de la clase. Se menciona igualmeente que los estudiantes por diferentes motivos no interactuaban con el micrófono encendido, por lo que el método más efectivo para generar dicha participación fue por medio del chat. Lo anterior se conecta con la promoción de trabajos

	herramienta sincrónica sino que usan herramientas como Whatsapp, Meet, Zoom y Blackboard Collaborate. Esto se debe a que aunque las herramientas insitucionales están disponibles para todos, no siempre funcionan, como se ve en los comentarios de los docentes en este mismo cuestionario. ¿Qué LMS utilizó durante el semestre? Los docentes de ÚNICA usan diferentes LMS para sus clases. En este caso, se encontró que la plataforma que más se usa es TEAMS al ser la aplicación oficial de la institución. Sin embargo, se encontró que los docentes también usan otros LMS como Google Classroom, Edmodo, Blackboard y	diferentes momentos de la clase, por ejemplo luego de hacer el análisis de una lectura, los estudiantes podían presentar y moderar la participación a traves del chat. también se evidenció que los docentes usaban los espacios de salas pequeñas para generar trabajo cooperativo. Por otro lado, se evidencia que los docentes dieron gran importancia a la integracion de diferentes herramientas tecnológicas más allá de la plataforma para la sesión sincrónica. Los docentes usaron herramientas como Pear Deck en Slides para generar diferentes tipos de participación, diferente de la intervención con micrófono abierto. Además, se usaron herramientas como videos interactivos, llamadas telefónicas, presentaciones de diapositivas y otros recursos multimedia que complementaban	en equipo y ejercicios colaborativos para promover aun más la respuesta de los estudiantes. Otra buena práctica a resaltar es el uso de ejercicios de entrada y actividades de cierre, esto se puede interpretar como la manera en la que se estructuran las sesiones sincrónicas, es decir, más allá de conectarse sin un inicio ni cierre. Por ultimo, las demás buenas prácticas dejaron en evidencia que fomentar el bienestar de los estudiantes es importante sin embargo menos del 50% de los docentes dieron estos espacios, como dar tiempo para hacer pausas activas.

	Schoology en sus asignaturas en menor medida. Es interesante ver que alrededor de 14 docentes mencionan Google Drive como LMS, siendo que este es solo una nube de almacenamiento. Esto se debe a la versatilidad de la herramienta para compartir información y facilidad para editar información. Se puede decir que todos los docentes usaron diferentes plataformas y formas de alamacenamiento para sus clases virtuales y de esta manera manejar los contenidos y actividades para ser compartidas con los estudiantes de la mejor manera. ¿Cuáles de las siguientes herramientas digitales usó con más frecuencia en sus clases? Dentro del abanico de	las clases. Por último, de demostró que hubo un gran componente de trabajo asincrónico, ya que los docentes manifestaron que dejaron trabajos, tareas, talleres para ser realizados en otros momentos de la clase o incluso en las clases mismas sin necesidad de estar conectados todos en la sesión.	

	herramientas digitales disponibles para su uso en clase, se encontró que los docentes de UNICA conocen una gran variedad de ellas. Algunas mayormente usadas que otras. Esta encuesta demostró que las aplicaciones de Google (Docs, Slides, Forms) y Padlet, donde las apps de Google son las más usadas como herramientas digitales, y dentro de este grupo Google Docs es el más usado. Luego de estas aplicaciones, está padlet que es una herrmienta de respuesta inmediata y de fácil uso para cualquier usuario. Por otro lado, están las herramientas como Quizziz y Mentimeter que permiten la participación por medio de cualquier dispositivo en encuestas, quizes o		

	preguntas. Estas dos herramientas fueron también usadas por los docentes en gran medida, alrededor 4 docentes dicen usar dichas herramientas. Finalmente, estan algunas herramientas que no son muy populares entre el grupo de docentes, estas herramientas son: Actively Learn, Wordwall, Flipgrid, Quizlet, Graph Paint, Openbaord y las aplicaciones de Office. Cada una de estas herramientas tienen un propósito diferente, lo cual evidencia que los docentes las usaron con algun propósito para sus clases.		
Observación de clase	El docente C utiliza la herramienta Zoom para presentar información y para que sus estudiantes presenten. La docente D utiliza Pear Deck para promover participación de los	Durante las observaciones se pudo evidenciar y concluir lo siguiente. La mayoría de los docentes comienzan la clase con una actividad para retomar un tema anteriormente visto o para revisar	Los docentes fomentan el trabajo cooperativo y colaborativo por medio de herramientas como Jamboard, documentos vivos, hiperdocumentos y las salas paralelas de ZOOM.

	estudiantes. El docente A utiliza el tablero de Zoom para escribir conceptos, explicaciones, etc. Utiliza también Power Point para presentar contenido, Live worksheets para que los estudiantes practiquen un tema específico, utiliza la herramienta de salas paralelas de Zoom para que los estudiantes compartan y realicen actividades cooperativas o colaborativas y utiliza Jamboard para promover participación. La docente E utliza Genially, entimeter, y Jamboard para promover participación y presentar contenido. La docente M utiliza preentaciones de Power Point para presentar contenido y las salas paralelas para generar discusión y reflexión en grupos. La docente AA	conceptos del trabajo independiente. 5 de los 11 docentes incluyen el paso 1 de SOFLA el cual está relacionado a empezar la clase con un ejercicio de entrada o actividad de registro con preguntas abiertas, encuestas, un jamboard, para revisar el tema visto en la clase anterior o el trabajo independiente. También este mismo número de docentes utiliza actividades con todo el grupo para aplicar conceptos aprendidos y resolver dudas. Se utilizan preguntas abiertas para resolver dudas o aclarar ideas. Finalmente , 7 docentes ponen en práctica el paso 4 para que los estudiantes en grupos o salas pequeñas de ZOOM practiquen, pongan en práctica lo aprendido, discutan y trabajen colaborativamente en una tarea. Cabe anotar que se ve evidente 3 pasos de la	

	utiliza hiperdocumentos para practicar o contextualizar un tema visto. El docente M utiliza Genially y Zoom para presentar contenido. La docente S utiliza Jamboard con diferentes tableros para promover colaboración entre los estudiantes. El docente F utiliza Zoom, documentos vivos donde todos los estudiantes pueden participar y PPP para presentar contenido. Las docentes J y P utilizan las salas de Zoom y videos explicativos de un tema en específico.	metodología SOFLA en las observaciones.	
Entrevistas	No pues también en el chat, escríbale hágale. Y los chinos también, como que el chat sí como como darle otros usos al chat que pues si a uno se le olvida, porque a mí me gusta, pues Patriots o ellos ya están cansados de tanto Padlet y de tanto Jamboard	AA: Por lo general hay un video o una lectura de apertura, luego una explicación de 20m (a veces más del tema) y luego un ejercicio práctico// No eso todo una manera sería pensar que luego pues se pone en evidencia en esto y eso y se organiza otra vez, eso me parece, pero sí me parece una	Trabajo colaborativo: Sí, ósea es la impresión que uno tiene, yo sí me doy cuenta que pueden crear cosas, digamos, ¿no?. Y hacerlo más interactivo con sus compañeros, ser más creativos en ciertas cosas (A.A) //No es que ese es el asunto que probablemente a lo que lo que he logrado me hace sentir satisfecho en el, en el sentido de del uso de las herramientas para favorecer interacción, para favorecer producción,

	(AA)--- Y también sí para mí el uso es fácil o no Por ejemplo, a mí me gusta mucho, genially. Yo ya te he dicho eso varias veces, pero yo sé que no es fácil de usar para muchas personas. Me encanta y yo siento, para mí es facilísimo. O sea, yo siento que cuando hago otras cosas me es más difícil, pero genially para mí es súper fácil. Entonces, cuando yo empecé a usarlo, pues sencillamente empecé a mirar y empecé a cacharrearle por un lado y por el otro, y a medida que fue lo que yo trataba de hacer, era pues usar la clase como excusa, digamos, para desarrollar mi habilidad en la en la herramienta, entonces me ponía a la meta, no sé, esta semana quiero usar Jamboard listo, entonces, cómo lo voy a incorporar a lo que yo quiero	buena propuesta del SOFLA. Me parece buena idea para para...organizar las clases. Igual, todos hacemos cosas muy parecidas. A veces como por por intuición o porque la clase para que la clase no se aburra DB: En cuanto al rol que yo juego, es decir, procuro que haya momentos de asincronía y momentos de sincronía a veces se nos va toda la clase conversando, pues en o ya sea en Breakout rooms, o ya sea como grupo general. Pero lo que sí he tratado de mantener es que haya constantemente cambios. Es decir, si ellos deciden de grupo total, breakout rooms. A veces están en breakout rooms los paró, volvemos al al grupo general. Hacemos reflexión general y vuelven a veces en en grupos diferentes o a veces en los mismos grupos, ese tipo de cosas.	para favorecer la creación de artefactos. (CA) Seguimiento del trabajo de los estudiantes: No es que ese es el asunto que probablemente a lo que lo que he logrado me hace sentir satisfecho en el, en el sentido de del uso de las herramientas para favorecer interacción, para favorecer producción, para favorecer la creación de artefactos. (AA) Desarrollo profesional (SOFLA): Yo siento que ha sido bastante...como escalonado y siento que ustedes han hecho un muy buen trabajo frente a guiar a los profesores a descubrir las herramientas que hay y a empezar a usarlas de forma significativa en los salones. Siento que, por ejemplo SOFLA ayuda mucho a estructurar eso y que eso ayuda a que los profes lo puedan hacer de una mejor forma (ED)// el tercer momento fue, como ya hay una aproximación metodológica mucho más secuencial a al proceso, digamos que es un poquito más, o sea, como que ya no solo como el inventario de herramientas, sino que realmente hay una secuencia lógica que es a veces muchas veces es muy útil desde la desde la perspectiva metodológica desde la perspectiva de pedagógica que

	planear entonces porque no lo pongo acá, Lo pongo allá o y hay fui como explorando diferentes cosas, algunas me gustaron y las seguí usando otras no me gustaron y no las uso porque no les veo yo el uso personal, o sea, no veo cómo funcionan bien desde lo que yo percibo. (ED)// Y también le cogí arto el tiro a.. sabe a qué le cogí el tiro a Quizziz vea en no sé en 45 minutos que montó pruebas de simulacro para saber pro. porque en un lado, pongo las preguntas, si es que eso es perfecto para la para el simulacro de saber pro de los pelaos. Y me bota resultados, yo miro quién está quedado, quien no pudo (AA)// me siento satisfecho y entusiasta y también de de de reconocer que que se que me faltan muchísimo,		uno con la que uno trabaja usualmente. (CA)

	muchísimo por aprender. En cuanto al uso de herramientas tecnológicas. Pero sí he empezado, digamos, a utilizar cosas como Padlet, Filgrip Poitstraits. Cosas que digamos ajá eventualmente en en la presencialidad, muy ocasionalmente utilizaba, sí y.. y bueno siento que utilizado osea como que veamos que que he encontrado significativo el uso de las herramientas para el propósito de los contenidos en que las he utilizado (CA)		