Implementation of the Hybrid Modality as a Consequence of the COVID-19 Pandemic

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Abstract

Due to the global outbreak of the coronavirus disease (COVID-19), educational institutions in Mexico and the world began to close their schools to avoid risks of contagion. With the implementation of this measure, all students and teachers changed their face-to-face sessions and activities to the virtual modality in an emergent way, which caused various problems for both teachers and students who were not prepared for this sudden change but which were gradually resolved. At the beginning of the decline of the pandemic, the University of Veracruz selected the hybrid learning modality as an alternative to start a safe and orderly return to the classrooms. This article describes the implementation of hybrid learning at the Poza Rica Language Center and the advantages and disadvantages appreciated by the pioneer teachers in this modality. For this research, we implemented a qualitative methodology whose paradigm focuses on getting a deep knowledge about people, communities, contexts, variables or situations from the participants' very own words. The data collection was carried out from a semi-structured interview. Findings suggest that although hybrid learning is here to stay, continuous training of technicians and educators is necessary to achieve a better academic experience for both teachers and students.

Keywords: *Education, Hybrid learning, technology, console.*

1. Introduction

SARS-Cov-2 is a highly contagious virus that caused the disease called COVID-19 (coronavirus) and spread to all continents of the world causing a pandemic. The World Health Organization, through the Strategic Plan for the preparation and response to the new coronavirus, called on world leaders to take the necessary measures to prevent further spread of it, through national strategies to contain community transmission. One of these strategies was the closure of non-essential workplaces and educational establishments [1].

In Mexico, the Ministry of Public Education in conjunction with the country's Ministry of Health agreed on preventive measures for public educational institutions at all levels, including participation in voluntary isolation and the adoption of distance learning [2].

Two years into the pandemic, having implemented suggested strategies to contain it, the world has never been in a better position to end COVID-19 as a global health emergency as the number of reported weekly deaths nears an all-time low since the pandemic began and two-thirds of the world population have been vaccinated [3].

In Mexico, the return to face-to-face classes began to be planned in May 2021 [4], to be carried out in the 2021-2022 period in a voluntary, responsible and orderly manner in compliance with the provisions of the health authorities to basic, upper middle and higher education [5].

At the University of Veracruz, the start of face-to-face activities was also given voluntarily for those students who did not know the facilities due to the pandemic and it was estimated that by April 2022, 75% of the students would already be in the classrooms [6].

Finally, the return to the facilities was established for all members of the university community in August 2022 [7].

Thinking about a safe return to classes, the current university administration proposed in advance the creation of hybrid classrooms as a new way of working: virtual, face-to-face and bimodality after the

pandemic. For this, a total of 430 hybrid classrooms were installed in the different faculties of the five university regions [8].

The Poza Rica Language Center benefited from 4 classrooms equipped for this learning modality, which began to be piloted by volunteer teachers at the end of the 2021-2022 school year and are now used normally in the current 2022-2023 period. It has been noted that teachers have experienced various problems both in piloting and in current classes.

Therefore, this research work aims to describe the implementation of hybrid learning at the Poza Rica Language Center and the advantages and disadvantages appreciated by the pioneer teachers in this modality. For this, the following questions were posed: What are the advantages and disadvantages of this modality so far? What are the main problems that teachers have faced? Questions that must have an immediate answer to provide better attention to students who choose to learn a language in this learning.

2. Background

Due to the COVID-19 pandemic, teachers around the world went through adverse situations as they were not prepared to work in the virtual modality. Authors such as Alcántara (2020) [9] and Malo (2020) [10] agree that one of the greatest impacts of emerging digital education in times of pandemic has been the poor preparation of teachers in managing educational platforms to teach online classes. Students also faced stressful situations due to internet connection problems, mainly in rural areas [11]. Due to these situations, both teachers and students learned resilience, a positive and adaptive characteristic that human beings have in the face of traumatic, stressful or painful events (Masten, cited by Becoña, (2006) [12], and they had to adapt to the new normality and to work online. When migrating to the online modality, educational authorities and teachers reflected on the need to be prepared for emergency situations with different learning modalities. In all parts of the world, the COVID-19 crisis has required substantial efforts to create new infrastructure to enable more demanding forms of technology-enhanced learning, such as video conferencing [13].

In this sense, the hybrid teaching-learning model, which emerged some time before the pandemic, combines elements of the traditional face-to-face modality and the virtual mode. Hybrid learning is also known as mixed or combined learning that first arose with the aim of reducing the mobility of students to schools [14]. This type of learning was adopted at the University of Veracruz in 2016 as mixed or multimodal learning characterized by combining face-to-face and virtual sessions in the teaching-learning process using information and communication technologies (ICT) [15].

Differences have now been made between what is known as the hybrid learning model and the blended or mixed modality: Hybrid and blended learning are often confused, and both have many of the same instructional components. However, both are different learning models. Blended learning combines face-to-face instruction with asynchronous learning methods, in which students complete exercises online and watch instructional videos in their spare time. Hybrid learning is a teaching method in which teachers simultaneously instruct in-person and remote students. Asynchronous teaching methods may be used to complement synchronous face-to-face instruction in hybrid learning models [16].

The University of Veracruz has already begun its return to face-to-face classes in the period August 2022-January 2023 with a total of 434 hybrid classrooms in order to promote a diversity of learning environments using a variety of media and resources where the interaction between students and their teachers is established [8].

The Poza Rica Language Center has offered seven English hybrid courses in this period, favoring the method of simultaneous instruction to face-to-face and remote students, who have been working since August 2022. Before this, the teachers had to attend training sessions given by academic technicians from the institution who indicated how to use the technological tools of the hybrid classroom that allow communication with remote students. These tools are:

- A console or hub as controller of the necessary components for video conferences.
- A desktop computer and an HDMI adapter with 3 ports to allow communication between the computer and the console.
- A Main camera to transmit different parts of the classroom.
- A content camera that focuses on the front of the classroom where the content board and display stand are located.
- A microphone that allows to clearly transmit audio from anywhere in the classroom.
- A speaker that allows sound to be heard clearly throughout the classroom.
- A screen that displays remote participants or shared content.

- A projector to transmit content.
- Acoustic insulators that cancel external noise and improve the quality of audio transmission.

Work in the hybrid modality is carried out mainly using the Microsoft Teams application through which remote students are connected and the videoconference is transmitted [17].

All of these implements must be carefully used to work optimally, otherwise various problems can arise when trying to start the hybrid class.

The following section describes the methodology used to investigate the experience of teachers who piloted this modality last semester and those who are currently working on it.

3. Methodology

For this research the qualitative methodology was implemented. It focuses on understanding phenomena and exploring them from the perspective of the participants in their natural environment and in relation to the context. This type of research usually raises questions before, during and after data collection and analysis [18].

3.2 Instrument

Data collection was carried out from a semi-structured interview based on a set of issues or questions that serve as a guide, and where the interviewer is free to ask additional questions to specify concepts or obtain more information [18].

The interview focused on 4 main categories: technical issues, academic issues, advantages and disadvantages in the perception of the teacher. The results obtained were concentrated in a condensation table.

3.2 Participants

The participants were 8 teachers from the Poza Rica Language Center who participated in the previous piloting and the ones who are currently working in the hybrid modality.

4. Results

During the February-July 2022 semester, the piloting of the hybrid classes was implemented with the participation of four teachers and with students from the Language Center. This piloting could only be carried out at the end of the period, which was the time when the classrooms were finished being installed. Currently, 7 hybrid courses are being taught with the participation of 6 teachers.

The results of the semi-structured interview conducted with 8 of the 9 pioneer teachers in this modality are shown below. These results follow up on the research objective and were recorded by means of one concentration table in which the educators' main ideas on technical and academic issues, as well as advantages and disadvantages are summarized.

HÍBRYD MODALITY	
TECHNICAL ISSUES	The training was adequate, but technical problems arose in practice.
	Configuration problems have been faced with the console (hub).
	When the console is unconfigured, remote students do not hear room audio.
	The Teams app sometimes freezes their own dialog boxes that don't allow you to see the class content in the screen.
ACADEMIC ISSUES	Teachers rely on the digital book to project it.
	They use digital material designed during the pandemic for digital classes.
	Most use the project-based methodology.
	Student-student interaction occurs mainly among those who attend the face-to-face class.
ADVANTAGES	The main advantage of this modality expressed by teachers is the opportunity for students with mobility problems to attend a remote class from wherever they are.
	Students can choose to take the class in person or virtually depending on their activities or needs.
	Students spend less on transportation.
	The sound and protection equipment is excellent for face-to-face students, also for remote ones as long as there are no faults.

	It is difficult to control the work of a remote student who is not dedicated to studying.
DISADVANTAGES	If the internet connection fails, remote students lose signal.
	When the class stops due to signal failures, the in-person students must wait.
	If you have a good activity to work in-person, sometimes it does not work with remote students.
	WhatsApp and other chats are a good link when the connection is lost, but if a remote student loses the connection, it is difficult for the teacher to know immediately because he is also giving the class in person.

Table 1. Teachers' experiences in the hybrid mode.

It is important to point out that all the participants agreed in the importance of a continuous training in order to remember the steps that must be followed in this model and remain updated in the handling of the equipment.

5. Conclusions

In this investigative work, the implementation of the hybrid modality in the English courses of the Poza Rica Language Center was studied. The results of the research include the concentration of the information provided by eight teachers who have worked with this mode since May 2022. Four categories were examines: technical issues, academic issues, advantages and disadvantages. Regarding the technical aspects, most of the participants agreed that they had had problems with the console and with the audio and that most of the technical problems were unforeseen and had not been contemplated. Regarding academic aspects, teachers make use of the authorized digital book and teaching material of their authorship. The interaction between the students is carried out mainly with the students who attend in-person. The advantage that all the participants agreed on is the ease for students who cannot attend school to take their class at home and the main disadvantage of this modality is the time lost from the class when a technical failure occurs.

Therefore, it is concluded that the participants are in a stage of trial and error from which the positive and negative experiences must be rescued to contribute to the improvement of this modality and provide better attention to the students.

It is necessary that the students who choose this modality know in advance the technical requirements necessary to be able to study it successfully.

It is indispensable to work hand in hand with the technicians through a scholar group to publicize the aforementioned experiences and create manuals and tutorials that guide teachers in solving unforeseen problems and making decisions regarding how to evaluate learning as well as proposing guidelines on the way of working in this modality.

It is also important to accurately monitor the academic performance of students in this modality in order to take the necessary actions in the event that the failure and dropout rates are high.

The implementation of a research project that collects the perception of students regarding their learning of English in this modality is recommended.

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