Distance learning experiences at the University of Guadalajara, Mexico. Towards a hybrid model

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Abstract

The recent health crisis caused by the SARS-CoV-2 virus, known as the COVID-19 virus, disrupted essential areas of the economy and led to the implementation of new forms of teaching and learning in education. At the University of Guadalajara (UDG), Jalisco, Mexico, practical distance learning tools were adapted, and teaching staff was trained to use them; however, areas of opportunity were left visible beyond the work of universities. With the data resulting from a survey of students at the University Center for Economic and Administrative Sciences (CUCEA), we concluded that the strategy implemented by the university was successful; however, the outcome of the learning process was not wholly successful there were significant shortcomings.

Keywords: Distance learning; hybrid learning; e-learning; virtual education.

1. Introduction

The total closure of schools, institutes, and universities throughout Mexico caused by the COVID-19 pandemic forced education at all levels to be virtual or distance learning, as the entire population's health was put at risk. This strategy, implemented in March 2020, resulted in the confinement of 40.7 million people, including students, teachers, and administrative staff, of which 5.3 million people correspond to the higher education level, and giving continuity to education through technological environments (Concheiro, 2020).

The above has led homes to become classrooms, and there was the need to acquire computer equipment or mobile devices that allowed connection and internet service when unavailable. Education became totally online, and teachers also had to adapt to these needs. The situation was that not everything flowed as desired; there were delays in the execution of educational programs, there was confusion, discouragement, and in many cases, school desertion.

This paper focuses on presenting the educational policy and actions carried out by higher education institutions, in this case, the University of Guadalajara (UDG), particularly in undergraduate programs offered at the University Center for Economic and Administrative Sciences (CUCEA), regarding distance learning and the challenges faced by students and teachers. The latter finally led to applying a hybrid learning system based on the educational experience implemented.

2. Educational system in Mexico

Education was traditionally face-to-face with other learning environments such as Blended Learning or combined learning in Mexico. This last situation has been more frequent in European countries and has had acceptance among the student community due to the flexibility, access, and teaching-learning processes based on continuous models and not rigid and disciplinary as is the face-to-face (Simon, et al., 2018).

Performance of primary and secondary students remains low about "reading comprehension, written expression, and mathematics" (Gómez, 2017, p.156). In the pandemic context, lags that were already there have worsened since the closure of schools, the economic situation of families, access to education in a virtual environment, capabilities and skills to adapt to the new scenario. All of the above constitute factors that will eventually affect the development of human capital and well-being (World Bank, 2020).

On their behalf, United Nations Educational, Scientific and Cultural Organization (UNESCO, 2020) has reported significant adverse effects on education derived from the

COVID-19 pandemic. Confinement has generated additional problems, such as domestic violence, poor nutrition, unstable family economy, stress, and anxiety, to name a few.

Historically, Mexico does not have the required higher education coverage for its total population. Terminal efficiency has also contributed to the lack of higher educational levels in its people and the existence of other problems related to the social relevance of academic programs at the higher level (Malagón, 2003; ANUIES, 2018).

Therefore, education in Mexico has sought to rely on synchronous, asynchronous, distance, and online virtual learning tools to provide continuity to the educational process and conclude educational programs in the best possible way, with quality and without affecting learning.

In the University context, potentially efficient learning support tools known as Learning Management System (LMS) have been adapted. As its name says, our online learning management systems work in a virtual environment, such as Google Classroom, Cisco Webex, Zoom, Teams, etc. However, this form of disruptive education or change of teaching and learning model from face-to-face to virtual has had essential effects on both students and teachers to incorporate this change and continue with their thematic content and not affect the ultimate goal of learning.

2.1. Classroom vs. virtual education and the hybrid model.

In Mexico, face-to-face education has been the predominant public and private education mode at all levels. Virtual education and remote or distance education were only options for those who, by choice or necessity, had access to this type of learning and for which there are educational programs in specific areas of knowledge.

There was a disruptive change in education by the pandemic where everyone, without exception, had to continue with academic instruction in virtual environments. With the help of an internet connection, through social networks, email, mobile telephony, or instant messaging, such as WhatsApp, Facebook, Telegram, or others, through a television connection has given continuity at all educational levels, mainly in basic education, in the Mexican context.

Under this scenario, virtual education, also known as online education, requires an Internet connection, highlighting the students' socioeconomic problems. Some of them could not pay for Internet service or did not have an electronic device to connect; if they owned, one had to share it with other household members, which generated tension and, ultimately, school dropout.

Therefore, the strategy of the governments in coordination with the Universities consisted of implementing support programs for the student community of free internet connections so

that they could continue with their studies or the loan of computer equipment to be able to connect.

2.2. Actions adopted by the UDG in response to the pandemic

At the beginning of the pandemic, the UDG formed a health board in conjunction with the Jalisco government to monitor the evolution of the number of infected people and inform society about the appropriate actions to prevent and contain contagions.

At the same time, the UDG, as a member of the National Association of Universities and Institutions of Higher Education (ANUIES), signed the National Agreement for Unity in Higher Education in the face of the health emergency caused by COVID-19. With this, they committed to safeguarding society's health to continue their educational work online, prioritizing socioeconomically disadvantaged students (ANUIES, 2020).

Under this scenario in the UDG, from March 17, 2020, until February 8, 2022, middle and higher education (undergraduate and graduate) classes were carried out in the virtual modality. In addition, it was established teachers and administrative or support staff over 60 years with a compromised health condition or pregnant women should not report to their work places.

2.3. Actions adopted by the CUCEA in response to the pandemic

Administrative processes and procedures were adapted to be offered primarily online and in digital formats, except for those strictly necessary to be carried out in person.

A particular training program was developed for academics and students in hybrid and online modalities with a perspective of educational inclusion to reinforce students' learning during the pandemic.

The following is a list of the equity and inclusion actions undertaken at CUCEA:

1. Face-to-face access to laboratories for vulnerable groups: oriented to students who manifest problems with internet access or mobile devices and situations of family violence had access to the use of laboratories for their online classes.
2. Scholarships for mothers and fathers: to provide access to the daycare system for their children.
3. Priority in the class schedule: organization of flexible class schedules.
4. Tutoring: monitoring and accompanying academic performance of vulnerable groups, school trajectories, academic and administrative processes.
5. Job opportunities: online catalog.
6. Culture of Peace Program: psychological support (face-to-face and virtual).
7. Protect yourself and enjoy: sexual prevention program.
8. Subtitles in webinars: support the community with hearing impairment.

9. Emotional and legal support for complaints.
10. Computer equipment donation campaign.
11. Internet: support for sim cards with internet access.

Finally, classrooms and specific spaces were provided for teachers to teach their classes online from the campus if necessary. In addition, services were provided to design and develop conferences, seminars, master classes, and virtual workshops to support students' learning.

2.4. Educational setting, design, and evaluation

First-year students received face-to-face tours and induction sessions for comprehensive instruction and school services as part of a welcome to the new stage of their academic education and got to know the dynamics of our university community.

The first semester of 2021 has been developed online, under a hybrid model, to respond to academic priorities and, at the same time, ensure the health of the people who make up the university community.

Undergraduate and graduate teaching activities were developed at a distance (online), using virtual learning platforms and didactic support tools during the regular hours of each class (as in the traditional model). It was recommended to use the institutional Moodle and Google Classroom platforms associated with institutional emails and contact students through those emails.

Each professor was free to choose the platform and didactics that suited best. Those teachers who used Google Classroom shared didactic material, videos and presentations (their own or from other authors), homework, evaluations (two or three, on average, throughout the semester), and made video calls (through Google Meet or Zoom) to conduct their class.

During the semester, evaluations of student development and academic achievement were carried out in order to obtain information that will allow us to adapt our activities and take measures to address the educational lag.

3. Methodology

The analysis was based on a survey of undergraduate students of the CUCEA of the UDG, elaborated through the Google Forms tool, applied in February 2021, to know the perception of their academic performance and of their professors. Therefore, the data are cross-sectional, and descriptive statistical analysis is used. A total of 435 valid questionnaires were received from students of different careers and semesters of the CUCEA.

The survey was structured in 4 sections as follows:

1. Online learning
2. Internet connection and technological resources
3. Virtual modality use and teacher performance
4. Educational platform used

4. Results

Female participation was 72%, and male participation was 28%. The average age was around 20 years old, and the great majority were students of Accounting and Gastronomic Business Management, respectively. The students' responses are presented below (Table 1), organized by axis.

Table 1. Results grouped by section

Section	Result
Online learning	Most of them said they had never taken a course in this modality before.
Internet connection and technological resources	The majority (97.9%) had internet at home, but not good quality. Of these, 31.3% said they share it with another household member. The device they connected to classes was mostly laptop (61.6%), followed by their cell phone (26.4%); desktop computer only 9%, while a minority connected via an electronic tablet, 3%.
Use in the virtual model and teacher performance	In this question, one out of every three respondents (33.1%) mentioned that they had not found the modality promising, as there were more homework assignments. However, slightly more than half (56.6%) stated that their grades were not affected in the virtual modality. Of the respondents, 43.7% felt feedback from their professors is poor, 37.7% felt their professors do better in the face-to-face modality, and 21.8% thought they require training for the virtual modality. Only 18.9% of the respondents perceived that teacher is trained to use virtual educational platforms; 21.6% mentioned that online classes were a disaster.
Educational platform used	The platforms mostly used were Classroom, Meet, email (institutional and personal), Zoom, and Moodle.

Source: Authors' elaboration

5. Conclusions

Change face-to-face to online model has represented a significant issue in the educational sector, where students and professors have had to adapt technology use. However, Internet quality often did not allow asynchronous connection with teachers, meaning students have also faced the self-learning challenge.

On the other hand, it is highlighted e-learning brought some benefits for students, such as a lower economic investment for their transportation to educational centers, time-saving, and practicality of reviewing their teachers' recordings after classes and searching for other educational resources in a self-taught manner.

Survey results confirm a range of possibilities when introducing a hybrid educational model, where face-to-face and virtuality are allowed. The student's perception of a better performance of their professors in the face-to-face environment has been one of the motivations for implementing the hybrid model currently being developed on campus, where the use of educational platforms to guide learning continues and combines with face-to-face sessions.

References

ANUIES (2020). Acuerdo Nacional por la Unidad en la Educación Superior frente a la emergencia sanitaria provocada por el COVID-19. Available at: https://web.anuies.mx/files/Acuerdo_Nacional_Frente_al_COVID_19.pdf.

ANUIES (2018) Visión y acción 2030 Propuesta de la ANUIES para renovar la educación superior en México Diseño y concertación de políticas públicas para impulsar el cambio institucional. Available at: http://www.anuies.mx/media/docs/avisos/pdf/VISION_Y_ACCION_2030.pdf

Concheiro Bórquez, L. (2020). Responses of Public Institutions of Higher Education in Mexico to face the COVID-19 crisis. Mexico: Subsecretaría de Educación Superior, Secretaría de Educación Pública. Retrieved from: http://www.anuies.mx/media/docs/avisos/pdf/200417115709VF_ACCIONES_SES_COVID_19_ANUIES.pdf

Gómez, C. M. (2017). Overview of the Mexican education system from a public policy perspective. Innovación Educativa, Vol. 17, number 74, pp. 143-163.

Malagón, P. L. (2003). Relevance in higher education: elements for its understanding. Revista ANUIES, No. 127, Vol. 32, pp. 113-134.

Simon, P.J., Benedí, G.C., Blanché, V.C., Bosch, D. M., Torrado, F.M.. (2018). Quantitative and qualitative analysis of blended learning in the Catalan university system. RIED. Revista Iberoamericana de Educación a Distancia, 21(1), 113-133. https://doi.org/10.5944/ried.21.1.18773

UNESCO. (2020). Global Coalition for Education. Compiled on 10/14/2020 from https://es.unesco.org/covid19/globaleducationcoalition

World Bank. (2020). COVID-19: Impact on education and public policy response. Executive summary. Available at: https://pubdocs.worldbank.org/en/143771590756983343/Covid-19-Education-Summary-esp.pdf