

# Women and distance higher education: rural and urban experiences in the post-pandemic

## Mujeres y educación superior a distancia: experiencias rurales y urbanas en la pospandemia

<http://doi.org/10.32870/Ap.v16n1.2476>

Edith J. Cisneros-Cohernour\*  
José Gabriel Domínguez Castillo\*\*  
Ileana del Socorro Vázquez Carrillo\*\*\*

### ABSTRACT

#### Keywords

Distance education;  
gender; pandemic;  
learning contexts

During the covid-19 pandemic, distance education witnessed a surge in credibility, popularity, and advantages; however, this change disproportionately impacted vulnerable groups: the low-income population, the disabled, indigenous groups and children of migrants. While research in basic education has been conducted, information regarding online learning experiences of female university students is limited, especially in relation to gender. Therefore, the present study surveyed 1 206 female undergraduate students from rural and urban contexts to analyze their experiences in distance classes during confinement. Significant differences were found according to context, with women from urban settings valuing the design of assignments and strategies, and instructional design, while those from rural contexts demanded greater attention from their tutors. In both cases, participants lacked prior experience with online courses and suitable learning environments. In conclusion, these disparities warrant further investigation and targeted measures to bridge the gender gap in distance education.

### RESUMEN

#### Palabras clave

Educación a distancia;  
género; pandemia;  
contextos de aprendizaje

*Durante la pandemia por la covid-19, la educación a distancia experimentó un aumento en su credibilidad, popularidad y ventajas; sin embargo, este cambio afectó desproporcionadamente a grupos vulnerables: a la población con bajos ingresos, con discapacidad, a los grupos indígenas e hijos de migrantes. Si bien se han realizado investigaciones en educación básica al respecto, la información sobre el aprendizaje en línea de estudiantes universitarias es limitada, sobre todo en relación con el género. Por ello, en el presente estudio se encuestó a 1 206 mujeres estudiantes de licenciatura de contextos rurales y urbanos para analizar sus experiencias en las clases a distancia durante el confinamiento. Se encontraron diferencias significativas según el contexto, ya que las mujeres de entornos urbanos valoraban el diseño de tareas y estrategias, así como el diseño instruccional, mientras que las de contextos rurales demandaban una mayor atención de sus tutores. En ambos casos, las participantes carecían de experiencia previa en cursos en línea y de espacios adecuados para el aprendizaje a distancia. Se concluye que estas disparidades requieren más investigación y acciones para reducir la brecha de género en la educación a distancia.*

Received: August 3, 2023  
Accepted: December 15, 2023  
Online Published:  
March 22, 2024

\* Doctora en Filosofía por la Universidad de Chicago en Urbana-Champaign. Profesora investigadora de la Facultad de Educación, Universidad Autónoma de Yucatán, México. ORCID: <https://orcid.org/0000-0003-2319-1519>, correo electrónico: [ecohernour@gmail.com](mailto:ecohernour@gmail.com) | \*\* Doctor en Investigación Educativa por la Universidad de Granada. Profesor titular de la Facultad de Educación, Universidad Autónoma de Yucatán, México. ORCID: <https://orcid.org/0000-0002-2897-913X>, correo electrónico: [jg.dominguez@correo.uady.mx](mailto:jg.dominguez@correo.uady.mx) | \*\*\* Maestra en Innovación Educativa por la Universidad Autónoma de Yucatán. Profesora titular de la Facultad de Contaduría y Administración, Universidad Autónoma de Yucatán, México. ORCID: <https://orcid.org/0000-0002-7600-7319>, correo electrónico: [ileana.vazquez@correo.uady.mx](mailto:ileana.vazquez@correo.uady.mx)

## INTRODUCTION

On March 11th, 2020, the World Health Organization officially declared confinement due to the SARS-COV2 (covid-19) virus pandemic. This event disrupted all contexts, affecting the political, educational, social and economic spheres, since the security norms implemented at that time at a worldwide level led to a universal strategy focused on social distancing and confinement to prevent the number of contagions from increasing and to try to stop the spread of the disease to other countries (Jones *et al.*, 2021).

Given this contingency, in the educational field the strategy focused on moving the contents of the subjects to an online distance environment; this represented a change in teaching, focusing on emergency remote education and adjusting the usual way of the instructional process.

In advance, this represented a challenge for the educational systems of all countries, as it was a massive process that had to be implemented in record time and for which there was little or no training at all, since there was no technological competence to face this challenge, much less with a master plan that recommended fully documented actions for a scenario of this type. Despite these setbacks, the school system worldwide implemented ecosystems that allowed them, to the best of their ability, to serve their students (Bond, 2021).

According to Álvarez *et al.* (2020), the Inter-American Development Bank (IDB) and the International Association of Universities (IAU, 2020), although the countries did not have a consolidated national distance education strategy, much less for an emergency, they made significant efforts based on their previous capabilities.

Reality has shown that the health crisis projected a clear and stark image of inequalities around the world, especially in poor and developing countries. In the dynamics caused by the pandemic, internet accessibility became a line of segregation between students with access and those with little access or none. The contrasts could not be more evident between those who live in areas with good connections and access to the web, and those who are in regions where internet availability is low; the latter face serious difficulties in carrying out the assigned activities, which prevents them from maintaining the learning pace of their classmates.

Among the problems caused by the implementation of remote education during confinement (Álvarez *et al.*, 2020), it was mentioned that the prolonged closure of educational centers would have negative repercussions on the learning achieved, weakening the skills of students and affecting the regular school path, dropout and the backwardness of men and women. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2020), the most affected by this situation would be vulnerable students, including the most economically

disadvantaged and middle-class students residing in poor areas, as well as those belonging to indigenous, migrant and special needs groups.

Generally, students who are older than expected for their school grade, and those who are at ages and grades considered critical, that is, grades and ages that have been identified with high dropout rates, have a greater risk of not continuing in the educational system, a situation that could be aggravated in educational systems that are in contexts of high social vulnerability, and do not have effective distance education mechanisms in line with the characteristics of homes and contexts (Quinn *et al.*, 2016; Dominguez *et al.*, 2019). This can further widen the gaps between students with more or less internet access.

During confinement, various remote teaching strategies were created globally to provide short-term solutions and maintain continuity in teaching processes; these measures depended on the infrastructure and capabilities of each country. For example, in the context of Latin America and the Caribbean (LAC), the strategies used combined first- and second-generation solutions and media for educational systems in more than 25 countries (IDB, 2020). However, many LAC countries implemented distance education strategies in a basic manner, since a large percentage did not have a national strategy or master plan to face a contingency of this nature.

Various strategies were put into practice with the aim of promoting greater digital inclusion that would help both men and women, integrating technology into people's daily lives to improve their quality life and foster better-informed and more participatory citizens, who with these actions, facilitate their gradual insertion into the knowledge society. Despite this, data after the return to face-to-face classes shows that there is still much to do, since currently it is still a challenge for most countries to consolidate a true strategy that takes advantage of technologies' potential, mainly for the most disadvantaged groups.

Studies by Liu (2020), UNESCO (2020) and Van-Deursen (2020) have highlighted the latent digital divide and the insufficiency of the digital strategy so that the most economically disadvantaged students, whether men or women, have access and opportunities to quality education, emphasizing that these inequalities are a real threat to the learning continuity at a time of unprecedented educational disruption, such as the health crisis. Thus, the implementation of a clear and systematized strategy for distance education is important, and its effectiveness as a teaching modality must be based on comprehensive attention to various domains, such as activities, methodologies and tactics used, course design, communication and interaction with students, content taught and participants' attitude.

First, it is imperative to outline teaching areas and strategies that fit this modality, as Alqurashi's (2019) research points out. In the online context,

the course design should stand out for its flexibility and accessibility, and for providing students with the opportunity to learn at their own pace (Bozkurt *et al.*, 2020). Likewise, it is important to consider the relevance and attractiveness of the content taught, and the connection between the curricular content and students' expectations, a crucial element that directly affects the quality of the remote teaching process. Another essential pillar in virtual education is effective interaction with students, since this dynamic encourages active participation and student commitment (Boling *et al.*, 2012). A key aspect to strengthening this interaction is communication, which must be carefully managed to nourish the distance educational experience. Likewise, as Jaggars and Xu (2016) emphasize, students' attitude towards remote learning is essential to adapt the educational proposal effectively.

To evaluate the effectiveness of any distance educational program, it is essential to keep these points in mind, which not only constitute aspects of reference, but also offer a comprehensive framework for the analysis and constant improvement of virtual education (Lowenthal *et al.*, 2020).

Regarding the implementation of the virtual modality during the pandemic, Lloyd (2020) indicates that the health crisis increased educational and gender inequalities in Mexico, to continue providing education to more than 36 million children and adults in the country. The virtual strategy used by the National Educational System has faced serious difficulties and ethical questions related to inequalities and inequities in the operationalization of the strategy. The same author mentions that among the factors that shape educational inequalities and that condition access to quality education in distance modality are: Students' type of educational institution, geographical area, gender, ethnicity and social classes. To this must be added that, according to the International Telecommunications Union (ITU, 2020), Mexico ranks 87th in the world and 8th in Latin America in terms of access to digital technologies, a fact that contributed to the pandemic's complications skyrocketing.

In this regard, specialized literature (Gnanadass & Sanders, 2019; Moore & Diehl, 2019) indicates that studying gender issues is important in remote modalities, since there is little evidence in research about gender aspects and their relationship with distance learning, among these, experiences and challenges that women face in this unconventional modality.

Given that gender is one of the little-studied variables, especially in higher education, this work was carried out taking into consideration the disruptive impact that the pandemic had on educational contexts and sought to understand the experiences of female undergraduate students in urban and rural areas in the context of post-pandemic distance education. Mainly, groups that are in conditions of high degrees of social vulnerability in low-income households, indigenous populations, female students, rural entrepreneurs or those with disabilities were considered.

The historical component of this work dates to the studies of Moore (2013), Peters (2003) and Pittman (2003), who mention that one of the first documented ways to support women's access in remote modality were Pittman's works in the 1840s (Holmberg, 1995). Later, the Society to Encourage Studies at Home, founded in 1873 by Anne Eliot, aimed to induce women of various social classes and geographical borders into the habit of devoting a part of each day to study in a systematic and complete manner (Bergmann, 2001). On this same topic, Von-Prümmer (2000) indicates that distance education has been conceived as an educational opportunity for women or disadvantaged social groups that do not have instruction or access to university campuses, in addition to this modality allowing them to have a paid job without abandoning or giving up their studies.

Von-Prümmer (2000), in studies carried out in Germany and the United Kingdom, documents the differences between men and women and their relationship with activities at home. The author found that women are mainly responsible for caring for children at home, regardless of the degree of participation they have in paid work, and that they are almost always responsible for the functioning of the domestic sphere, as well as caring for the sick and elderly. In fact, more recent studies (Kirkup & von Prümmer 1992) show that although men help with housework and childcare, they do not assume the same responsibility; data that is also shown in a survey carried out in West Germany (BMFJ, 1992), where the daily functioning of men and women in the households is mapped with a clear picture of how they function on a daily basis.

Nowadays, the credibility in distance education as well as its popularity has increased rapidly. Unlike a few years ago, today women actively participate in academic and professional strengthening in remote environments, which has meant a drastic change, as indicated by some strategic programs aimed at promoting and encouraging the empowerment of women, such as The General Presidency of Girls Education (GPGE) in Saudi Arabia (Al-Rawaf & Simmons, 1991) and the Higher Education for Sisters in Africa (HESA) in sub-Saharan Africa (Wakahiu & Shaver, 2015).

Women's gradual access to distance education, and especially tertiary education, has increased because it is important for the growth and development of any nation. When women receive education in a manner relevant to their needs and environment, they gradually become more visible and recognized in the mainstream of activities, both at home and in society in general, while at the same time it contributes to their self-esteem and confidence, so they become more assertive in their roles and take initiative (Suri & Sharma, 2013).

## WOMEN IN DISTANCE HIGHER EDUCATION

An extensive literature analyzes the particular dynamics that women face in higher education, and especially in remote modalities. For example, Koseoglu *et al.* (2020) conducted a review of studies about gender inequity and curricular design in distance education. The authors formulate three fundamental conclusions related to distance education to promote equity, curricula design from a gender perspective, and culturally relevant curricula design.

First, thinking about distance education as a mechanism that promotes equity is wrong (Funes & Mackness, 2018), since on some occasions these modalities can perpetuate elements of gender inequality, in the sense that they are not taking into consideration elements related to the dynamics of being a woman (Castellanos-Serrano *et al.*, 2022; Koseoglu *et al.*, 2020). This has not only been seen in students (Arias-Velandia *et al.*, 2018; Castellanos-Serrano *et al.*, 2022), but even in all women related to the educational field, such as teachers, whose workload increased during the covid-19 pandemic by having to do their work at home (Clark *et al.*, 2021).

This may be due to a second issue: the absence of curricular designs sensitive to the needs of women. Many of the designs are influenced by knowledge and positions that favor male points of view, such as that distance education is oriented towards independent learning and with little social interaction and few opportunities to create social networks (Koseoglu, 2020; Koseoglu *et al.*, 2020).

In a meta-analytic study carried out by Marley (2007) on gender differences in distance education in higher education students, it was observed that men and women have different profiles in their styles and ways of learning online; women enroll with the intention of having greater flexibility to carry out their family roles, while men enroll to improve their technological skills (Marley, 2007) and the type of multimedia tools they use (Dolch, 2020). Furthermore, it was identified that women are more likely to seek help while men tend to be more independent; this is why men expect to receive less support and women seek to receive more support (Gnanadass & Sanders, 2019; Korlat *et al.*, 2021; Marley, 2007). The above shows that a unique curricula design for men or women would be, at the very least, not very empathetic, since it does not adapt to their differentiated styles.

A solution is to design a culturally relevant curricula that considers the needs of women (Koseoglu *et al.*, 2020) and the important elements of intersectional positions that promote distance education oriented to social justice (Koseoglu, 2020), which includes elements such as gender, race or social classes (Hanson & Fletcher, 2021). The inequities experienced by women in the city are not the same as those faced by women in rural areas

(Jordan *et al.*, 2021), situations that have even been observed since childhood in longitudinal studies (Becker & McElvany, 2018).

Due to the vulnerability presented by both gender and social class issues and considering the gap that the covid-19 pandemic increased, this study aimed to analyze the experiences in distance mode classes of female undergraduate students belonging to urban and rural contexts during the covid-19 health confinement.

## DESIGN

The study was classified as observational, as it was limited to measuring certain variables in the participants; descriptive, as the purpose of the study was to use the data for a description of the variables; cross-sectional, because the data was collected in a single intervention; and retrospective (Argimón and Jiménez, 2004).

### *Participants*

The sampling of this study focused on the effects of the covid-19 pandemic in the state of Yucatán, Mexico, when teachers and students were unable to attend classes in person, which caused them to start working in virtual mode. It was difficult to obtain the participation of students because schools and faculties were closed during the collection in September 2021, so a non-probabilistic snowball-type sample was used, applicable when the researcher has difficulties for access and data collection at the research site (Cohen *et al.*, 2018). A total of 1,206 female undergraduate students participated.

As can be seen in Table 1, a large part of the participants belonged to the urban context and were enrolled in public universities, of which only 8.2% are Mayan speakers. Regarding their context and the infrastructure available in their homes to be able to carry out their activities remotely, the results showed that most of them did not have previous experience in distance courses and nearly half did not have a space to work online, since only 8 out of 10 have computer equipment and just over 10% lacked an internet connection. This data supports the problem studied in contexts of high social marginalization, as it shows that students in poor contexts are at a disadvantage compared to those in urban contexts, with better conditions for distance learning.

**Table 1.** Variables characterizing the population

Variable	Category	N	%
Context	Urban	916	76
	Rural	290	24
University type	Public	964	79.9
	Private	242	20.1
Speaks Mayan language	Yes	99	8.2
	No	1 107	91.8
Has space for online work	Yes	678	56.2
	No	528	43.8
Has computer equipment for online courses	Yes	994	82.4
	No	212	17.6
Has experience in online courses	Yes	467	38.7
	No	739	61.3
Has an internet connection for the courses	Yes	1 042	86.4
	No	164	13.6

### ***Instrument***

The Domínguez (2020) instrument was used for data collection, which includes two sections. In the first one, students were asked to, in addition to providing personal data (gender, age and school type), answer some questions related to the object of study, which included variables related to educational inequalities that have an impact on the digital gap and whether these are associated with the parents' schooling, internet connection, speaking Mayan and the infrastructure to take their online courses, as well as their experience in this modality.

The second section was the most important, and was made up of five domains aimed at helping participants focus on the actions that make up the minimum competencies required in distance courses: 1) tasks and strategies, 2) course design, 3) communication and interaction, 4) content and 5) attitude (Alqurashi, 2019; Boling *et al.*, 2012; Bozkurt *et al.*, 2020; Jaggars & Xu, 2016; Lowenthal *et al.*, 2020). In this section, a Likert-type rating scale was used with one step and five levels or grades, ranging from 1 (never) to 5 (always), to investigate the frequency with which the students have observed these strategies in the performance of teachers during their online courses. In this section, the student had to respond based on the grade or percentage observed, considering an ascending numerical scale from 1 (0%) to 5 (75-100%).

### ***Technical indicators***

The main technical indicators of the instrument used were supported by the participation of five experts from the area of educational technology

and three experts from the area of educational research who gave their opinion on the items, domains and their relevance within the instrument. The experts contributed to the definition and precision of the items, the valid construction of the domains according to the specialized literature and the scale used (Alqurashi, 2019; Boling *et al.*, 2012; Bozkurt *et al.*, 2020; Jaggars & Xu, 2016; Lowenthal *et al.*, 2020).

The results of Cronbach's  $\alpha$  coefficient assessment showed that high values for alpha were documented in all sections of the instrument. Domain two (course design) was the section that had the lowest rating (0.901), while the content domain had the highest value (0.930). In addition to the reliability of the indicators, the integral reliability of the instrument was also calculated and an integral coefficient of  $\alpha = 0.979$  was obtained which, according to Ebel and Frisbie (1991), denotes an instrument with a high reliability indicator.

## RESULTS

The main results obtained in this study are presented below. The analysis of the participants' experiences according to the distance education strategy implemented in their schools is shown in table 2. These were divided according to their context, whether urban or rural.

### *Urban context*

Table 2 shows the descriptive statistics for urban context in each of the domains related to this modality. The results highlight important characteristics in women's opinions. First, higher scores are noted in AveDom3 (communication and interaction,  $\bar{x} = 4.1347$ ), AveDom4 (content,  $\bar{x} = 4.0908$ ) and AveDom5 (attitude,  $\bar{x} = 4.1284$ ), compared to the averages of the AveDom1 and AveDom2 domains, which correspond to the tasks, strategies and course design, respectively. Second, these results clearly indicate how women from urban contexts have a higher valuation towards strategies related to the importance of communication, online interaction, content for course development and the attitude shown by the online tutor. Third, the assessment of women from urban environments highlights areas of opportunity for no less relevant domains related to the design of tasks and strategies, and the essentials of instructional design in the course, elements documented in literature as important (Bao, 2020; Coman *et al.*, 2020).

**Table 2.** Inferential statistics of the domains by participants' context

Domain	Urban context (N = 916)		Rural context (N = 290)		T (1206)	P
	Average	OF	Average	OF		
AveDom1	3.902	0.829	3.643	0.885	2.89	0.961
AveDom2	3.955	0.8553	3.663	0.876	3.639	0.645
AveDom3	4.135	0.826	3.76	0.894	5.388	0.004
AveDom4	4.091	0.856	3.65	0.995	5.712	< 0.001
AveDom5	4.128	0.867	3.557	1.013	7.446	< 0.001

Notes: N = sample size, SD = standard deviation, T = *t* student statistics, P = significance value.

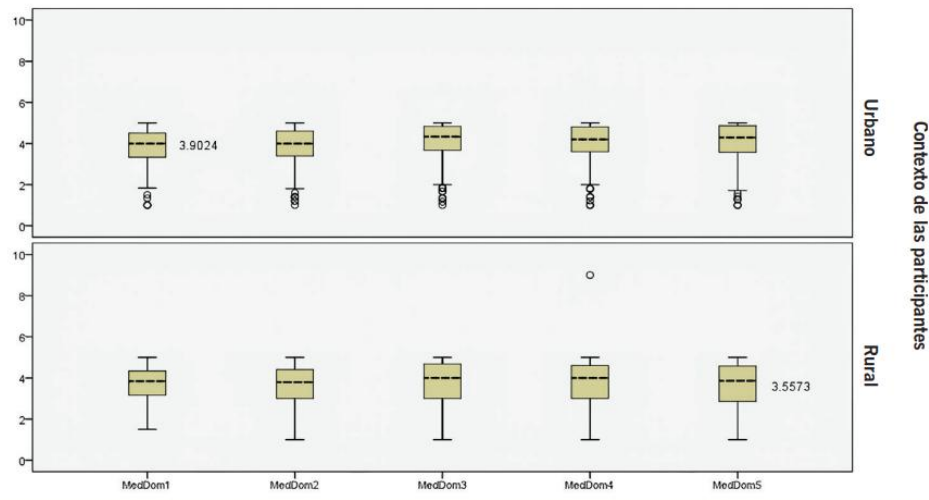
### ***Rural context***

In the rural context, the results of descriptive statistics show relevant particularities. Firstly, the assessment reflected in the scores of students from rural places shows that in no domain obtained scores greater than 4, which indicates that according to the opinion of these participants, the strategies implemented were only observed occasionally, which presents a significant area of analysis and reflection for them. Secondly, the domain that recorded the lowest score was AveDom5 (attitude,  $\bar{X} = 3.557$ ) and it is confirmed by reviewing the behavior of the data variance ( $\sigma^2$ ), where scores greater than 1 are observed. This is an important finding because in several publications of a scientific nature (Wang *et al.*, 2020; Chandwani *et al.*, 2021) from specialized search engines, it is mentioned that attitude is a substantial piece that has a significant impact on the construction of student learning at all levels, and especially as an element that determines the scope and quality of a distance education program in any context that you wish to implement. Consequently, negative attitudes towards innovative educational solutions, from people who conduct distance courses, will undermine or even jeopardize efforts to implement any strategy at an institutional level.

### **TRENDS BETWEEN URBAN AND RURAL CONTEXTS**

Figure 1 presents a box and whisker plot to contrast the behavior of the students' opinions according to their context. From the point of view of the participants in this study, it is observed that certain domains require immediate attention. For example, from the opinion of urban areas students, the AveDom1 section, focused on the design of tasks and strategies, is identified as one where women demand attention in the design of their distance courses, because they consider that the design of tasks and strategies for their implementation were weak. On the other hand, in the opinion of women from rural environments, the area of

immediate attention is found in AveDom5, oriented to the importance of attitude and emotions when taking a distance course.



**Figure 1.** Box and whisker plot for women's urban and rural domains.

Additionally, to deepen the analysis of the contexts and the five domains, inferential statistics were used through the *t student* test for independent samples, to look if there was a significant difference when analyzing the domains. Using the test, the results showed significant differences in 3 of the 5 domains: Domain3 ( $P < 0.004$ ), Domain4 ( $P < 0.001$ ), and Domain5 ( $P < 0.001$ ), respectively.

The data obtained clearly reflects that the context of the participants does influence the way they perceive the activities related to communication and interaction, which involves helping students when they have doubts or do not understand a complex process, as well as generating an adequate learning environment during distance classes. Likewise, another aspect where considerable discrepancies were found was in the course content, which is related to demonstrating mastery of the topic, handling adequate explanations and showing relevant examples to enrich learning experiences. Finally, the last domain where important differences were found was in attitude, linked to the treatment of students during synchronous sessions, showing empathy and tolerance with the management of digital information and communication technologies, and motivating students with innovative attitudes to create and implement new resolutions to problems.

## DISCUSSION

Distance education has provided learning opportunities through the lens of gender and current trends; Harvey *et al.* (2017) corroborate this information and are forceful in stating that the number of women exceeds the number of men enrolled in higher education in this modality. This research consistently predicts this trend for the future, mentioning that distance education will continue to provide women with a fundamental alternative so that they can achieve their goals and advance their professional education, while allowing them to improve their quality life and promote their insertion into the knowledge society.

However, reality is showing that today there are still serious challenges, inequalities and barriers in all societies that prevent the full professional development of women. Although distance education may at first glance be seen as a “women-friendly” way of acquiring formal qualifications, many of the challenges are related to role conflict, time, expenses, relationships, domestic tasks and spousal support. Given that, this work provides relevant information for organizations and institutions that are responsible for the training of the most vulnerable populations, mainly so that they focus their attention on core aspects of distance courses related to tasks and strategies, online course design, communication and interaction, course content and the attitude of the remote tutor.

In the context of southeastern Mexico, the results are consistent with the priorities of the State Development Plan, in relation to the importance for the public policies of providing information and communication technologies to higher education institutions of our country and of each state to promote innovation, mainly in urban and rural contexts, as well as helping avoid the possible increase of inequality gaps in towns. Likewise, the data obtained coincides with those of other studies where it is pointed out that disadvantaged contexts can affect the performance and involvement of students in distance education, since contexts with lower socioeconomic levels, such as rural ones, tend to have a bigger gap in online education (Kizilcec *et al.*, 2017). In these scenarios of vulnerability, the use of affirmative actions can improve student performance.

It is likely that the differences between rural and urban environments are due to technology access in vulnerable areas (Jordan *et al.*, 2021), therefore, as previously mentioned, content creation that is sensitive to contextual needs of the target population is a requirement for the promotion of social justice in distance education (Koseoglu *et al.*, 2020). It was also found that women in urban areas tend to score better than their rural counterparts in domains such as communication, course content, and attitude. Although this can be explained in terms of the existing gaps in vulnerable areas, it can also be examined from the interest and motivation that women have in online courses, where they tend to give greater importance to aspects such

as teaching support, attitude and communication (Gnanadass & Sanders, 2019; Korlat *et al.*, 2021; Marley, 2007).

The results of this study contrast and complement the fundamental principles set forth in the base text on the effectiveness of distance education. Both perspectives converge on the importance of analyzing multiple domains, supporting the need for strategies adapted to this educational modality, flexibility in course design, effective interaction, careful communication, relevance of the content and consideration of student's attitude (Alqurashi, 2019; Bozkurt *et al.*, 2020; Boling *et al.*, 2012; Jaggars & Xu, 2016; Lowenthal *et al.*, 2020). The positive appraisal of participants in urban areas towards communication and interaction and the identification of areas of opportunity in the rural context reinforces the importance of participatory dynamics and attention to emotional perceptions. These data, in conjunction with theoretical principles, offer a comprehensive framework for the constant improvement of distance education, highlighting the influence of context on the perception of crucial elements and the need to adapt educational strategies according to the specific characteristics of the participants.

Since the beginning of distance education, women have been considered as one of the main groups of interest, due to the fact that they have traditionally been underrepresented in face-to-face higher education; even, as the specialized literature shows, on many occasions their academic and professional development is subordinated to the demands of child care and upbringing, home care and attention to the spouse, leaving in second place the strengthening of their competencies to insert themselves in the knowledge society and the improvement of their quality of life. This study shows how this scenario has changed over time: every day more female students receive education and obtain academic degrees, which allow them to improve their own economic condition and their families'.

According to the experiences of the participants in this research, there is a need to strengthen areas of opportunity. Students from urban areas detected the importance of instructional design in their distance courses, both in tasks and strategies. For their part, students from rural areas identified and demanded attention in areas focused on the attitude of distance tutors, which is consistent with the findings that women in general tend to have a greater orientation towards the search for support and relationships in distance education (Marley, 2007).

In this regard, it is striking that women in urban areas evaluate aspects such as course content less favorably, which confirms the need to create courses that respond to their needs (Koseoglu *et al.*, 2020), which allows them greater flexibility to reconcile their roles in the family, as students and as workers (Arias-Velandia *et al.*, 2018; Castellanos-Serrano *et al.*, 2022; Clark *et al.*, 2021; Marley, 2007). Another important finding was the little experience that participants have in taking online courses, along with the

fact that most of them do not have a space to take their classes remotely, which considerably hinders their aspirations, opportunities and learning.

## CONCLUSION

Regarding the objective of analyzing the experiences of female undergraduate students belonging to urban and rural contexts who attended classes remotely during the health confinement due to covid-19, it is concluded that there are differences in relation to the experiences of learning according to the environment of the participants, particularly in communication and interaction, course content and attitude.

In rural areas, a gap was observed with respect to urban areas in terms of activities related to helping students when they have doubts or do not understand a complex process, generating an adequate learning environment during distance classes, mastering the topic and content of distance classes, managing appropriate explanations for the course content and showing relevant examples to enrich course experiences, dealing with students during synchronous sessions, showing empathy and tolerance with the management of digital information technologies and communication, and motivating students with innovative attitudes to create and implement new resolutions to problems.

This work begins the dialogue to analyze in depth the distance education strategies that are used with women who study a degree in urban and rural contexts, since, as could be observed, the demands for this type of non-conventional modalities vary depending of the context in which they find themselves and the type of strategies that their remote tutors use.

At the same time, this research provides valuable inputs for the empowerment of disadvantaged minority groups and for institutions and organizations that are responsible for the enabling of innovation and knowledge insertion processes of women in the state.

An additional area of study that could be important to strengthen future research related to this object of study, is to review the impact on the improvement of women's experiences in this modality and its relationship with the variables associated with class or socioeconomic level, disability, religion and ethnicity, among others. Likewise, it is necessary to document the successful experiences of university women who concluded their studies in this modality with academic recognition and the successful cases of leadership in this modality, in order to reflect on how they have faced the challenges and broken the barriers they faced during this period of contingency.

It is important to recognize some potential limitations of our study. First, the research focused on women who participated voluntarily, which may restrict the generalizability of the results to other demographic groups. Furthermore, data collection was based on self-reports, which could be subject to perception bias, and variability in the implementation of the distance education strategy in different schools could also have influenced the results. These points should be kept in mind when interpreting and applying the findings of this study and limiting generalizations to contexts relatively similar to those of this study's participants.

## REFERENCES

- Al-Rawaf, H. & Simmons, C. (1991). The Education of Women in Saudi Arabia. *Comparative Education*. *Comparative Education*, 27(3), 287-295. <https://www.jstor.org/stable/3099298>
- Alqurashi, E. (2019). Predicting student satisfaction and perceived learning within online learning environments. *Distance Education*, 40(1), 133-148. <https://doi.org/10.1080/01587919.2018.1553562>
- Álvarez, H.; Arias, E.; Bergamaschi, A.; López, A.; Noli, A.; Ortiz, M.; Pérez, M.; Rieble-Aubourg, S.; Rivera, M.; Scannone, R.; Vásquez, M. y Viteri, A. (2020). *La educación en tiempos de coronavirus. Los sistemas educativos de América Latina y el Caribe ante COVID-19*. Banco Interamericano de Desarrollo. <https://bit.ly/35btvdO>
- Argimón Pallás, J. M. y Jiménez Villa, J. (2004). *Métodos de investigación clínica y epidemiológica*. Elsevier.
- Arias-Velandia, N.; Rincón-Báez, W. U. y Cruz-Pulido, J. M. (2018). Desempeño de mujeres y hombres en educación superior presencial, virtual y a distancia en Colombia. *Panorama*, 12(22), 57-69. <https://doi.org/10.15765/pnrm.v12i22.1142>
- Banco Interamericano de Desarrollo en América Latina y el Caribe. (2020). *Hablemos de política educativa. Educación más allá del COVID-19*. División de Educación del BID, Sector Social.
- Bao, W. (2020). Covid-19 and online teaching in higher education: A case study of Peking University. *Human Behavior with*

*Emerging Technologies*, 2(11), 113-115.  
<https://doi.org/10.1002/hbe2.191>

- Becker, M. & McElvany, N. (2018). The interplay of gender and social background: A longitudinal study of interaction effects in reading attitudes and behaviour. *British Journal of Educational Psychology*, 88(4), 529-49  
<https://doi.org/10.1111/bjep.12199n>
- Bergman, H. F. (2001). "The Silent University": The Society to Encourage Studies at Home, 1873-1897. *The New England Quarterly*, 74(3), 447-47. <https://doi.org/10.2307/3185427>
- BMFJ. (1992). *Frauen in der Bundesrepublik Deutschland*. Bundesministerium für Frauen und Jugend. <https://www.bmfsfj.de/>
- Boling, E. C.; Hough, M.; Krinsky, H.; Saleem, H. & Stevens, M. (2012). Cutting the distance in distance education: Perspectives on what promotes positive, online learning experiences. *Internet and Higher Education*, 15(2), 118-126.  
<https://doi.org/10.1016/j.iheduc.2011.11.006>
- Bond, M. (2021). Schools and emergency remote education during the covid-19 pandemic: A living rapid systematic review. *Asian Journal of Distance Education*, 15(2), 191-247.  
<https://doi.org/10.5281/zenodo.4425683>
- Bozkurt, A.; Jung, I.; Xiao, J.; Vladimirschi, V.; Schuwer, R.; Egorov, G.; Lambert, S. R.; Al-Freih, M.; Pete, J.; Olcott, D.; Rodes, V.; Aranciaga, I.; Bali, M.; Álvarez, A. V.; Roberts, J.; Pazurek, A.; Raffaghelli, J. E.; Panagiotou, N.; De Coëtlogon, P... Paskevicius, M. (2020). A global outlook to the interruption of education due to COVID-19 Pandemic: Navigating in a time of uncertainty and crisis. *Asian Journal of Distance Education*, 15(1), 1-126. <https://doi.org/10.5281/zenodo.3878572>
- Castellanos-Serrano, C.; Escribano, G.; Paredes-Gázquez, J. & San-Martín González, E. (2022). What is behind the gender gap in economics distance education: Age, work-life balance and COVID-19. *PLOS ONE*, 17(8), e0272341.  
<https://doi.org/10.1371/journal.pone.0272341>
- Chandwani, S.; Singh, N. & Sing, G. (2021). *Attitude of Faculty Towards Online Teaching in Relation to Certain Variables: A study during Coronavirus (COVID-19) Pandemic in India*. University of Nebraska-Lincoln.

- Clark, S.; McGrane, A.; Boyle, N.; Joksimovic, N.; Burke, L.; Rock, N. & O' Sullivan, K. (2021). "You're a teacher, you're a mother, you're a worker": Gender inequality during COVID-19 in Ireland. *Gender, Work and Organization*, 28(4), 1352-1362. <https://doi.org/10.1111/gwao.12611>
- Cohen, L.; Manion, L. & Morrison, K. (2018). *Research methods in education*. Routledge.
- Coman, C.; Țîru, L.; Meseșan-Schmitz, L.; Stanciu, C. & Bularca, M. (2020). Online Teaching and Learning in Higher Education during the Coronavirus Pandemic: Students' Perspective. *Sustainability, MDPI, Open Access Journal*, 12(24), 1-24. <https://doi.org/10.3390/su122410367>
- Dolch, C. (2020). Toys for the boys, tools for the girls? Gender and media usage patterns in higher education. *Turkish Online Journal of Distance Education*, 21(3), 94-111. <https://doi.org/10.17718/tojde.762031>
- Domínguez, J. G. (2020). Efectividad de un programa formativo en tecnología para hombres y mujeres mayas ubicadas en zonas profundas de exclusión. *Teletrabajo Positivo y Saludable*, 20(1), 131-155. <https://doi.org/10.30827/eticanet.v20i1.15525>
- Domínguez, J. G.; Cisneros, E. J.; Suaste, M. A. & Vázquez, I. S. (2019). Reducing the Digital Divide in Vulnerable Communities in Southeastern Mexico. *Publicaciones*, 49(2), 133-149. <https://doi.org/10.30827/publicaciones.v49i2.9305>
- Ebel, L. R. & Frisbie, D. A. (1991). *Essentials of Educational Measurement*. Prentice Hall.
- Funes, M. & Mackness, J. (2018). When inclusion excludes: a counter narrative of open online education. *Learning, Media and Technology*, 43(2), 119-138. <https://doi.org/10.1080/17439884.2018.1444638>
- Gama, A.; Rocha, J. V.; Marques, M. J.; Azeredo-Lopes, S.; Pedro, A. R. & Dias, S. (2022). How did the COVID-19 pandemic affect migrant populations in Lisbon, Portugal? A study on perceived effects on health and economic condition. *International Journal of Environmental Research and Public Health*, 19(3), 1786. <https://doi.org/10.3390/ijerph19031786>
- Gnanadass, E. & Sanders, A. (2019). Gender still Matters in Distance Education, en M. G. Moore & W. Diehl (Eds.), *Handbook of Distance Education*. Routledge.

- Hanson, C. & Fletcher, A. J. (2021). Beyond the trinity of gender, race, and class: Further exploring intersectionality in adult education. *European Journal for Research on the Education and Learning of Adults*, 12(2), 135-148. <https://doi.org/10.3384/RELA.2000-7426.3360>
- Harvey, H. L.; Parahoo, S. & Santally, M. (2017). Should Gender Differences be Considered When Assessing Student Satisfaction in the Online Learning Environment for Millennials? *Higher Education Quarterly*, 71(2), 141-158. <https://doi.org/10.1111/hequ.12116>
- Holmberg, B. (1995). *Theory and practice of distance education*. Routledge.
- International Association of Universities (IAU). (2020). *The impact of covid-19 on higher education around the world. Global Survey Report*. IAU. <https://www.iau-aiu.net/IAU-releases-Global-Survey-Report-on-Impact-of-Covid-19-in-Higher-Education>
- Jaggars, S. S. & Xu, D. (2016). How do online course design features influence student performance? *Computers and Education*, 95, 270-284. <https://doi.org/10.1016/j.compedu.2016.01.014>
- Jones, C.; Philippon, T. & Venkateswaran, V. (2021). Optimal mitigation policies in a pandemic: Social distancing and working from home. *The Review of Financial Studies*, 34(11), 5188-5223. <https://ideas.repec.org/a/oup/rfinst/v34y2021i11p5188-5223.html>
- Jordan, K.; David, R.; Phillips, T. & Pellini, A. (2021). Education during the COVID-19: crisis opportunities and constraints of using EdTech in low-income countries. *Revista de Educación a Distancia (RED)*, 21(65). <https://doi.org/10.6018/red.453621>
- Kirkup, G. & Keller, L.S. (1992). *Inventing Women. Science, Technology and Gender*. Polity Press.
- Kizilcec, R. F.; Davis, G. M. & Cohen, G. L. (2017). Towards Equal Opportunities in MOOCs: Affirmation Reduces Gender & Social-Class Achievement Gaps in China. *Proceedings of the Fourth (2017) ACM Conference on Learning @ Scale*, 121-130. <https://doi.org/10.1145/3051457.3051460>
- Korlat, S.; Kollmayer, M.; Holzer, J.; Lüftenegger, M.; Pelikan, E. R.; Schober, B. & Spiel, C. (2021). Gender Differences in Digital Learning During COVID-19: Competence Beliefs, Intrinsic Value, Learning Engagement and Perceived Teacher Support.

- Koseoglu, S. (2020). Access as Pedagogy: a Case for Embracing Feminist Pedagogy in Open and Distance Learning. *Asian Journal of Distance Education*, 15(1), 211-290. <https://www.asianjde.com/ojs/index.php/AsianJDE/article/view/470>
- Koseoglu, S.; Ozturk, T.; Ucar, H.; Karahan, E. & Bozkurt, A. (2020). 30 Years of Gender Inequality and Implications on Curriculum Design in Open and Distance Learning. *Journal of Interactive Media in Education*, 2020(1), 1-11. <https://doi.org/10.5334/jime.553>
- Liu, J. (2020). Digital divide and education equity: Empirical investigation using PISA 2018 B-S-Z-J. *Journal of National Academy of Education Administration*, 273(9), 35-43.
- Lloyd, M. (2020). Desigualdades educativas y la brecha digital en tiempos de covid-19. En H. Casanova-Cardiel (Ed.), *Educación y pandemia: una visión académica* (pp. 115-121). Universidad Nacional Autónoma de México, Instituto de Investigaciones sobre la Universidad y la Educación.
- Lowenthal, P. R.; Borup, J.; West, R. E. & Archambault, L. (2020). Thinking Beyond Zoom: Using Asynchronous Video to Maintain Connection and Engagement During the COVID-19 Pandemic. *Journal of Technology and Teacher Education*, 28(2), 383-391. [https://www.researchgate.net/publication/344468538\\_Thinking\\_Beyond\\_Zoom\\_Using\\_Asynchronous\\_Video\\_to\\_Maintain\\_Connection\\_and\\_Engagement\\_During\\_the\\_COVID-19\\_Pandemic](https://www.researchgate.net/publication/344468538_Thinking_Beyond_Zoom_Using_Asynchronous_Video_to_Maintain_Connection_and_Engagement_During_the_COVID-19_Pandemic)
- Marley, J. L. (2007). Gender Differences and Distance Education: Major Research Findings and Implications for LIS Education. *Journal of Education for Library & Information Science*, 48(1), 13-20. <https://www.jstor.org/stable/40324317>
- Moore G. & Diehl, W. (2019). *Handbook of Distance Education. Fourth Edition*. Routledge.
- Moore, M. G. (2013). *Handbook of distance education*. Routledge.
- Peters, O. (2003). Learning with new media in distance education. En M. G. Moore & W. G. Anderson (Eds.), *Handbook of distance education* (pp. 87-112). Routledge.

- Pittman, V. (2003). Correspondence study in the American university: A second historiographic perspective. En M.G Moore & W. G Anderson (Eds.), *Handbook of distance education* (pp. 21-35). Routledge.
- Quinn, D. M.; Cooc, N.; McIntyre, J. & Gomez, C. J. (2016). Seasonal Dynamics of Academic Achievement Inequality by Socioeconomic Status and Race/Ethnicity. *Educational Researcher*, 45(8), 443-453. <https://doi.org/10.3102/0013189X16677965>
- Suri, G. & Sharma, S. (2013) The Impact of Gender on Attitude towards Computer Technology and E-Learning: An Exploratory Study of Punjab University, India. *International Journal of Engineering Research*, 2, 132-136.
- United Nations Educational, Scientific and Cultural Organization (Unesco). (2020). *La educación en tiempos de la pandemia de covid-19. Informe covid-19*. Oficina Regional de Educación para América Latina y el Caribe. <https://www.cepal.org/es/publicaciones/45904-la-educacion-tiempos-la-pandemia-covid-19>
- Unión Internacional de Telecomunicaciones (UIT). (2020). Reunión del grupo de expertos en indicadores de TIC en el hogar. [https://www.itu.int/en/ITU-D/Statistics/Documents/events/egh2020/IDI2020\\_BackgroundDocument\\_S.pdf](https://www.itu.int/en/ITU-D/Statistics/Documents/events/egh2020/IDI2020_BackgroundDocument_S.pdf)
- Van-Deursen, A. (2020). Digital Inequality During a Pandemic: Differences in COVID-19-Related Internet Uses and Outcomes among the General Population. *Journal of Medical Internet Research*, 22(8), 1-13. <https://doi.org/10.2196/20073>
- Von-Prümmer, C. (2000). *Women and Distance Education: Challenges and Opportunities*. Routledge. <https://doi.org/10.4324/9780203992296>
- Wakahi, J. & Shaver, R. (2015). Perception and Experience of Distance Learning for Women: Case of the Higher Education for Sisters in Africa (HESA) Program in West Africa. *Journal of Education & Social Policy*, 2(3), 93-110. [http://jespnet.com/journals/Vol\\_2\\_No\\_3\\_September\\_2015/12.pdf](http://jespnet.com/journals/Vol_2_No_3_September_2015/12.pdf)
- Wang, C.; Pan, R.; Wan, X.; Tan, Y.; Xu, L.; Ho, C. S. & Ho, R. C. (2020). Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus

Disease (COVID-19) Epidemic among the General Population in China. *International Journal of Environmental Research and Public Health*, 17(5), 1729. <https://doi.org/10.3390/ijerph17051729>

World Health Organization. (2020). *Joint Leaders' statement - Violence against children: a hidden crisis of the COVID-19 pandemic*. WHO. <https://www.who.int/news/item/08-04-2020-joint-leader-s-statement---violence-against-children-a-hidden-crisis-of-the-covid-19-pandemic#:~:text=Leader's%20Statement&text=The%20COVID%2D19%20pandemic%20is,based%20violence%20and%20sexual%20exploitation>



### HOW TO CITE

Cisneros-Cohernour, E. J.; Domínguez Castillo, J. G. y Vázquez Carrillo, I. S. (2024). Mujeres y educación superior a distancia: experiencias rurales y urbanas en la pospandemia. *Apertura*, 16(1), 56-71. <http://doi.org/10.32870/Ap.v16n1.2449>

