

**ORIGINAL**  
**Research article**

## **Perception of spending by the educational community against covid-19\***

### **Percepción del gasto de la comunidad educativa frente al covid-19**

Received: May 13, 2022 - Evaluated: August 23, 2022 - Accepted: November 25, 2022

Valeria Martínez-Ramos\*\*

ORCID: <https://orcid.org/0009-0006-1917-2437>

Carlos David Zetina-Pérez\*\*\*

ORCID: <https://orcid.org/0000-0003-0397-9157>

Cecilia García Muñoz-Aparicio\*\*\*\*

ORCID: <https://orcid.org/0000-0001-5316-8630>

#### **To cite this Article**

Martínez-Ramos, V., Zetina-Pérez, C. D., & García-Muñoz-Aparicio, C. (2022). Perception of spending by the educational community against covid-19. *Revista Gestión y Desarrollo Libre*, 8(15), 1-13. <https://doi.org/10.18041/2539-3669/gestionlibre.15.2023.10095>

**Editor:** PhD Rolando Eslava-Zapata

#### **Abstract**

The purpose of this article is to learn about the perspective of the educational community's spending on covid-19. In this regard, the comments of those involved in the study are analyzed qualitatively through the grounded theory of expenditure, verifying the existence of economic factors immersed in aspects of health, work, society and education that respond to the abrupt change of modality. It is concluded that the educational community adapts to the change in a complex way, where the situation is not egalitarian since it is adapted to the economic and social possibilities of each individual, in some cases due to the lack of access to technologies makes it impossible to continue with the educational process in an optimal way. The analyses strengthen the knowledge in this area of research, considering the diverse experiences that account for the complexity experienced in the face of alterations in the socioeconomic environment caused by an unexpected event such as a pandemic.

**Keywords:** Educational Community, Covid-19, Pandemic, Economy, Education

---

\* Original article. Research and innovation article. Research article. Project linked to the Accounting Degree of the Academic Division of Economic and Administrative Sciences of the University Juárez Autónoma de Tabasco, Mexico.

\*\* Undergraduate student in Accounting at the University Juárez Autónoma De Tabasco, Mexico. E-mail: [martinezramosvaleria19@gmail.com](mailto:martinezramosvaleria19@gmail.com)

\*\*\* PhD in Educational Administration from the University Juárez Autónoma de Tabasco, Mexico. Head of Research at the Academic Division of Economic and Administrative Sciences at the University Juárez Autónoma de Tabasco, Mexico. E-mail: [carzeti@hotmail.com](mailto:carzeti@hotmail.com)

\*\*\*\* PhD in Economic and Administrative Sciences from the University para la Cooperación Internacional de México, Mexico. Email: [Flamingos1999@hotmail.com](mailto:Flamingos1999@hotmail.com)

## Resumen

El presente artículo tiene por objetivo conocer la perspectiva del gasto de la comunidad educativa ante el covid-19. Al respecto, se analizan de manera cualitativa los comentarios de los involucrados en el estudio a través de la teoría fundamentada en gastos, comprobando la existencia de factores económicos inmersos por aspectos de salud, trabajo, sociedad y educación que responden al abrupto cambio de modalidad. Se concluye que la comunidad educativa se adapta al cambio de manera compleja, donde la situación no es igualitaria ya que esta se adecua a las posibilidades económicas y sociales de cada individuo, en algunos casos debido a la falta de acceso a las tecnologías imposibilita continuar con el proceso educativo de manera óptima. Los análisis fortalecen el conocimiento en esta área de investigación, considerando las diversas experiencias que dan cuenta de la complejidad que se vive ante alteraciones en el ambiente socioeconómico causado por un hecho inesperado como una pandemia.

**Palabras Clave:** Comunidad Educativa, Covid-19, Pandemia, Economía, Educación

## SUMMARY

INTRODUCTION. RESOLUTION SCHEME. - I. Research Problem. - II. Methodology. - III. Drafting plan. - 1. The advent of covid-19 and its impact on the economy - 2. Impact on the education community. IV. Research results. - CONCLUSIONS. - REFERENCES.

## Introduction

In December 2019 an outbreak of pneumonia arose in Wuhan that resulted in an investigation by the health authorities. Later in January 2020 with more than 9,700 confirmed cases in China and 106 confirmed cases in others countries, the World Health Organization established a public health emergency of international scale. Mexico, in response to the situation, opted to issue guidelines to control the spread of the virus, the idea was to prioritize suspected cases for prevention, then perform a laboratory test to establish the diagnosis and provide continuity in an appropriate manner (Epidemiología, 2022, p. 14). Mexico was one of the countries in the world that closed its schools for more than 41 weeks, since the Secretary of Public Education decided to bring forward the Easter vacations on March 23, 2020, establishing that classes would resume on April 20 of the same year if the necessary sanitary capacities were available (García, 2021, p. 4).

Education was affected by the circumstances of the pandemic and trying not to slow down learning, technological support was the tool used for the different educational levels, but the quality of the virtual educational methods used for learning, the knowledge of teachers and students in the manipulation of technological tools and the limited use of technological tools by all involved were questioned (Linne-Joaquín, 2021, p. 10). The implementation of distance education was forced, using virtual media entirely, because health security measures made it impossible to attend classes face-to-face, and virtual education would allow teachers and students to continue with the classes under the circumstances originated by the pandemic (Marco & Cisneros, 2020, p. 4).

In order to make distance education possible, Information and Communication Technologies (ICT) was used as the main tool for its achievement; however, the teachers were not fully trained for its use and went through a process of adaptation in order to have new competencies for the management of virtual tools (Ortega & Oyanede, 2022, p. 3). In addition, the Instituto Nacional de Estadística y Geografía (INEGI) surveyed the impact of Covid-19 on education. In the higher education aspect, it is appreciated that in the 2019-2020 school period, there were approximately 7.1 million students, of which 76.00% were enrolled in a public

school and the remaining 24.00% in a private school. The survey conducted provided information regarding the most used devices in distance learning classes of higher education students (laptops (52.40%), desktop computers (12.90%), smartphones (33.40%), and lastly, tablets (1.20%). However, these devices were exposed to be owned, shared, borrowed, rented, or paid. Likewise, there was a low percentage of 3.30% of students who did not have their device and had to borrow or pay for its use (Instituto Nacional de Estadística y Geografía, 2021).

However, since teachers and students did not have technological equipment, they had to invest in acquiring it, causing a decreased capital that needed to be planned. In the same way, parents of students increased their expenses during the period of virtual classes, and their economy was also affected by changes in the purchase of food, longer working hours, reduction of salaries, stress due to confinement, and job losses (Hólguez-Altamirano, Cadena & Arias, 2021, p. 13). INEGI in 2015-2018, before virtual classes, showed that only 56.40% of the homes had Internet connectivity. In this way, there is a shortage of conditions to continue with the school period due to the confinement in basic and higher education. However, higher education, having different educational needs, requires specialized knowledge depending on social demands and economic factors. The emerging adjustment to the virtual modality has been positive for this level of education (Miguel, 2020, p. 15).

Pandemic inequality generates several impacts. Previous smaller-scale pandemic events caused a large extent reduction in employment-population for segments of basic education compared to people with higher levels of education. Regressive effects on the distribution of income and wealth also worsened people's economic lives (Alarco & Castillo, 2022, p. 146). Academic achievement is associated with improvements in health and more productive professional and social, family, and community trajectories. Therefore, if students perform well academically and complete their education, it benefits the quality and development of the country's future. However, performance is complicated when the student has to deal with poverty, marginality, family dysfunctionality, and low parental education, among other factors (Rodríguez & Guzmán, 2019, p. 118). In capitalism, personal finances tend to be affected by the need to acquire commodities which, since there is no evaluation of economic liquidity to determine the viability of the purchase, but on the contrary, to determine what is unfeasible. As an action to be carried out by the population, it is detrimental at an economic-social level (Villada, López-Lezama & Muñoz-Galeano, 2017, p. 14).

In this sense, students and their parents should prepare themselves economically for unexpected situations such as the covid-19 pandemic, for example, having a savings fund to support them in these types of circumstances in order to avoid moments of anguish and economic instability. If you begin to implement a method of saving to subsist in unexpected times, future problems, individually and collectively due to "economic crisis," will be less likely. In order to achieve the objective of understanding the perspective of the educational community's spending on covid-19, a qualitative approach based on the grounded theory of spending was used. The textual responses of the participants of the 13th ANFECA forum were extracted using Web Scraping techniques. Categories grouped their comments according to spending to carry out the respective analysis.

## Resolution Scheme

### 1. Research problema

How does the educational community appreciate the impact of Covid-19 on its economy?

### 2. Methodology

The study is qualitative, with a systematic design based on categories of analysis by grounded theory and computer-assisted following Hernández-Sampieri, Fernández-Collado & Baptista-Lucio (2014, p. 7). The sample unit was derived from 151 students, teachers, and administrators who voluntarily participated in the 13th ANFECA Academy Forum, mostly women (56.00%). The remaining 44.00% represented the attendance of the male audience, and from which the textual responses of the 64 people who shared their experiences about the educational process were taken.

The forum participants come from different universities and technological institutions in Mexico. Figure 1 shows the frequency distribution (word cloud or frequency histogram) of the institutions that participated, with the institute's name with the highest visibility corresponding to the highest number of participants in the forum.

The Web Scraper program was used, which allowed downloading the comments made at the panel discussions of the forum and analyzed in order to find the situation they experienced, identifying the categories of direct or indirect expenditure based on the grounded theory aimed at the student community to the phenomena caused by confinement and, Consequently, homeschooling from the perspective of various aspects such as knowledge, availability of economic resources and digital skills and thus determine how it influenced economically in their lives and what problems have been derived by coping with the situation with what they had at their disposal, grouping only the most relevant comment of each participant in the different aspects or categories. After the research, we intend to establish the panorama experienced in the drastic change in education due to the COVID-19 pandemic and its impact on spending.

**Figure 1.** Histogram of universities that participated in the forum



**Source:** prepared by the authors with data from the 13th ANFECA Academy Forum.

### **3. Drafting plan**

#### **3.1 The advent of covid-19 and its impact on the economy**

Covid-19 appeared on December 31 as an unknown virus with pneumonia-like characteristics. The first cases were reported in Wuhan, Hubei province, which months later turned into a pandemic. On January 9, the causal agent that originated the respiratory syndrome was announced by the Center for Disease Control and Prevention of China, and the causative agent was scientifically identified as SARS-CoV-2, which would be denominated by the World Health Organization (WHO) as COVID-19 (Melgarejo, 2020, p. 2). Mexico had the first covid-19 infection on February 20, 2020, and approximately one year and three months later, alarming levels of 2,433,681 infections and 228,804 deaths were reported. As a result, Mexico implemented security measures calling on the population to "Stay at home," which included the closure of educational institutions, non-essential work suspensions, and social distancing [healthy distance](García-Grajales, Buenrostro-Silva, & López-Vázquez, 2021, p. 3).

One of the effects on the economy resulting from the pandemic in Mexico was the slowdown as a consequence of the decision to close/suspend those activities that were considered non-essential, affecting in this way several manufacturing and service sectors that were temporarily closed as a tool for social distancing (Esquivel, 2020, p. 3). The economic impact in Mexico generated by the confinement in times of covid-19 was generated by those people with precarious jobs who found it difficult to implement their jobs remotely and continue with the flow of income to subsist. In addition, the world economy experienced recessionary trends, causing a contraction in economic activity and trade (Orellana & Guerrero, 2021, p. 5).

Faced with the closure of many places considered non-essential and from reopening the sites, the trade has been seeking to adapt, like everything else, to this pandemic situation; the measures they implemented to continue with the flow of sales were to make a readjustment of its approaches, activities and restructuring its business model with a new value proposition, the latter in order to deliver and give a plus to its customers (García et al., 2021, p. 3). Consequently, a social impact is arising from the decision-making of each country to face the pandemic, which has revealed the inequality of resources, the low investment in infrastructure, and the inadequate protocols to face situations such as this one, in addition to the economic and social aspects derived from them. Latin America has been an example of the shortcomings in terms of social protection systems and insufficient health, in addition to corruption scenarios with the resources allocated to the pandemic (Tejedor, 2020, p. 3).

#### **3.2 Impact on the education community**

The educational community integrates a group of people involved in a school environment, such as parents, teachers, students, and administrative assistants operating in the institutions (Vargas, 2017, p. 7). The educational community had to face new circumstances to give continuity to the educational process despite the social confinement brought about by the closing of the schools and having as an auxiliary the virtual spaces, causing a restructuring of the coexistence in terms of space and time (Gómez & Chaparro, 2021, p. 5). For millions of students, the pandemic caused the need to take classes from their homes since there was no possibility of receiving them in person at school, thus not slowing down the educational process. For this reason, the means that were used to address this situation was the Internet with virtual classrooms; in addition, they resorted to radio, television, and computer programs

in order to meet the needs of the educational population in order to integrate all the systems of it (García, 2021, p. 10).

For the covid-19 scenario, ICTs were necessary for virtual education since they allowed the sending and receiving of didactic support material and the interaction of teachers with students and parents, as well as the carrying out of evaluations and meetings from the comfort of the home, in addition to other activities (Blas, 2021, p. 5). It should be noted that there were limitations faced by the students, for example, access to connectivity because Mexico does not have a homogeneous Internet system, which made it difficult to meet the demand for distance learning activities (García et al., 2021, p.3). The educational strategies in the country before the pandemic prevented students from developing in this new reality since they were unprepared to face it (Velázquez & Tello, 2021, p. 150).

Some of the main factors that impacted higher education during the pandemic are the economic problems that resulted from the pandemic itself due to a decrease in commercial and productive activity, unemployment and consequent loss of sources of income; socioeconomic inequality due to the digital divide and the difficulty of higher education institutions to cope with the change of modality; and the difficulty of higher education institutions in facing the change of modality (Schmelkes, 2020, p. 81). In 2021 the pandemic caused the number of poor people in the Mexican country to increase by 10 million people, adding to this that 64.00% of the population has difficulties in acquiring basic food basket products, which shows that the return to face-to-face classes is a challenge in the economy of many students (Álvarez, 2021).

#### 4. Research results

During the review of the information and impact on the economy of the educational community, several fundamental aspects were highlighted that refer to the difficulties experienced directly related to learning, which influenced their economies due to the change of the teaching system to a virtual mode that includes various technological components, experiences with teachers, students, connections, visual interrelation, the conditioning of the space to take classes to interact without auditory distractions, among others. The first aspect analyzed is the change in the didactics because the confinement brought direct and indirect costs (table 1). Table 1 shows the comments made in this regard, where the institutions incurred expenses to train and provide tools to their professors, who sometimes incurred additional expenses to acquire new licenses and platforms to produce new didactic materials and adapt to virtuality.

**Table 1: Comments on expenditures due to "Changes in didactics"**

| ASPECT               | RESPONSE  |
|----------------------|---|
| Changes in didactics | LPF: "I consider that the level of student learning has decreased, in contradiction to the increase in didactic materials".<br>HHV: "The students and teachers had to adapt to the new circumstances, but the response was not formalized, but rather students and teachers acquired skills and abilities (as best they could) to cope with the change"<br>MEVB: "we witnessed stressed teachers, students who did not follow a discipline when taking a virtual class" |

**Source:** prepared by the authors based on the analysis of the textual responses of the participants in the 13th ANFECA Academy Forum.

Another important aspect that impacted the economy of the educational community is the connectivity of the users, an element that is related to communication among them (table 2). From Table 2, it can be seen that connectivity affected most of the educational community, causing disbursements to connect among them to expand their telephone packages, increasing their expenses due to the Internet service and that despite the investment, the service was often unstable and hindered the process of taking classes.

**Table 2: Comments on "Connectivity" expenses**

| ASPECT      | RESPONSE  |
|-------------|---|
| Conectivity | MEVB: "connecting only and justifying not having signal, audio or camera that do not serve"<br>TMG: "foreign students decided to return to their places of origin where they found that there is no <i>Internet</i> connectivity"<br>BPM: "most students can only connect to the <i>Internet</i> through their cell phone".<br>DMJJ: "preferred to have their cameras turned off, some because their connection was unstable".<br>IYBG: "the precarious <i>Internet</i> service, some students even had to take their virtual classes outdoors, in places where the <i>Internet</i> signal could reach them better".... "Some even dropped out of the school because they said it was very difficult for them to concentrate when taking their classes online". |

**Source:** prepared by the authors based on the analysis of the textual responses of the participants in the 13th ANFECA Academy Forum.

Another aspect that impacted the students' finances was the study environment (table 3). In Table 3, it can be understood from the comments that the limited economic resources in some cases did not allow them to adapt to space and obtain an environment of concentration that would help them to understand the virtual session; consequently, many students were forced to drop out.

**Table 3: Comments on expenses due to the "Study environment"**

| ASPECT            | RESPONSE  |
|-------------------|---|
| Study environment | MAAJ: "students stated that there were many distractions at home, one of the main problems they had was not having a private space to take their classes."<br>IYBG: "Some of them even dropped out of school because they mentioned that it was very difficult for them to concentrate when taking their classes online". |

**Source:** prepared by the authors based on the analysis of the textual responses of the participants in the 13th ANFECA Academy Forum.

Another aspect involved in the expenditure of the educational community is related to digital tools (table 4). It is possible to perceive this in the comments of table 4. These complications disturbed the expenses of this group, such as getting digital tools and adapting to their geographic area with Internet packages that allowed adequate connection, in addition to the need for training to acquire the skills for the distance education process.

**Table 4: Comments on spending due to "digital tools"**

| ASPECT        | RESPONSE   |
|---------------|--|
| Digital tools | RNE: "limited <i>Internet</i> access for some students, lack of equipment complicated matters".<br>MDJMA: "faced a very common problem in that several students living in communities outside the capital city had no Internet signal, computer or device of their own".<br>TMG: "not all of us have the finances to invest in equipment that will lead us to get involved in virtual tasks" |

BPM: “lack of technological infrastructure suffered by a large part of the student community”.

LPF: “Lack of knowledge, skills and access to technological devices complicated the process at the beginning of the virtual modality”.

**Source:** prepared by the authors based on the analysis of the textual responses of the participants in the 13th ANFECA Academy Forum.

One aspect that arose due to the confinement was the automation of processes that facilitated online procedures, which also impacted the economy (table 5). Table 5 shows the decrease in expenses; the universities were able to invest in automation, which in the long term will allow a decrease in time and expenses in administrative processes; on the other hand, since there were no daily trips to the schools, the budgeted expenses available for face-to-face activities were reduced.

**Table 5: Spending comments related to "Savings"**

| ASPECT  | RESPONSE   |
|---------|--|
| Savings | MOP: “The automation of processes helps to reduce costs, which will have to be invested in, and will be reflected in a lower disbursement of resources in the future”.<br>GHR: “a student does not have to go in person to the Higher Education Institution from which he/she graduated in order to carry out any procedure, this is an advance and a saving of time and money”. |

**Source:** prepared by the authors based on the analysis of the textual responses of the participants in the 13th ANFECA Academy Forum.

The lack of infrastructure is another aspect exposed in the pandemic due to covid-19 (table 6). Table 6 shows the comments of the educational community, where it is perceived that the scarcity of economic resources hindered the processes of adaptation to virtual reality due to the scarce funding for training that would allow employees and students to obtain the skills to face the new virtual reality and, on the other hand, access to quality Internet.

**Table 6: Comments on spending for "infrastructure deficiencies"**

| ASPECT                      | RESPONSE   |
|-----------------------------|--|
| Infrastructure deficiencies | BPM: “Lack of training is also a factor, many times companies do not have the use of intranets and much less train their personnel”.<br>HHV: “the biggest problem was faced by students living in rural communities who had to travel long distances to get the signal”.<br>LPF: “High utility costs, dependence on the <i>Internet</i> , high costs for service payments” |

**Source:** prepared by the authors based on the analysis of the textual responses of the participants in the 13th ANFECA Academy Forum.

The economic budget of the countries was a determining factor for the development of virtual classrooms (table 7). Table 7 shows the comments that refer to the countries' budgetary causes that limited the educational community's necessary equipment. The countries needed a budget to cover the expenses in the schools to equip them for training needs, technological devices, and work materials, causing the student community to make their disbursements to acquire the necessary tools.

**Table 7: Comments on the expenditure caused by the "Economic budget of the countries"**

| ASPECT                            | RESPONSE   |
|-----------------------------------|--|
| Economic Budget of the countries. | ATSO: “education has been adapting to the social and economic needs of the countries in which it has been developed” |



MPHB: “Public higher education institutions present a series of disadvantages.., one of them is the limitation of budgets for the acquisition of tools and work materials”.

JMJ: “According to the Organization for Economic Cooperation and Development (OECD, 2020), this crisis manifested multiple deficiencies and inequalities in education systems: from the broadband and computers required for online education to the lack of access to the *Internet*”

SPT: “At present, mankind is working to solve the challenges to ensure that people have equal opportunities for their development and well-being, taking into account social, economic and environmental needs”.

HHV: “the lack of increasingly scarce economic resources in public institutions and a lack of comprehensive planning”

MEVB: “the lack of equipment, infrastructure, licenses, teacher training, among others, did not achieve the desired impact on education”

**Source:** prepared by the authors based on the analysis of the textual responses of the participants in the 13th ANFECA Academy Forum.

Unemployment is another aspect immersed by the relative presence during the pandemic, which affected the educational community (table 8). Table 8 shows that unemployment and the decrease in salaries caused by the pandemic affected the economy in many households in the world, which the educational community is part of; this is a cause for not acquiring adequate equipment and paying for Internet services required for the development of education.

**Table 8: Comments on "Unemployment" expense**

| ASPECT       | RESPONSE  |
|--------------|---|
| Unemployment | <p>TMG: “students whose parents and themselves have become unemployed and are unable to meet the challenge of purchasing much more up-to-date equipment to continue their classes virtually”</p> <p>JEMB: “many of us have lost our sources of income”</p> <p>IYBG: “quitting their jobs, with the difficulty of not having a computer or sharing it with other family members”</p> <p>DMJJ: “In many cases these employees were our students who had to work to pay for their studies or their parents on whom they depended economically, aggravating the situation of not being able to pay for the use of the <i>Internet</i> to have online classes”.</p> <p>GHR: “teachers at all academic levels, many of whom lost their jobs or saw their salaries reduced as a result of the reduction in the number of groups or students per group.”.</p> |

**Source:** prepared by the authors based on the analysis of the textual responses of the participants in the 13th ANFECA Academy Forum.

In turn, investment is relevant as an aspect of confinement (table 9). Table 9 shows the comments regarding the investment category perceived by the educational community. It can be understood that there was an investment by the educational sector in automation that left prolonged benefits that allowed for facilitating the processes with the educational community.

**Table 9: Comments on the expenditure by "Investment" aspect**

| ASPECT     | RESPONSE   |
|------------|--|
| Investment | SBHG: "to enable online psycho-pedagogical attention for our students, free attention was provided to the population".<br>MJMA: "The automation of administrative processes in the institutions generated an investment in equipment, systems, personnel necessary for their establishment, operation, maintenance and user training, as well as the design of the formats or official documents to be generated with the necessary institutional security measures".<br>ATSO: "Automation in organizations brings benefits; as with any change, it implies a global preparation, obviously technological, but also financial" |

**Source:** prepared by the authors based on the analysis of the textual responses of the participants in the 13th ANFECA Academy Forum.

Another aspect to be analyzed is the health issues experienced by the educational community, both because of the pandemic and the new reality (table 10). Table 10 shows that health during the pandemic was a high-risk factor that, in some cases, claimed many people's lives and, in others, left sequelae. Consequently, family members had to cover expenses for consultations, medicines, medical instruments, and in more extreme cases, funeral processes, as well as extra elements such as eyeglasses and therapies, among other things.

**Table 10: Comments on spending for "Health" issues**

| ASPECT | RESPONSE  |
|--------|---|
| Health | GHR: "a simple backache suddenly turns into lumbago, a condition of eyestrain, controlled by the customary use of glasses with the corresponding prescription"<br>TMG: "others have had to cope with the loss of loved ones"<br>ADU: "From the point of view of limitations in administrative processes in the contingency stage, it is possible to mention the increase in activities or actions, such as "processing the payment of eyeglasses (benefit for assigned workers)" carried out by the Human Resources area in public educational agencies"<br>DMJJ: "It is true that the mental health of our students was affected by the death of close family members; they were also affected economically"<br>GHR: "The current situation caused by the pandemic has brought with it developments that, for the sake of preserving life alone, we could say have been good". |

**Source:** prepared by the authors based on the analysis of the textual responses of the participants in the 13th ANFECA Academy Forum

The financial challenge of the pandemic throughout the educational community is an aspect of analysis due to its presence during virtual classes (table 11). The comments that expose the challenges faced by the educational community are shown in table 11, where the derived effects can be appreciated. In the category, it can be evaluated that an economic recession affected a high population as the need to cover income to continue in their jobs and not lose them.

**Table 11: Expenditure comments for the "Pandemic Financial Challenges".**

| ASPECTO                             | RESPUESTA  |
|-------------------------------------|--|
| Pandemic<br>Financial<br>Challenges | APBC: "The COVID-19 pandemic; which has had a devastating effect on the lives of millions of people, triggering a severe health crisis and an economic recession."<br>DPHM: "millions of people had a huge challenge to stay at home for months, it was very difficult for both teachers and students, for those who had to go to work, for people who are from other municipalities and had to pay rent, for those who had to go to work, and for those who are from other municipalities and had to pay rent". |

**Source:** prepared by the authors based on the analysis of the textual responses of the participants in the 13th ANFECA Academy Forum.

## Conclusions

The pandemic caused by covid-19 wreaked havoc in different aspects such as health, economy, work, society, and education. How humanity reorganized itself to continue, although the situation was not egalitarian. In other words, there was economic inequality; this agrees with the studies of Regueyra Edelman, Valverde Hernández & Delgado Ballesteros (2021), y Landa García (2021), indicating employment shortages, a relevant impact on the economy and greater affectation was on the less favored society. In households, the economy decreased to a great extent due to labor issues because of the closures of many businesses due to the so-called "stay at home," causing unemployment and, in this way, the economic subsidy in households decreased, which would cause difficulty in the educational community to continue developing activities from home, due to the services that were required to overcome the situation.

In education, the measures implemented caused an abrupt change. The demand for the need to have a technological device that would allow interaction and communication with external people to continue with the teaching was inaccessible due to the economic lack in some cases, this inconvenience to continue with their distance process Ortega (2020). Also, changes in didactics and connectivity impacted the expenses of the student community. However, efforts were redoubled to face each obstacle leading those involved to a constant struggle against adversities and their economy.

Adaptation had to happen in order to keep education going, causing, in the process, frustration and stress in most people. They had to reorganize with new teaching strategies as much as possible to continue the education process. Discipline and honesty have always been a pillar of achieving objectives; in this case, it was also because, with the commitment of those involved, the opportunity to continue with the education process through the virtual classrooms was taken advantage of.

For those who had few economic resources, it was more complicated to adapt to distance education since they had to add new expenses because of their needs since it was required to continue with the education from home a technological device such as a cell phone, tablet or computer, pay for additional services such as an Internet network or telephone packages, in addition to the usual services such as food, water, energy, gas, among others. Despite the economic disposition, the adversities to continue with distance education required effort and training to make what one had an ally to continue.

## References

- Alarco, G., & Castillo, C. (2022). Elevada desigualdad, pandemias, cambio tecnológico y desempleo: una reseña en tiempos del covid-19. *Revista Economía UNAM*, 19, 146–173. <http://revistaeconomia.unam.mx/index.php/ecu/article/view/699/665>
- Altamirano, H., Cadena, V., & Arias, B. (2021). Educación virtual y su impacto socio – económico en los estudiantes y docentes de una unidad educativa. *Explorador Digital*, 5(3), 13–25. <http://doi.org/10.33262/exploradordigital.v5i3.1771>
- Álvarez, H. (2021). *Regreso a clases, impacto en la economía y rutina de los colaboradores*. <https://blog.sodexo.com.mx/blog/regreso-a-clases-impacto-en-la-economia>
- Blas, A. (2021). Uso de las TIC y atención a la diversidad en los tiempo de la COVID. *Texto*

- Livre*, 14(2), 5–12. <https://doi.org/10.35699/1983-3652.2021.33578>
- Epidemiología, D. G. de. (2022). *Lineamiento estandarizado para la vigilancia epidemiológica y por laboratorio de la enfermedad respiratoria viral*. [www.gob.mx/salud](http://www.gob.mx/salud)
- Esquivel, G. (2020). Los impactos económicos de la pandemia en México. *EconomíaUNAM*, 17(51), 3–18. <https://www.banxico.org.mx/publicaciones-y-prensa/articulos-y-otras-publicaciones/%7BD442A596-6F43-D1B5-6686-64A2CF2F371B%7D.pdf>
- García, Grajales, J., Buenrostro-Silva, A., & López-Vázquez, A.S., (2021). El *Internet* en tiempos del SARS-Cov-2 (COVID-19) en México. *CIENCIA Ergo-Sum*, 28(4), 3–8. <https://doi.org/10.30878/ces.v28n4a3>
- García, L. (2021). COVID-19 and digital distance education: pre-confinement, confinement and post-confinement. *RIED-Revista Iberoamericana de Educacion a Distancia*, 24(1), 10–25. <https://doi.org/10.5944/ried.24.1.28080>
- García, P. (2021). Educación en pandemia: los riesgos de las clases a distancia. *Instituto Mexicano Parala Competitividad A.C.*, 4–28. [https://imco.org.mx/wp-content/uploads/2021/06/20210602\\_Educación-en-pandemia\\_Documento.pdf](https://imco.org.mx/wp-content/uploads/2021/06/20210602_Educación-en-pandemia_Documento.pdf)
- Gómez, J., & Chaparro, A. (2021). La convivencia en el contexto de pandemia: experiencia de docentes de secundaria. *Sinéctica*, 7033(57), 5–23. [https://doi.org/10.31391/s2007-7033\(2021\)0057-016](https://doi.org/10.31391/s2007-7033(2021)0057-016)
- Hernández-Sampieri, R., Fernández-Collado, C., & Baptista-Lucio, M. P. (2014). *Metodología de la investigación*. Sexta Edición. México D. F.: McGraw-Hill.
- INEGI. (2021). *Encuesta para la Medición del Impacto COVID-19 en la Educación (ECOVID-ED) 2020. Nota Técnica. Segunda Edición.* 1–30. [https://www.inegi.org.mx/contenidos/investigacion/ecovided/2020/doc/ecovid\\_ed\\_2020\\_nota\\_tecnica.pdf](https://www.inegi.org.mx/contenidos/investigacion/ecovided/2020/doc/ecovid_ed_2020_nota_tecnica.pdf)
- Linne, J. (2021). *La educación del siglo XXI en tiempos de pandemia*. 32, 10–18. <https://doi.org/10.33255/3262/977>
- Marco, L., & Cisneros, S. (2020). Repercusiones de las clases virtuales en los estudiantes universitarios en el contexto de la cuarentena por COVID-19: El caso de la PUCP. *Propósitos y Representaciones*, 8(SPE3), 4–15. <https://doi.org/10.20511/pyr2020.v8nspe3.588>
- Melgarejo, E. (2020). COVID-19: extraño nuevo virus, endotelio y enseñanzas de una pandemia. *Acta Médica Colombiana*, 45(2–5). <https://doi.org/10.36104/amc.2020.1918>
- Miguel, J. (2020). La educación superior en tiempos de pandemia: una visión desde dentro del proceso formativo [Higher education in times of pandemic: a view from within the training process]. *Revista Latinoamericana de Estudios Educativos*, 50(ESPECIAL), 15–40. Obtenido de <https://n9.cl/ov5w4>

- Orellana, J., & Guerrero, R. (2021). Impacto socioeconómico de la COVID-19 en el escenario mexicano TT - Socioeconomic impact of COVID-19 in the Mexican scenario. *Acta Odontol. Colomb. (En Linea)*, 11(2), 5–7. <https://revistas.unal.edu.co/index.php/actaodontocol/article/view/97196>
- Ortega, J., & Oyanede, C. (2022). Docentes y las tecnologías de la información y la comunicación: el nuevo rol en tiempos de pandemia por COVID-19. *Revista Educación*, 46, 3–14. <https://doi.org/10.15517/revedu.v46i1.47614>
- Ortega, M. (2020). Efectos del Covid-19 en el comportamiento del consumidor: Caso Ecuador. *Retos*, 10(20), 233–247. <https://doi.org/10.17163/ret.n20.2020.03>
- Regueyra-Edelman, M. G., Valverde-Hernández, M. E., & Delgado-Ballesteros, A. (2021). Consecuencias de la Pandemia COVID-19 en la permanencia de la población estudiantil universitaria. *Actualidades Investigativas En Educación*, 21(3), 1–31. <https://doi.org/10.15517/aie.v21i3.46423>
- Rodríguez, D., & Guzmán, R. (2019). Rendimiento académico y factores sociofamiliares de riesgo. *Perfiles Educativos*, 41(164), 118–134. <https://doi.org/10.22201/iisue.24486167e.2019.164.58925>
- Schmelkes, S. (2020). La educación superior ante la pandemia de la Covid-19: el caso de México. *Universidades*, 71(86), 81–87. <https://doi.org/10.36888/udual.universidades.2020.86.407>
- Tejedor, J. (2020). Los impactos sociales y económicos de la pandemia de la Covid-19 en Latinoamérica. *Revista Finanzas y Política Económica*, 12(2), 3–4. <https://doi.org/10.14718/revfinanzpolitecon.v12.n2.2020.3730>
- Vargas, I. (2017). Mirada de la comunidad educativa acerca del desempeño de directivas educativas: Algunas reflexiones. *Revista Electronica Educare*, 21(1), 7–20. <https://doi.org/10.15359/ree.21-1.14>
- Velázquez, E., & Tello, E. (2021). Prospección del sistema educativo mexicano a partir de las experiencias aprendidas por el COVID-19. *Revista Electrónica En Educación y Pedagogía*, 5(8), 150–157. <https://doi.org/10.15658/rev.electron.educ.pedagog21.04050810>
- Villada, F., López-Lezama, J.M., & Muñoz-Galeano, N.(2017). El papel de la educación financiera en la formación de profesionales de la ingeniería. *Formacion Universitaria*, 10(2), 14–22. <https://doi.org/10.4067/S0718-50062017000200003>