

MENDIVE

REVISTA DE EDUCACIÓN

Translated from the original in Spanish

Learning experiences during the COVID - 19 pandemic at the National Pedagogical University

Experiencias de aprendizaje durante la pandemia COVID-19 en la Universidad Pedagógica Nacional

Experiências de aprendizagem durante a pandemia COVID-19 na Universidade Pedagógica Nacional

Gabriel Alejandro Álvarez Hernández¹



<https://orcid.org/0000-0001-6809-8321>

María de Jesús De La Riva Lara¹



<https://orcid.org/0000-0001-6215-3289>

¹ National Pedagogical University, México.



gabo.alvarezh@gmail.com



mriva@g.upn.mx

Received: October 14th, 2020.

Approved: February 22nd, 2021.

ABSTRACT

The present investigation was carried out with undergraduate students from the National Pedagogical University of

Mexico in the context of the pandemic caused by the COVID-19 virus and which forced the transfer of face-to-face classes to online mode in the middle of the semester. The objective was to evaluate the experiences of the students in the context of the pandemic in relation to their training process to understand the actions that each student took in order not to lose the semester. In the first stage, a questionnaire is applied to 48 students corresponding to 80 % of the total population in order to know the central problems in the experience of the students in the pandemic context, in the second stage a second questionnaire is applied that aims to specify the reasons why the lack of technological resources was an impediment, hence four students were chosen to be interviewed and whose experience was expressed in greater depth. The research was with a qualitative approach, from an interpretive paradigm and it was based on hermeneutical phenomenology and the narrative biographical method. The results show that the main problem was the accessibility to education derived from the resources that are available or not and how each student got around it. It concludes by revealing the weaknesses of the educational system in general and specifically at the University, in order to provide alternatives that help students in their training process and in achieving the learning objectives set in the study programs.

Keywords: higher vocational training; learning experiences; pandemic; online education.

RESUMEN

La presente investigación se realizó con estudiantes de licenciatura de la Universidad Pedagógica Nacional de México en el contexto de la pandemia provocada por el virus COVID-19 y que obligó a trasladar las clases presenciales a modalidad en línea a mitad del semestre. El objetivo fue evaluar las

experiencias del estudiantado en el contexto de la pandemia, con relación a su proceso formativo, para comprender las acciones que cada estudiante tomó para no perder el semestre. En una primera etapa se aplica un cuestionario a 48 estudiantes, que corresponden al 80 % de la población total para conocer las problemáticas centrales en la experiencia de los estudiantes en el contexto pandémico. En la segunda etapa se aplica un segundo cuestionario que se dirige a precisar las razones por las cuales la carencia de recursos tecnológicos fue un impedimento, de ahí se eligieron a cuatro estudiantes para ser entrevistadas y cuya experiencia se expresaba con mayor profundidad. La investigación fue con enfoque cualitativo, desde un paradigma interpretativo y se basó en la fenomenología hermenéutica y el método biográfico narrativo. Los resultados demuestran que la problemática principal fue la accesibilidad a la educación derivado de los recursos con los que se cuentan o no y cómo cada estudiante lo sorteó. Se concluye develando las debilidades del sistema educativo en general y en específico de la Universidad, para poder brindar alternativas que ayuden al alumnado en su proceso formativo y en el alcance de los objetivos de aprendizaje marcados en los programas de estudio.

Palabras clave: formación profesional superior; experiencias de aprendizaje; pandemia; educación en línea.

RESUMO

A presente investigação realizou-se com estudantes de Bacharelado da Universidade Pedagógica Nacional de México no contexto da pandemia originada pelo vírus COVID-19 e que obrigou trasladar as aulas presenciais à modalidade em linha à metade do semestre. O objetivo foi avaliar as experiências da estudiantada no contexto da pandemia, com arrolamento ao seu processo formativo, para compreender quais foram as ações que cada um deles adotou para não abafar o semestre. Na

primeira etapa aplica-se um questionário a 48 alunos, o que corresponde ao 80% da população total para conhecer as problemáticas essenciais na experiência dos estudantes no contexto pandémico. O segundo questionário aplica-se na segunda etapa, dirigido a sobressair as razões pelas que a carência de recursos tecnológicos foi uma barreira, por isso elegeram-se quatro alunas para ser entrevistadas e cuja experiência expressava-se com maior profundidade. A pesquisa foi com enfoque qualitativo, desde o paradigma interpretativo e apoiou-se na fenomenologia hermenéutica e o método biográfico-narrativo. Os resultados confirmam que a problemática principal foi a acessibilidade à educação é dependente dos recursos que se tenham ou não e como cada aluno o lotou. Concluiu-se explanando as carências do sistema educativo em geral e especificamente, da Universidade, para poder oferecer alternativas que ajudem à alunada no seu processo formativo e na abrangência dos objetivos da aprendizagem, sinalados nos programas de estudo.

Palavras chave: formação profissional superior; experiências da aprendizagem; pandemia; educação em linha.

INTRODUCTION

In the course of modern history there have been moments of rupture that, among other things, cause changes, transformations and sometimes interruptions of social dynamics, including education; in those cases the student body can be affected. And it was the case of Alan Mathinson Turing, who was born in June 1912 in Paddington, England. He was a mathematician, logician, theoretical computer scientist and cryptographer, his contributions to science consequently earned him the nickname of *father of computer*

science or at least one of those who collaborated in the construction of this discipline; He formulated the principles of the Turing machine with which he managed to prove that it was able to solve any mathematical problem using an algorithm. He also developed the concept of hyper computing for the study and discussion of problems with no apparent algorithmic solution, among many other contributions to science and even to the history of mankind. They say that this English scientific since childhood showed a rare but outstanding ability for mathematics and learned to read with little help and in just three weeks. It stands out from his biography, among other things, that at the age of fourteen a strike threatened to ruin his first day of school in a boarding school, but he traveled just over 90 kilometers by bicycle to spend the night at an inn to be able to study without adversity next day.

Turing's story shows us and exemplifies that the in the passage of history situations may occur, to a greater or lesser extent, put obstacles to the educational activity is carried out as planned; Thus, each student in these disruptive moments has to go through moments of decision about what they can or cannot do to continue with their studies despite the contingencies that happen to them. Each one is preparing its history that can serve to the understanding of these substantial actors of pedagogy that Perez de Lara (2011) called the others (other) of pedagogy: "[...] are those students that from their ways of being in the world question it, because they make its principles shake with her mere presence in the classrooms "(p. 47).

In this writing, the stories of students are highlighted of the degree in Pedagogy and the degree in Educational Psychology of the National Pedagogical University of Mexico (UPN), at a time that we can now say is conjectural for humanity: that of the pandemic caused by the SARS virus-

CoV-2 (COVID-19) or also known as Corona virus. In December 2019, the first cases of the disease caused by the aforementioned virus occurred in the city of Wuhan in China, which was rapidly proliferating in the rest of the world; By March 20, 2020, the World Health Organization (WHO) officially declared a global pandemic and in Mexico the Ministry of the Interior did so officially on April 22, 2020 in the Official Gazette of the Federation (SEGOB, 2020).

In Latin America, in February 2020, the first case in Brazil appears and in only a month reached other countries in the region; Mexico was no exception and, according to information from *La Jornada* (Muñoz and Martínez, 2020), on February 28 the first official case was reported.

Once the pandemic was evident, each country began to develop and carry out its own strategies to try to overcome this situation in the best possible way; each government determined the actions to be carried out in each sector, and education was one of these. The ministries of education ordered the cancellation of classes in face to face way and go immediately to one in line, the Public and Autonomous Universities joined and the change of modality took place in an urgent and emergent way.

Authorities of the UPN acted in accordance with categorical instructions and orders of the federal authorities and ordered that educational programs ongoing move to online way; this caused confusion in the community and led to a radical change. The story of the Units in Mexico City comes with a tradition of working in material conditions and sometimes unfavorable contractual; This is reflected in that they do not account with own facilities for their university tasks, what is done is renting buildings for administrative functions and loan facilities of secondary and preparatory schools to operate educational programs

there, when they do not intervene with regular educational functions of them.

The student body, according to a study carried out (Álvarez, 2019), comes from municipalities and neighborhoods with limited resources, some cases in marginalized urban conditions; In the case of the degrees in Pedagogy and Educational Psychology, the population is the sons and daughters of merchants, employees, or those engaged in trades, families of Quintil 1, that is to say, of little resources. It represents a pedagogical challenge because the university in Mexico needs to develop its educational strategy based on the unfavorable socioeconomic status in one country that according to studies by the Center for Studies Espinoza Yglesias (CEEY, 2019) 74 of each 100 Mexicans that born in these quintiles fail to overcome poverty, no matter what they do or how much they try, in contrast to the economically privileged families quintile 5, in which 57 of 100 remain there the rest of his lives, no matter what they do or do not do. It is added that, factors to prevent social mobility are skin color, as people of brunette skin has fewer opportunities than those of white skin, and gender, which stresses that women also have fewer opportunities, among other variables.

It can highlight the following points as elements that set a context and, therefore, the problem:

- A global pandemia.
- Educational programs that from curricular nature were designed to be implemented in face to face way and who are forced to move in line.
- The null experience and training of the student to work and in line.
- The precarious material conditions with which the educational programs of the UPN Units operate.

- The students of the degrees in Pedagogy and Educational Psychology are of little resources.

These points are central elements that make up the context, which seems to be the beginning of a historical conjuncture of humanity, due to the social, economic and, of course, pedagogical effects, since what it has been experienced shows that the foundations and educational facts do not count and they do not provide theoretical and practical tools to overcome such a contingency and, despite everything, achieve the curricular objectives stated in the educational programs. This research, of all the approaches addressed up to here, focuses on the student body and the effects of this context in their training process, on how they lived this experience and what lessons they leave us and that they are the possible platform of pedagogical approaches that help to elaborate an educational task transformed and ready after this historical dislocation.

MATERIALS AND METHODS S

In order to carry out this research, the concept of experience of Larrosa (2006) is retaken, which allows us to understand that the human experience is not what happens but what happens to us, that is, not everything lived is properly an experience, since it display a rupture, a transit time to a different subject, a vital transformation vital, a future subject.

Each student, in the context of a pandemic and who led the UPN to transfer their face-to-face classes to an online mode in the middle of the semester, developed a specific experience, lived it in a different way, both in the specificity of each course with a professor who personally reworked their planning, as in confining their studies at home, with their technological

material resources and their own study strategies to be able to accredit their subjects, since each student is in a formative process that allows to see that training is that dynamic of life, of constant relationship and reflection with itself and its environment: its classes, teachers and curricular contents, in the task of personal, constant and unfinished search and reworking (Ferry, 1990).

Derived from all the above, the research that prompted this article and that presents results, aimed to evaluate the experiences of the students in the context of the pandemic, in relation to their training process, in order to understand and assess the actions to the study that each one took in order not to lose the semester; With this, both the methodological platform and the epistemological components for the interpretation and analysis of the data were elaborated.

To carry out the present research, it was first proposed that the scientific basis was Aristotelian, which within its foundations supports the fundamental scoop of recognizing that social and human phenomena are fundamentally mediated by qualitative aspects that focus on significance and meaning sense of human experience in the dynamic relationship of the subject with the phenomenon that is lived or lived, so that understanding (*Verstehe n*) is epistemologically articulated as a central element of investigative work.

The interpretive paradigm was the one that governed the present investigation, since it allows us to understand ontologically that reality is a constant and dynamic elaboration and construction, the work of human minds that live and coexist in the scenarios to which they are engaged; Also, this paradigm justifies a relationship of epistemological interaction between the social and human phenomenon to be investigated with the researcher, united

in a constant relationship and experiential interaction.

A key methodological reference for this work was the hermeneutical phenomenology of Van Manen (2003), since it manifests itself as a human science that focuses on the experience lived from a pre-reflective point of view, that is, as it was lived. Following the same author, pedagogy is the act of teaching, exercise done primarily by parents, teachers and educative institutions, it is the relationship between someone who teaches another, but not in a purely technical dimension, but in a human deeply, a formation relationship (*bildung*); then, hermeneutical phenomenology and research in the human sciences as planned by Van Manen (2003) has as its goal for educators:

[...] To achieve an essential pedagogical competence: to know how to act wisely and cautiously in pedagogical situations, starting from a thoughtful character carefully worked out. To this end, hermeneutical phenomenological research reintegrates the part and the whole, the accessory and the essential, the value and the desire. It promotes a determined awareness of the details and seemingly trivial dimensions of our everyday educational lives. It makes us reflexively aware of the consequent in the inconsequential, of the significant in what is taken for granted (p.26).

To achieve this, it took the narrative biographical method (Bolívar Domingo and Fernandez, 2001) and were developed four stages; the first one was

to identify the central issues in the experience of students in the context of the pandemic context described in the introduction of this work. A questionnaire by a form of *Google* to approximately 80 % of the student population of the degrees in Pedagogy and Educational Psychology was applied. The reason why we worked with the population of these programs was because they are of a semester nature and in their case the course remained in its face-to-face nature at half; it for both, half of the experience was face to face and another online. In the survey it was found that the greatest educational challenge in their education was the resources with which they had to study and completion of their courses.

The second stage was to develop another questionnaire, which is more accurately directed to the recovery of the reasons why resources technology was an impediment to bringing out in the best way the classes online. Later, the empirical data was analyzed, for there to choose students whose experience expressed in greater depth and description the difficulty to study with such deficiencies; they were interviewed via *Google MEET*.

The third stage was to capture, systematize and interpret the responses to the second questionnaire and the interviews; For both instruments the holistic type of reading of the form (HF) was used that "[...] finds its best expression in the search for the overall plot or structure of a life story: for example, the progression, decline or stability of a trajectory extended in the plot of the story" (Bolívar, Domingo and Fernandez, 2001, p. 192). To the preparation of the stories: two positions were combined the restorative or hyper empiric and the analytical and of the reconstruction of the sense (p 199-202). The first one is focused on respecting faithfully the speech of the

protagonist, as much as possible without altering the reported, maintains the nature of the story and its relationship with the experience. Second, because of the narrative fragments extracted, in an inductive sequencing, achieve to account for a phenomenon of life, in this case, from the experience of undergraduate students in school and classroom and their transfer to on line form. Finally, the fourth stage was continued, which was to prepare the narrative report and which is set out in the next section.

RESULTS

The first stage of the investigation led to a primary approach to the experience of the student in the pandemic context and its consequences on the actual courses that moved to on line way; from what I was found it was reached to the reflection that the most important problems for many and many students was not to have the necessary resources to carry out their studies. Some of the answers that allowed this statement are as follows:

- I do not have a computer, Internet and it has been very difficult for me to be 100 percent in online classes.
- Because I am in a place where the internet signal is bad.
- Due to the fact that currently I do not have excellent functioning of my PC, it has cost me work, apart from the fact that with the cell phone or the *laptop* I have many distractions, both for my work or entertainment; for example, the little time that the PC lasts me without turning off I use it in my work.
- It is a new model to which many of us are not adapted, as well as we do not have the necessary resources for remote work.

- It's a bit difficult as there is only a *laptop* at home and is used by three people inside the home, to work and study.
- I did not have a computer or the Internet to be in online classes and submit assignments.

Here are some of the responses that led the investigation to focus on aspects that have to do with the shortcomings in order to carry out the tasks, for work in line necessarily require resources to run, so that students can take their subjects and learn, achieve the objectives of educational programs; So with these empirical data, the first a category of analysis was built: *economic and social conditions of the students who affect or against their study*.

Other evidence that emerged in this first stage of approach to the student experience, and that gave body to the second category of analysis were those who did direct reference to the work proposals that teachers, emergently, developed individually. In this category of analysis it was called: *pedagogical-didactic conditions which could be changed from the teaching plant UPN*. Next, the elements that configure them are listed in a specific way:

Economic-social conditions of the female students that affect for or against their study

1. They are moved to other places, houses, municipalities, states.
2. They do not have the resources or lost them in the breakdown process or lack of maintenance or payment: computer, *laptop*, *smartphone*; the *Apps*; Internet access, etc.
3. They have to work to meet family expenses.

4. They are caregivers of minors or vulnerable people.

5. There are families who support borrowing computers, network and housing to students.

6. There are students sick with COVID-19 or with sick relatives that affect the family organization.

7. In the students, expectations, feelings, emotions about the situation, the group to which teachers do not attend and support them in these respects are generated.

8. The time for the use of resources is little and has no fixed schedule for the conditions in which they live.

Pedagogical-didactic conditions that could be changed from some UPN teachers

1. They do not know how many resources the students have, using applications (*Apps*) that require a sophisticated *hardware*.

2. It imposes the type of *App* or *software* without taking into account if the students can access it because they require a large amount of data or have access to a good internet.

3. Timetables and duration of the sessions were imposed without taking into account the conditions and resources; they were not flexible or clear, but the need to attend virtual sessions in real time was assigned.

4. They do not adapt the strategy or the didactic sequences of their courses to a logic online work. They repeat mistakes in face to face classes: too reads do not explain, they repeat previous contents. They are messy to follow the activities; they do not fit the evaluation criteria, etc, according to testimony from students.

5. They do not take into account that there are students who support other students with fewer resources, they do not promote organization among them, and they do not work with groups of adequate size for the *hardware* and *software* and what is going to be done (construction of concepts, discussion, conclusions, and evaluations).

6. They do not take into account that they themselves have feelings and emotions that affect their courses and are impatient with the students, they lack a school where these issues are discussed.

7. They do not use tools to work with students who are lagging or with few or less sophisticated resources: landline, *drive* and mail, *Facebook* groups, etc. .

These two categories are retaken for the next stage of *economic and social conditions of the students who affect in favor or against its studies*.

In the second step, the interviews were a central element to this investigation; they were carried out by Google MEET and a script for it was developed. The criterion for choosing key informants was, as mentioned, the descriptions point that gave about how they lived this experience and the impact it had on it. To recognize each interview, and the same time maintain confidentiality, the nomenclature I1 (Informant 1), I2 (Informant 2), I3 (Informant 3) and I4 (Informant were placed 4). Then, their answers:

- Sometimes making presentations or handling *Excel* sheets complicates the work, in my case when doing it. On the other hand, the lectures are good, but sometimes the teacher's internet or even mine is bad and this prevents us from

understanding 100 %. We are experiencing difficult times and the main thing is to understand that not all of us have the resources to be able to participate in class; being aware of this situation can improve the system or the way of teaching at this time (I1).

- Connection problems from the light, to the place where it receives the signal, as well as the number of people who are now at home. They have been obstacles because they are shared (technological resources), because we do not fit in with the schedules (in my case I have a brother who still takes classes in the afternoon), due to sudden bad signs and , not having the technological resources so new, then by themselves they fail, have problems, are constantly disconnected, etc. ether (I2) .
- I did not have a computer or the Internet to be in online classes and turn in assignments. It was not in video classes and I retarded in the works, since in the cell I could not do it well and the data internet was pretty bad (I3).
- For me it has been very difficult since, due to the situation, those who support financially in my house were left without work, which resulted in us being left without internet and without the essential things to be able to send my tasks. Because my internet was cut off I had to consume my data. Honestly, I didn't like the distance classes at all (I4).

Different factors are combined in the testimonies exposed. I1 recognizes that carrying out tasks through electronic means that are not suitable for that is singularly difficult; They accept that they do not have the necessary technological tools. For its part, I2 recognized the bad internet service, which other family members require to make use of

technological tools and therefore impossible at times to have these and the obsolescence of the devices were contingencies for their classes. With I3 we found that the complete absence of a computer and the Internet were a key to their experience, as well as the use of cell that is inappropriate for making tasks. Finally, I4 lived with his family in the consequences of unemployment and the complete absence of resources for schoolwork.

The interviews lasted an hour and allowed to address with phenomenological and hermeneutical depth, aspects of the experiences lived of each student and how was that they managed to overcome these adversities related to access to technology resources.

I1 is a 19-year-old student; she decided to study Educational Psychology under the influence of her mother who is a social psychologist. She recognizes that studying this career at the UPN has filled her with satisfaction, she likes her degree; He lives in the Peralvillo neighborhood, a popular neighborhood located in the historic center of Mexico City that stands out for its informal trade. She helps her mother with her work, while her father is a farmer and teaches at a high school in another city. To carry out its tasks, she had as a means her mobile phone, she recounts:

I had to make a presentation about a book that we were reading, I read the book perfectly but the problem was that that period was when my computer stopped working and I had no one to do it with, so I said "Well, I'm going to download it. "And I already had my presentation, I had some things underlined in the book and I said "Well, I can do it", but it was difficult, I started crying and I said " What am I going to do ?! yes I know what the book is about" and then I summarized and the teacher told me "No. slides are needed "I said, "Well, I will not in cell, but because I will do it in sheets I will take some

picture and I will sent you to your mail "and the teacher said, "Yes, but I need to be in order" and I said " of course I'll do it in order " but s t was very tedious, it is not the same to do a slide in such a small screen (I1).

Having a computer with the necessary packages to elaborate the tasks is an aspect that becomes nodal in professional training, tasks sometimes require these tools and in a global quarantine like the one we live today it is almost inevitable that everything is going to be done electronically; I1 explains to us in his story that this is the case, that in many cases a mobile device is not enough and does not replace a computer; on the other hand, the communication and agreements that are reached with the teaching staff can be of help to overcome adversity.

For its part, I2 is a young woman of twenty years; she is the City and Mexico. In its history recognizes that reaching study at the university was an achievement, because the opportunities were not necessarily the best and the economic situation at home prevented him from doing so, it made entrance examination for several public universities and there was; private school was not an option, he finally stayed at UPN. His family is of five members and there was only one computer; the house where he lives is shared with two other families, the internet is for everyone. She relates:

In my house we share an internet for everyone, we just have a computer and well the advantage I had with my little brother is that he took online classes in the morning because he goes in the morning, I found the problem with my middle brother because he also studies in the afternoon, then our classes, our schedules crossed and then at the time of taking classes it was difficult and not only because of the computer but also because of the internet: it was cut off, it was slower, we couldn't connect well, all of a sudden it was failing a lot, so we

couldn't get into classes. Neither one nor the other could dock. At the end of the day, we knew how to handle it as best as possible, to have schedules and my brother and I made a deal, an agreement, for example, he told me "" And I have a very important class right now "And I "I don't have such a class important". Then we conceded and shared us, we split up, then you take your class sometimes and that way (I2).

Access to certain technological tools depends to a large extent on the available resources. A large family tends to be a major expense for parents, so that sometimes it is not possible to give all children their own tools and resources; Consequently, having to distribute what one has is sometimes difficult, since each school and each educational program requires a specific time and schedule from the student body, so that in a context like the one that I2 lived, it was singularly difficult.

The case of I3 was representative of a family like so many that the pandemic caused them to lose their job and their income for their maintenance. Her mom sells ice cream outside a primary school and her father is a private driver and was also affected, without computer and forced to cancel the Internet for nonpayment; She was born and raised in the municipality of Netzahualcoyotl, a place east of Mexico City, of families mostly from low quintiles and it is also noted for high levels of crime. When she grew went to live to Tecámac, another municipality that shares the characteristics indicated in the above, for classes at a distance, she only had his mobile phone and data, in that way her classes entered, she recounts:

The data was quite slow, sometimes in the online classes that we had I failed a lot, I did not listen in the *WhatsApp* classes. I began to put my cell phone little by little, what I would bring: \$ 20.00 pesos or \$ 30.00 and so, then at that moment when in class the teacher asked a question, I wanted

to answer it and they beat me or someone else wrote faster than me, then, it was to erase the whole answer again and wait for them to put it back. Another question for me to answer quickly, so I felt that it was going to affect me a lot in my participation, since when the teacher asked something, I was writing faster and in what my message was sent the teacher already talking about another topic and my message just getting through (I3).

For this student, the mobile phone was the only tool of her property to do her homework, in addition to the fact that the internet was the one that the mobile phone company provided her and the data for the applications that were used for the classes were insufficient and they were over soon. In fact, as a methodological data, in order to carry out the interview, it had to put a balance on her mobile device, so that she could connect and carry it out. I3 also had to resort to an Internet Cafe for his final works; these due to the pandemic had restricted access, both in time and in number of people inside, as he relates:

Apart from the fact that there was a line, they put some scratches outside the Internet Cafe where you had to stop, I would go away more or less when the sun went down because you had to stay in the sun, then you would line up and wait for them to come out, just they could get three people and attending then just ten minutes each one, you had to go with masks and anti-bacterial gel, then you cast the gel in your gloves and cover your mouth so you could not remove all; when it was going to be ten minutes, before they warned you to close all your tabs and at the moment you had to stop, quickly they cleaned. I think not only affected me, but to many people here, because they were long rows they had to do, , yes, there were people who did not respect and had sometimes quarreled because they did not stop in their tache (I3).

I3 reported that in order to prepare some final works, he trained, entered the 10 minutes that were allowed, advanced as much as he could, left and re-formed and repeated the feat for two hours and sometimes more.

I4 was born in the State of Mexico; in second grade she began living with his grandparents because of family problems. She lives in a colony called Jardines de Morelos in the municipality of Ecatepec, also a colony and mayor with low population quintiles and with high crime rates. Their grandparents make and sell aluminum cookware, pots, pans, and utensils. They were considerably affected by the pandemic; she works on vacation, in the last vacations she sold desserts. Their only way was to study their subjects was her mobile phone and ran out Internet for nonpayment. She told an experience:

- Friday I had two classes with a teacher everything we drove through *WhatsApp*, then we asked us to connect by *Zoom* and at the beginning I was connected almost two minutes and I the data collapsed super-fast and as much as I try, he does not let me enter to class, I no longer entered. That day, it was a key issue to do my homework later.
- I downloaded *Word* and *Power Point*, which were the ones we used the most, so I made the presentations in *Power Point*, it was more complicated for me on the cell phone because it is smaller than the computer (Sic) and since it is tactile, things moved a lot to writing, or it was more difficult than in *Word* because I changed words or when I saved my files later I could no longer find them (I4).

Applications such as *Zoom*, *Google MEET*, *Microsoft Teams* and even video calls from *WhatsApp*, when executed

tend to occupy high volumes of *megabytes*, by combining audio and video; in these situations the data from mobile devices runs out quickly, cutting off the virtual presence of the student in the classroom. In the case of office suite, as in the case of *Office* from *Microsoft*, you can be downloaded to the phone, but mobile phones are not designed to make school work or office, so try to do it is a singularly complicated task and that in the case of I4 led to frustration.

The experiences of these four students, their stories, expose a series of difficulties to be able to take their subjects, a consequence of the economic conditions in which they and their families live in the framework of a pandemic context. Access to distance education is certainly conditioned on the tools that are needed to have. It is essential for the formation of the student and potential success at school.

DISCUSSION

The story with which this writing opens, the case of Alan Turing and the little more than 90 kilometers he had to travel to attend his first day of school, threatened to be canceled due to a general strike, is an example of millions all the world, stands out because in the history of mankind there were and there are contingencies that hamper the desire and the wishes of a student to continue his studies. But it is a decision and expertise of each one trying to overcome obstacles. Alan Turing was decisive for humanity, because of the aforementioned and because he was a key character in World War II, as he served the allied countries by deciphering Nazi codes and allowing the English army to be one step ahead of the Germans.

Currently, according to data from the National Institute of Statistics and Geography (INEGI) which holds derived

of their statistics, during 2019 in Mexico 44.3 % of the households have a computer, 56.4% of users had little access to Internet and of these, only 44.66 % gave it educative uses (2020), a low statistic considering that in the 2020 global pandemic that lives drove him to work online face to face education, an access problem was unavoidable.

The stories of students, as well as the methodological work carried out, leading to the need to analyze and interpret an educational reality that belongs in a larger context, where the pandemic, educational programs designed to face and face .The emergency and the inevitable need to transfer face- to- face courses to online mode, the little or sometimes no preparation and / or experience of teachers and students to work in this way and the socioeconomic conditions of the student body qualify the object of study. In regard to the socioeconomic, in Mexico a reality that reveals that at all educational levels this is a problem that reveals the weakness of infrastructure the Mexican educational system, as noted by Gil Anton (2020). The Figure 1 illustrates what media in the same position report:

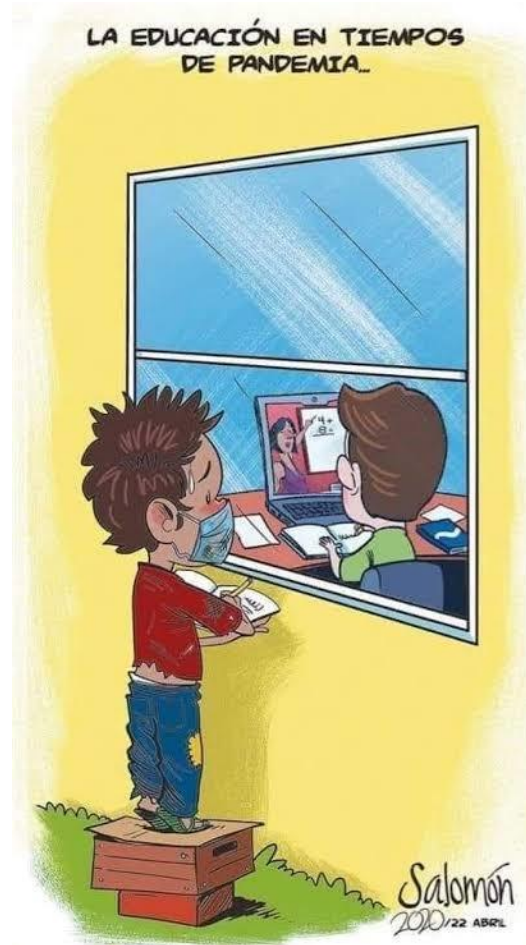


Fig. 1- The education in times of pandemic

Source: *The Press Diary* (Solomon, 2020)

The accessibility that one has on the part of the student body, which starts from their socioeconomic condition, can be a pedagogical didactic obstacle for their training; For the institutions it is a challenge, since it is necessary to understand this condition of the student body and make it an element for the construction and design of educational programs, as well as for the general planning of the educational act.

In Mexico, as in many other Latin American countries, the problem of accessibility to education by socioeconomic conditions is a generality, which seems having no short - term

solution; In contrast, society and sectors sometimes come to agree (figure 2):



Fig. 2 - Free Internet in Bochil, Chiapas
Source: Chiapas Parallel (Morales, 2020)

The experiences of the students, the stories that were center to this research show aspects of everyday life of students who are part of their training and that circumstances can make their traffic by an institution of education a winding road and they can sometimes represent the dropping out or lag. Having the tools needed to study books, notebooks, computer, Internet, etc., they are key to the success or failure of a student. In Mexico, internet access in a confined and pandemic context like the one we live is essential and it is not a need that many Mexican families can meet. In the State of Puebla, in Mexico (figure 3) a mother takes her children to a public park to access the free Internet site and their children can study.



Fig. 3 - Family takes classes on a court to have free internet access in Puebla
Source: Portal Sopitas (Espinoza, 2020)

The challenge of carrying out education for today's societies, especially in countries such as Mexico and the rest of Latin America, is deeply pedagogical, since the others in pedagogy sometimes do not have the resources to be able to study in the best possible way; For such purposes and as a reflection of the findings of this research and what has been experienced in education in times of pandemic, the following points may be useful:

- The elaboration or updating of educational programs so that they are flexible and contemplate the mobility from a Face-to-Face to a Distance mode.
- As part of the general education planning, standardize an online work strategy that incorporates the same digital work platforms for the educational community.
- Curricular components in teacher training programs (initial and continuous) that incorporate the development of skills for the management and use of technologies for distance education.

- Flexibility in the planning of the courses to foresee unfavorable socioeconomic situations and offer alternatives to the students to be able to fulfill their tasks and consequently achieve their learning.
- Accompaniment programs for the student body to contain and reduce dropouts and backwardness.
- Social programs for granting electronic devices to low - income students (In Mexico they have been, but they are isolated and very limited impact cases).

The issue of education is central in the Western world, and this is key for the countries due to the benefits that can be obtained socially in the short, medium and long term; to collect experiences of the student body in a contingency such as the ones caused by the pandemic COVID-19 may be the beginning of learning, knowledge and skills for pedagogy and consequently for all who are in schools every day, in daily education.

BIBLIOGRAPHIC REFERENCES

- Álvarez, G. (2019). Maestras en servicio, esposas, madres y estudiantes. El caso de la Licenciatura en Educación Preescolar de la UPN Unidad 096. *Revista Intercontinental de Psicología y Educación*, 21(2), 297-321. Obtenido de <https://es.scribd.com/document/492389967/Revista-Psicologia-y-Educacion-Vol-21-num-2>
- Bolívar, A., Domingo, J. & Fernández, M. (2001). La investigación biográfico-narrativa en educación. Enfoque y metodología. Madrid: Editorial La Muralla, S.A.
- Casarini, M. (2010). Teoría y diseño curricular. Ciudad de México: Trillas.
- CEEY. (2019). Informe movilidad social en México 2019. Hacia la igualdad regional de oportunidades. México: Centro de Estudios Espinoza Yglesias A.C. Obtenido de <https://ceey.org.mx/wp-content/uploads/2019/05/Informe-Movilidad-Social-en-M%C3%A9xico-2019.pdf>
- Espinoza, G. (27 de agosto de 2020). Familia toma clases en una cancha para tener acceso a internet gratuito en Puebla. Sopitas.com. Obtenido de <https://www.sopitas.com/noticias/puebla-familia-estudia-sep-cancha-acceso-internet-puebla-clases/>
- Ferry, G. (1990). El trayecto de la formación. México: Editorial Paidós.
- Gil Antón, M. (18 de abril de 2020). Con la cera que hay. El Universal. Obtenido de <https://www.eluniversal.com.mx/opinion/manuel-gil-anton/con-la-cera-que-hay>
- INEGI. (2020). Tecnologías de la información y comunicaciones. México: Instituto Nacional de Estadística y Geografía. Obtenido de <https://www.inegi.org.mx/temas/ticshogares/>
- Larrosa, J. (2006). Sobre la experiencia. Aloma: revista de psicología, ciències de l'educació i de l'esport. *Blanquerna* (19), 87-112. Obtenido de http://files.practicadesubjectivacion.webnode.es/200000018-9863d9a585/_la_experiencia_Larrosa.pdf

- Morales, Y. (26 de agosto de 2020). En Bochil, Marcos de León ofrece su casa, sillas e internet para que niños y niñas puedan continuar con el ciclo escolar virtual. Chiapas Paralelo. Obtenido de <https://www.chiapasparalelo.com/noticias/chiapas/2020/08/en-bochil-marcos-de-leon-ofrece-su-casa-sillas-e-internet-para-que-ninos-y-ninas-puedan-continuar-con-el-ciclo-escolar-virtual/>
- Muñoz, A., & Martínez, F. (2020). Se confirma primer caso de coronavirus en México. La Jornada On Line. Obtenido de <https://www.jornada.com.mx/ultimas/politica/2020/02/28/se-confirma-primer-caso-de-coronavirus-en-mexico-2562.html>
- Pérez de Lara, N. (2011). Escuchar al otro desde sí. En C. Skliar, J. Larrosa, & (Comp.), *Experiencia y alteridad en educación* (págs. 45-77). Rosario: Homo Sapiens Ediciones.
- Salomón. (2020). La educación en tiempos de pandemia. La prensa gráfica. Obtenido de <https://www.laprensagrafica.com/Caricatura-h202004210002.html>
- SEGOB. (2020). Diario Oficial de la Federación. Obtenido de https://dof.gob.mx/nota_detalle.php?codigo=5592089&fecha=22/04/2020
- Van Manen, M. (2003). *Investigación educativa y experiencia vivida: Ciencia humana para una pedagogía de la acción y la sensibilidad*. Barcelona: Idea Books, S.A.
- ¹It is specified, as a methodological and formal point, that the key informants for this research were women, so that they are conjugated in feminine from now on, as long as it is necessary (N. del A.).
- ²From the approaches of the Curriculum as a pedagogical discipline, Distance education programs are not necessarily Online (Casarini, 2010), the origins of Distance education are in educational programs at the bachelor's level in the fifties of the century XX and that they were given by post. C on over the years, electronic media have educational alternatives for telecommuting and with the advent of the internet and this was revolutionized in its curricular foundation. In this writing and in consideration of what has been lived and that is still lived expropriate at the UPN, each time the Distance mode is mentioned, in substance it refers to Online work; that is to say, through the tools specifically offered by the internet and the providers that exist there, either through access through a computer or a mobile device, in essence it is the internet and its alternatives (N. del A.).
- ³The UPN is a public institution at the service of the teachers' union primarily and with more than 40 years of antiquity, the headquarters of the governing bodies in Ajusco, an area of Mexico City located to the south. In the rest of the City there are Units 094, 095, 096, 097, 098 and 099, geographically accommodated so that they can provide educational services to the population of this entity and to the metropolitan area of the State of Mexico. Over time, these Units made their pedagogical presence evident in the area to which each one corresponds through professional, updating and postgraduate programs. The present investigation was concentrated in the Units and not in Ajusco (N. del A.).
- ⁴In US dollars \$ 20.00 Mexican pesos are equivalent to approximately \$ 1 dollar, consequently \$ 30.00 pesos is \$ 1.5 dollars.

⁵In Mexico, an Internet Café is an establishment that has computers with Internet access, it is charged by time, approximately \$ 15.00 pesos per hour (\$ 0.69 US cents).

Conflict of interest:

Authors declare not to have any conflicts of interest.

Authors' Contribution:

Gabriel Alejandro Álvarez Hernández: Conception of the idea, authorship coordinator, general advice on the topic addressed, literature search and review, translation of terms or information obtained, preparation of instruments, application of instruments, compilation of information resulting from the instruments applied, statistical analysis, preparation of the tables, graphics and images, preparation of the database, drafting of the original (first version), revision and final version of the article, correction of the article, revision of the applied bibliographic norm.

María de Jesús De La Riva Lara: General advice on the topic addressed, literature search and review, translation of terms or information obtained, preparation of instruments, statistical analysis, revision and final version of the article, correction of the article, revision of the applied bibliographic norm.



This work is under a licencia de Creative Commons Reconocimiento-NoComercial 4.0 Internacional
Copyright (c) Gabriel Alejandro Álvarez Hernández, María de Jesús De La Riva Lara