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"Exploring Emergency Remote Teaching (ERT) Experiences of students in an Elementary School"

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“Exploring Emergency Remote Teaching (ERT) Experiences of students in an Elementary School”

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Dedication

This thesis is dedicated to God, for the talent and the blessings.

To my beloved parents and brother.

To my friends, for all the shared experiences.

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I would like to thank Mtra. Leonor for her patience, wisdom and attention to this research project. God bless you.

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Thank you Colegio IFEP for gave me the opportunity to create experience during an unexpected reality.

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And all that is now

And all that is gone

And all that's to come

And everything under the Sun is in tune

But the Sun is eclipsed by the Moon.

Eclipse – Pink Floyd

Abstract

Emergency Remote Teaching (ERT) is a complex teaching process that implies learner's agency, teacher´s responsibility and careful planning. However, during this pandemic, we all experienced it as a temporary solution. This study explores the perceptions of both students and a teacher about ERM during the first part of the pandemic. This investigation uses a mixed method but analyzes qualitative data from a qualitative approach. Thus, by exploring participants´ experiences and perceptions from a particular contextual perspective. 29 children participated in this study, 19 boys and 10 girls. Their age ranges between 8-9 years old. The context of the investigation was a private Elementary School and the instruments to collect the data were questionnaires and one interview which were administered both virtually as well as F2F. Findings in this study suggest that ERT involves a multifaceted socio-emotional process of adaptation in some aspects, such as; communication, socialization and education. Some of the most significant findings involve lack of teacher´s training in the use of technologies and more positive social issues to solve it, such as cooperation both academic and emotional. Some other findings suggest that the actors of ERT (school administrators-directors, teachers, students, and students' families) might need to take a more active role in the educational process.

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CHAPTER I

1.1 Introduction to the problem

On March 11 of 2020, the World Health Organization (WHO) recognized the disease caused by the SARS-CoV-2 virus as a pandemic and identified its first case in December 2019 in the city of Wuhan, capital of Hubei province in the Republic of China. Due to the high rates of contagion in just a few months worldwide, strict protection measures were implemented, such as quarantine in 87 countries, including Mexico, social distancing, cancellation of events that generated crowds, closure of social establishments, and closure of educational centers. In more than 102 countries, including Mexico, the suspension of face-to-face classes and access to schools worldwide was an immediate strategy to prevent the increase in COVID-19 infections. Last year in Mexico, the National Council of Educational Authorities (CONAEDU) agreed on March 14, 2020, to bring forward the Easter holiday break and suspend access to schools throughout the country at all educational levels from March 23 as of April 19, resulting in the temporary closure of 265,277 campuses. According to this information, this action plan against the spread of the SARS-CoV-2 disease impacted 36 million 635 thousand students and more than 2.1 million teachers. (Fernandez M; Hernández D; Nolasco R; De la Rosa. R; Herrera N., 2020).

This situation brought the teaching sector suddenly into a field of education at a certain unknown point, but it also strengthened it and set immediate goals for continuing education. On the other hand, to continue education in online mode, the Technologies of Information and Communication took place in the teaching-learning process in 2020 and continuing to 2021. Distance Education is to share knowledge without the physical approach between teachers and students by relying on technical tools to allow interaction between the didactic material and the student. e.g., use of computers, online multimedia equipment, the internet, and e-learning. (Covarrubias. 2021, p.52).

The closure of schools in Mexico, although it was a final decision, its process was not easy. As mentioned above, the implementation of Technologies of Information and Communication was mandatory to reach the objective of distance education. As Mendoza (2020) explains, in the classroom, the teacher knows his materials, moments

in which he implements his teaching strategies, the verbal and non-verbal response of his students, and evaluation between each class. Whether the class is face-to-face or virtual, it is a community in which students and teachers coexist day by day and cooperate in the same educational event, and according to the circumstances we are facing nowadays, this event would be interpreted from each reality differently. (Mendoza L; 2020)

According to Bozkurt & Shasama (2020):

> Emergency remote teaching' is an obligation, which means that we have to use different strategies and approach the case with different priorities. It is a learning process that provides learners agency, responsibility, flexibility, and choice; therefore, it is a complex process that requires careful planning, designing, and determination of aims to create an effective learning ecology. It seems like online distance education, however, in essence, this is rather a temporary solution therefore these learning processes, of course, should not aim at purely learning, but rather, be directed towards therapy, empathy, and care. (p.1)

Considering this last statement and considering the context in which more attention is necessary to how technology and the teaching-learning process can be integrated effectively. Otherwise, it is essential to analyze the advantages and disadvantages related to Emergency Remote Teaching (from now on ERT) between primary school students and professors. The pedagogical, technological and social challenges during this emergency tool have been affected and adapted to be available between students and professors after 1 year of contingence, and so the observation and analysis of this experience would be essential in order to be consider in the future in case of another emergency that could affect one more time the educational sector.

1.2 Rationale for topic selection

In the political article 'Lessons from COVID-19 for the Mexican educational system' prepared by Tecnológico de Monterrey's Education with Equity and Quality Initiative team in March 2020, it is stated that there are different challenges that our Mexican educational sector would face between students and professors as well as accessibility to online learning, and enrichment of the cognitive processes of teaching-learning. This

article has given the basis to this research project which aim is to analyze students' experiences with technological tools and the availability they got from the beginning of this modality. "Online Learning and ERT: Opportunities and Challenges in Emergency Situations" (November,2020) contributes to explore the infrastructure among students, professors had, and how the teaching-learning process emerged due to pedagogical, technological and social crisis.

1.3 Purpose of the study

The purpose of this research is to explore and analyze the experiences of a 4th grade group of students and their teacher in a Private Elementary School in the center of Puebla during ERT. The specific objective is to identify and illustrate the challenges and the advantages and disadvantages the students have perceived during this COVID-19 pandemic.

1.4 Research questions

1.- What processes of adaptation do students report during ERT because of the pandemic at school?

2.- What were the advantages and disadvantages reported by the teacher about ERT related to the teaching-learning process?

3.- What were the challenges the participants faced and how did they solve them during ERT?

1.5 Research setting

This investigation takes place at Colegio IFEP in Puebla City.

Table 1

School's logistics

School levels	Students	Professors	Principals
Kindergarten	50	4	1
Primary School	**132**	**9**	**1**
Junior High School	**49**	**5**	**1**

Nevertheless, this research project contemplates 4th grade students, and one teacher who oversaw the new teaching learning adaptation during ERT. Thus, in order to explore and analyze their experiences.

1.6 Significance of the study

The main reason for this research is to expose that even in situations which endanger humanity around the world; education has always adapted to new scenarios with new approaches and tools. So that, education improvement, new implementations and especially professors' willingness has usually been keeping them learning from it. In the end, this is a good example of how education will always continue to be around in any form, despite society's circumstances and adversities.

1.7 Key terms

Table 2

Key terms	Definition
1. Adaptation	The process of changing to suit different conditions.
2. COVID-19	An infectious disease caused by a coronavirus, that usually causes fever, tiredness, a cough, and changes to the senses of smell and taste, and can lead to breathing problem and severe illness in some people.
3. Distance learning	A way of studying in which you do not attend a school, college, or university, but study from where you live, usually being taught and given work to do over the internet.
4. Emergency Remote Teaching	A temporary shift in the delivery of education to an alternative delivery model in which all teaching is conducted online.
5. Innovation	A new idea or method.

Note: Definitions 1,2,3, and 5 are taken from Cambridge Dictionary. © Cambridge University Press 2022. Definition 4 by Hodges (2020).

Chapter II. Literature review

2.1 Chapter overview

In this chapter a revision of the main themes related to this investigation is provided. A description of related theories is also offered as well as a general account of previous studies. Finally, an in-depth description of ERT as the main theme of this study is provided and an explanation of the relevance of it towards the other topics.

2.2 Education during Social Emergencies

'Education in emergencies refers to education for populations affected by unforeseen situations such as armed conflict or natural disasters. Sinclair (2007)

According to Nicolai (2003), education in emergencies is a set of activities with linked projects that allow learning to continue in a structured way in times of crisis or long-term instability; thus, also an emergency is defined as a crisis that exceeds the capacity of a society to cope using only its resources. During the history and the passing of the years of society, emergencies and crises have taught society how much more significant are the vital resources, both old and new. In a society where different emergencies and crises have been experienced, it has been possible to get ahead despite the difficulties that may arise.

Looking back a bit, society has faced both natural and social emergencies. For example, in social terms, we have the First and Second World War, the Cold War, the Civil War, and today hundreds of armed conflicts in different countries. Consequently, these events have affected the lives of millions of people worldwide, changing their lives and, above all, modifying their perspective towards education or, in some cases, denying it altogether. Faced with these situations, society and the sectors that comprise it enter a state of emergency and crisis, affecting the population equally in the economic, housing, health, and education fields. Emergencies cause major fractures in education systems, schools and universities are usually damaged during an armed conflict or, on the contrary, are used for the temporary accommodation of people who are left homeless, displaced by war, or natural disasters such as earthquakes, floods, or hurricanes. (Renner & Chafe, 2007). In "Education in Emergencies a Tool Kit for Starting and Managing Education in Emergencies" from Save the Children (2003), suggests elementary points on why education is necessary in times of crisis. First, children who have experienced 'conflict' have the right

to education; this is combined with protection since emergencies of any kind impact children and the educational system in a certain way. In addition, emergency education proposes to include support for the existing school system, special measures for children to resume their classes, and coordinate with alternatives for those who require taking classes outside of school to organize education for young children and adolescents. (Nicolai., 2003) Qualified teachers and even trained volunteers can teach such classes. Structured learning can occur during regular school hours, as part of a shift system, such as an after-school program, in the afternoons, twice a week, or on weekends. Times should be based on availability and the needs of the children. Finally, according to Child Friendly Spaces (2008) ensuring a safe space is the first thing considered in emergency education; that is why it can occur in schools, community buildings, homes, tents, and the outdoors have been places of activities.

In the case of World War II, there were many changes in the lives of children because the war was a time of fear, confusion, and above all, the separation of families, the destruction of homes, or even the loss of parents. In addition, Imperial War Museums (2021) point out that children's education suffered during the war because one in five schools in the country was damaged by the bombings, and many others were requisitioned by the government. As a result, the children had large classes, and office supplies or books were scarce. On the other hand, many school buildings were damaged or requisitioned for military use, which caused a shortage of suitable places to teach school lessons; for this reason, the classes were held in unusual places such as chapels, pubs, or churches.

Areas experiencing emergencies are subject to rapid and repeated changes, and extensive changes in population. In the same way, in the first stages of educational reconstruction there are similar emergencies, since it is intended to meet the need to quickly meet the urgent needs of many students, despite the null knowledge that may present to the unfamiliar landscape. Education is a fundamental human right, and there may also be problems of access to education depending on the context faced by students and teachers in the face of the emergency that is being experienced since there is no way to be sure if the wait will be weeks, months or years. (Sinclair, 2007)

Strategies that support education during states of crisis depend on the type of emergency; for this reason, education in emergencies can help provide a sense of normality to such a degree to let students know that the situation being experienced is real and has affected the lives of those who are suffering from it, education also tries to give hope through the dynamics of the class. On the other hand, they promote the support and psychological work of traumatic experiences through social activities among classmates and give them confidence in promoting a safe space during class so that in the end, the environment of the children, the families, and the community in which they live can be protected. (Bensalah., Sinclair, Hadj, Commisso, & Bokhari, 2000)

According to Aguilar and Retamal (1998) during various social emergencies, there is a relationship between emergency, rehabilitation, and development. These three stages guarantee a smooth transition when asking for help, thus, to continue to rehabilitation and finally to development. In this regard, authors mention how the emergency attendant must provide ways that support long-term recovery and development if the necessary measures are taken. However, in the education sector during complex emergencies, there are two phases based on educational response. (Aguilar, & Retamal,1998) In both phases, recreational activities and non-formal schooling are considered due to the aspects of adaptation, the collection and distribution of educational materials, and technical support. The importance of recreational activities and the rapid educational response should begin with group activities, such as games, and help carry out a needs assessment.

In many emergencies, more than 50% of the population are children and adolescents who have experienced trauma due to the state of emergency experienced as a society, which seriously affects their physical and psychosocial well-being. For this reason, recreational and educational activities seem crucial to relieve stress and increase self-esteem. Non-formal education means that students learn basic skills by studying core subjects, but the courses are not necessarily aimed at the achievement of academic grades or certificates. These strategies have been used by UNESCO, UNICEF, and other international organizations. (Aguila, & Retamal, 1998)

Education in crises helps prevent conflicts and foster a peaceful society among students since it promotes conflict resolution, awareness of the lived environment, and tolerance. It

suggests a flexible continuity of strategies adapted to maintain security for the psychosocial protection of the most vulnerable and help reproduce the basic educational skills required for their survival. Moreover, maintaining access to education for populations affected by conflict or disaster helps affected children and adolescents see a positive future instead of suffering from debilitating depression or seeking aggressive outlets for their feelings. (Bensalah, Sinclair, Hadj, Commisso, & Bokhari, 2000)

In the teaching-learning process, four essential standards for a study plan are considered. In the first place, the study plan must take a cultural and social aspect that is relevant to providing an education in a formal way and in the same non-formal way, also referring to being appropriate to the situation that is lived. The following standard focuses on teachers and educational personnel having to receive periodic, pertinent, and structured training according to the needs and circumstances they present INEE (2022). Also, in standard number three, student-centered instruction is developed. That said, student participation must be participatory and inclusive. Furthermore, it is necessary to use appropriate methods to assess and validate learning achievements, even though the main objective is not how to meet high educational expectations during emergencies INEE (2022).

Finally, it is important to mention that the development of different strategies to continue education during times of emergencies have also been a reminder for the preparation in the pre-emergency stage by monitoring warning signs, as well as the generation of planning strategies to meet the needs of groups affected by the emergency. It also normalizes the situation by establishing routines, thus reducing psychosocial stress, attending to immediate needs, and preparing for a better post-emergency society; and offers an opportunity for educational development, innovation, and improvement in the transition from emergencies.

2.3 Emergency Remote Teaching (ERT)

"In moments of crisis, only the imagination is more important than the knowledge". Albert Einstein.

Education is a learning process that begins at birth and takes place in the family, community, and school; this means that efforts to support education are diverse and could focus on stimulating change wherever children's learning is found (Nicolai, 2003). During times of crisis, access to vital rights and resources of education is often limited. However, education can play a crucial role in helping the affected population to cope with their situation by gaining additional knowledge and skills for survival and to regain normalcy in their lives ECLAC (2020).

ERT refers to a temporary instructional response to an emergency, which has been carried out worldwide due to the health contingency generated by COVID-19 that appeared at the beginning of 2020. *It involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses and that will return to that format once the crisis or emergency has abated. (*Hodges, Moore, Lockee, Trust, Bond, 2020*)* During this global event, most of the education sector entered a state of stress since they have wanted to maintain the quality of the classes that we have known in recent years despite the drastic change in the same panorama. Most of the teachers who, from one day to the next, had to change their face-to-face didactics to a remote class did not have the necessary knowledge or, more than anything, the Information and Communication Technology (ICT) training necessary for the continuity of their classes, considering them as illiterate in this new stage for education.

Although this event brought a crisis, it has also provided an excellent opportunity for the development and improvement of the education era, both for teachers who did not have previous experience and for those who already had it. During the last year, schools around the world have decided to create a remote space to continue with classes that at one point were believed to be "normal." As such, every education sector worldwide is required to be able to continue learning and improve teaching. This state of emergency that the entire society faced for a whole year, "Emergency Remote Teaching" has become a tool, taken for continuing the teaching-learning processes around the world and continue with the significant learning objectives and academic development. This situation is a complete

exposure to an environment derived from technological access, family support, school sector, and academic expectations. ERT became an obligation with different strategies and approaches for its corresponding needs. However, it is essential to note that remote teaching is only a temporary period, and in times when we face a crisis, we also expose ourselves to trauma, stress, and psychological pressure. Due to these circumstances, it is crucial to focus on collaborating, sharing, and supporting each other in the education sector (Bozkurt & Sharma, 2020).

Bozkurt & Sharma (2020) mention that after this remote period of emergency ends and the education sector returns to the classroom, students will remember more how they felt at that time beyond the academic programs that so many schools and teachers have focused their attention on. Furthermore, an environment of importance for those who have this experience is to develop an online class dynamic that can allow teachers to have some flexibility in the teaching-learning process. However, to reach that dynamic, it does not necessarily have to be fast. For this reason, quick solutions must be improvised in a short period.

2.3.1 Children's psychological response during ERT

Emergencies bring new pressures, children may be affected psychologically, either by their own personal experiences or indirectly through stress on their families and communities, and considering the psychological aspect that children affected by a crisis can experience during online classes, they range from having difficulty concentrating or suffering from a lack of support at home, which is why they need the maximum attention from teachers. For this reason, teachers are the key to quality, but in emergencies, many are new to the profession, are not trained, and lack confidence; even experienced teachers have not been trained in emergency respons (Winthrop and Kirk, 2005 as cited in Sanclair 2007). For this reason, it is necessary to maintain access to education for students affected by the COVID-19 contingency between classes. A more hopeful future is promoted instead of causing them to suffer from some depression or aggressive outlets for the feelings they come to experience.

Confinement from COVID-19 and associated stress can affect children's well-being. The study of "*Psychological impact of confinement by COVID-19 in Spanish children: a cross-*

sectional study" by Erades & Morales (2020) mentions that previous studies have shown that after the vacation period, children present a weight gain probably due to the lack of routines; considering this part, the consequences of confinement could be both psychological and physical. On the psychological side, it can be noted that children can suffer from anxiety and depression problems. Furthermore, the same study shows that children who have lived in a situation of isolation experience it as a traumatic event and are more likely to present stress-related conditions, such as post-traumatic stress disorder.

In this sense, ERT maintains its balance between classes that go according to the curriculum with a recreational process. For example, playing is a children's specialty. As such, playing allows children to express the events surrounding them, promoting dynamics, even in line with groups of children, contributing to the development of their trauma experienced by confinement in a more meaningful way. In the article "Rapid Education Response in Complex Emergencies" by Aguilar & Retamal (1998), they emphasized that throughout the emergency, it is vital to encourage and provide recreational facilities that children need. Promoting activities to students that help them generate their resilience generates the ability to make sense of the stressful and traumatic situation they may have experienced due to the COVID-19 situation.

Additionally, online teaching has been necessary to show the students didactic materials that capture their attention, that encourage them to participate and communicate with each other. It has been clear that during online classes, the majority may be fearful of participating or dialoguing in class but trying to have good communication generated by the teacher can generate that students with passive participation in class become the most active. During online classes, the teacher can observe how the student's socio-emotional development is at a certain point. Although, as mentioned above, students entered this online modality knowing absolutely everything and nothing simultaneously, they know that a pandemic has occurred, highly contagious, and for their safety, they must stay at home all day. However, they do not know how their social life at school and our if school will continue, generating anxiety, preoccupation, and the sadness of knowing that they will probably not see their classmates again for a long time. In addition to this, they had to learn to use digital media in order to continue with their education; adolescent students, on the

other hand, use digital media and it is something that most of them control. However, students who are only in the first years of primary school must pay attention to learning the resources they have at home. This learning support is promoted through family members or group teachers.

However, these situations of adaptation to new situations generate in students concern about being able to do well and stress that everything works continuously; in the worst-case scenario for students, losing the internet connection is the most dreaded. According to the experiences shared between teachers, students, and parents, it has been noted that losing internet connection also generates anxiety in students for the simple fact of missing class. It is important to note that students who already had mental health problems before confinement has been more vulnerable to the impacts of COVID-19 because the closure of schools means that students lose access to school resources that helped their socio-emotional development (Lee, 2020). We can infer this because students' school routines have helped them cope with different children with mental health problems, whether of lesser or greater intensity.

As Calderon (2020) mentions, the loss of routines can put students in conflicts according to how they face stressful moments during confinement; he also adds that the closure of schools means that students lose interactions between peers and teachers, generating a decline in the social context. It is important to consider losing these essential interactions for the students' development can create challenges in their confidence and adaptation to remote interactions. For example, students who experience specific mental health problems and have been in stressful situations at home will not have an effective development during remote mode. This situation results in students not feeling comfortable participating in class or maintaining a fluid communication dynamic between classmates and teachers (Levin, 2020).

According to the report of “Active Mind's Student Mental Health Survey” presented by Humphrey (2020), similar patterns of mental health challenges have been shown in the student population, mentioning that most students presented feelings of loneliness, isolation, stress, anxiety, depression, and sadness. This situation, at some point, affects all children. Still, in different degrees, everything depends on the various factors that each

student is experiencing, for example, the age of the students, the family environment in which they develop, and above all, the access they have to digital devices for the continuation of their classes. García & Weiss (2020) cover an important point about the consequences of the lack of face-to-face classes for students. These authors mention that students who miss school more often are the worst in their academic performance. Considering that the integral development of students that occurs in school is affected, we can add that student attendance at school is also about developing fundamental social and emotional skills to specific competencies as a society. That is why it is suggested that, even in a remote mode, the importance of generating communication between students and teachers and activities that support children's mental and emotional well-being, development of online social skills, and having a routine must be kept in mind.

In general, the remote classes and the health crisis have helped to highlight the importance of other skills that are often overlooked in the school context, for that reason it should be adopted as part of school and deserves more attention after the pandemic. Also, the skills to be developed include creativity, tolerance, persistence, empathy, resilience, self-control, and time management.

2.3.2 ERT classes dynamics

Right before the closure of schools due to COVID-19, the use of technologies in the classroom was already present in most schools, and there was also the inequality of these tools depending on the socioeconomic level of schools around the world. However, during 2020 and 2021, remote learning has been much more prominent. It is why technologies have assumed an essential role during this online modality because of the ease it has given to families to facilitate the learning of those who study. A remote classroom is effective if the students have constant access to electronic devices and the internet as well as teachers from different institutions have received specific training on online instruction. On the other hand, it is important to consider the reality of those who make up the education sector; there have been challenges for teachers who do not have the availability of training or even preparation for the transition to virtual learning (Delgado 2020).

According to Boston Consulting Group & Common Sense (2020) during remote classes, it has been reported that:

> 50 million students have had to learn remotely from home and 15 to 16 millions of those students have faced a lack of Internet or digital devices with effectively continuing their remote learning. Additionally, up to 400,000 teachers cannot teach due to a lack of Internet. With these results obtained in a general context, it can be highlighted that one of the main problems faced by students and teachers is the lack of connectivity with the Internet and also the lack of devices (p.6).

As may be seen, during these current times and especially of emergency, the 'normality' and 'continuation' of educational aspects depend entirely on two vital tools: Internet connection and technological devices. According to "Learning from COVID-19 emergency remote teaching: A case study to compare pupil and teacher experience." (Lillebo, 2020). The digital tools that were popular during the remote classes were mainly those that provided video conferencing; among them, Zoom and Microsoft Teams stand out. Also, in the same study, Langford and Dam (2020) highlight other applications such as Mentimeter, Kahoot!, Microsoft, and Google Drive. In the same study, there is a huge difference between university education and teaching in primary and secondary education is highlighted; for both fields, there are several similar tools that teachers can use, making it clear that digital solutions were incorporated in most schools to maintain communication between teachers and students.

Additionally, the study indicates that, during the use of ICT, teachers do not notice such a significant difference between online and offline sessions; this perspective is because teachers can use the largest source of necessary subjects. In comparison to in-person learning models, Middleton (2020) remarks that teachers are teaching less new material to students and taking a longer time to cover material, a trend that is especially evident in high poverty schools. Pebriantika (2021) found that mobile learning is an approach that boosted student interest in online classes during the COVID-19 pandemic.

Effective distance learning requires appropriate devices and an internet connection so that students can interact with the curriculum, teachers, and classmates. Students are considered to have an appropriate distance learning device if they have a desktop, a laptop, or a tablet.

Students need to have their device, as sharing a device with a sibling or parent can cause distance learning disruptions. On the other hand, in Boston Consulting Group & Common Sense. (2020) (p. 6-9) there are several other notable challenges about devices of which the following stand out:

- Incompatibility with existing tasks and learning applications with mobile operating systems

- Difficulty using small screens to read and digest information, as well as write and produce tasks.

- The greater probability of distraction on a mobile device than on another device.

However, according to the same article, for a substantial and dynamic experience during distance learning, students and teachers need four things:

- High-speed Internet service.

- Internet-enabled devices that allow completing the assignment.

- Distance learning instructional content.

- Support, including digital literacy, teacher preparation, and technical support.

Additionally, lesson planning requires a creative way of solving problems during times of crisis. For example, the classroom environment is flexible, inclusive and they pay attention to the needs of the students so that they can access and learn about the material, activities, and assignments of the remote courses. The essential types of presence for a remote class are teaching presence, cognitive presence, and social presence. In the same way, according to Kaiser and König (2019, as cited in König, Jöger, Biela, & Glutsh, 2020). Teacher competencies are “context-specific, cognitive performance dispositions that are functionally responsive to situations and demands in certain domains” In view of the fact for a remote modality there are 10 strategies devised by

"Instructional Strategies for Online Teaching in COVID-19 Pandemic*"* (Mahmood, 2020) that are relevant to this investigation and that teachers must consider during ERT and which are summarized in the following paragraphs:

1.- Voice and pitch management: In online teaching, teachers should focus more on their voice and vocal functions. The teacher's voice is a prominent feature in online teaching, keeping voice pitch high and practicing vocal functioning like pauses.

2.- Formulating teaching strategies to enhance online class interactions: Online class participation can be useful for enhancing student involvement and interest during class while participating in lectures, interactive platforms, asking and formulating questions. Greater interactivity in an online course will enhance the overall online class success rate.

3.- Poverty and neglected infrastructure areas: Few students have the essential equipment needed for online classes. The lack of high-speed internet in their neighborhoods is a significant issue facing poverty and lack of infrastructural development which needs to be considered in this context.

4.- Developing student learning abilities in online classes: Online classes are entirely different from the traditional in-class lectures. In the conventional in-class course, the teacher feels more control over student behavior. Therefore, a teacher should devise various activities that can enhance student learning skills in online classes, ask challenging questions to students during online courses, and get feedback from students that can improve the capacity of the online modality.

5.-Teaching to think critically, practically, and creatively for online study success: Teaching staff should devise learning material, which is more creative. Students should offer more innovative and practical work. Developing and analyzing learning materials is difficult in traditional teaching methods.

6.-Flexible teaching and assessment policies: Due to the lack of high-speed internet connectivity in some areas, students cannot perform assignment submissions and even access them. The teacher should show flexibility and give

extra time to students. Teachers should not put pressure on students in a pandemic state and, therefore, should give students full support.

7.- Backup plans for pandemic situations: Institutions do not have the appropriate resources and equipment to conduct online classes. All these are significant problems in running online classes, such as overloading servers, lack of computer devices, and inability to perform software installations. Therefore, institutions must be ready with a plan A, B, C for the future.

8.-Transforming a large-class lecture course to smaller modules in online classes: An extensive class can be divided into smaller modules or discussions to ensure concentration. Teaching staff should prepare online classes materials of less than 30 minutes by splitting a single big task into multiple tasks. This dynamic will help the student to remain attentive and focused during online classes. This strategy will help in improving student learning abilities in online classes.

9.-Recoding online lectures and providing self-learning material: Teaching staff should send an email containing all pre-class-specific reading material and activities. In addition, the teacher can ask students to submit a short brief explanation of what they understood after reading the material during the online session and thus will help improve the online class discussion.

10.- Allocating teaching assistants: Technically teachers are not ready and do not have enough training to run online classes smoothly. Online classes require much greater involvement of technical knowledge than in a face-to-face class (2020 pp. 200-202)

This modality can be called distance learning, online or virtual, yet teachers were challenged to provide meaningful educational experiences to their students. It can also be inferred that this intervention is new for most of those who work in the education sector. According to Kaden (2020), it is shown that the results of successful student learning begin with teachers' concern about prioritizing their mental health is considered, fostering self-confidence during this modality and understanding the workload during the online school year. It can be argued that the teachers' workload is due to them looking for ways to

connect with the students and make a quick transition, even though the teaching mode was unknown to both. On the contrary, as already mentioned above, it is not new that this field of work is new for teachers, also the role of the teacher that has been known for a long time has drastically changed.

In adapting an online educational model, as mentioned above, it is necessary to go beyond just projecting educational content. In order to achieve a pleasant, meaningful, and dynamic online class, it is necessary to consider the suggestions mentioned above, whose intentions are to take advantage of ICTs and their development. As such, the use of ICT has been in this field for more than two decades, and as time passes, these tools are more accessible to teachers, students, and educational institutions. Nevertheless, it is necessary to mention that no matter what type of solution has been given during ERT, this starting process for teachers, academic staff, and students have been stressful, and as such, it must be understood by all who entered this experience. With the COVID-19 outbreak, many schools showed that it was still challenging to keep up with teaching due to the unstable internet to which most had access and the needs of those who make up the school circle.

However, according to Trust & Whalen (2020), several examples have demonstrated at the international level that even though teachers and schools were not prepared and overwhelmed by the health emergency, they managed to use the tools and adapt the necessary pedagogy to the ERT situation. Additionally, Bubb & Jones (2020) comment that teachers experienced a significant contrast to the home office since they had more time to plan their classes, create dynamics or relevant tasks, and more meaningful feedback could be provided among students. Which, from the teachers' perspective, has been beneficial. Home office practices that the teachers have experienced managed to be beneficial to some extent; also, according to Fjrtoft, (2020) a heavier workload has been noticed, but the experience with digital tools has made teachers report that this experience to be positive.

"Well-planned online learning experiences are meaningfully different from courses offered online in response to a crisis or disaster.*" – (Hodges,* Moore., Lockee, Trust, and Bond, 2020). From the effectiveness of the implementation of videoconferences during classes or work meetings to be able to somehow 'substitute' or instead promote the ease of

communications around the world, much of the current academic dynamics are based on a learning environment in line with educational technology combined with asynchronous communications. Although at the beginning of the adaptation of these asynchronous and synchronous communications, it fulfilled in its origins to only establish remote communication, over time, they have adapted and taken place to generate educational environments for those who cannot access face-to-face classes (Yamagata-Lynch, 2014).

In addition to online dynamics, Moore (1993) establishes that it is understood that transactional distance is a pedagogical concept that learners take instructions and coexistence with their peers at a distance, which learners experience through their interactions and define the nature of their relationship. Besides, Moore, (2013) points out that participants can feel the transactional distance of the online course depending on the level of dialogue that is shared during class, the dynamics that the instructor puts in their place, and the level of autonomy that the participants develop during the course. Besides, asynchronous online learning suggests that students experience meaningful learning during a participatory learning environment. Ouma & Wang (2021) indicate that unreliable internet connection and not-recorded synchronous sessions were relevant factors that limited online learning. Thus, asynchronous environments are designed to help participants develop a sense of community with opportunities for participation in a digital context (Pratt & Palloff, 2011).

On the other hand, synchronous learning means that the class is at a distance; however, the students will virtually attend the established class sessions every week, in the same way with their class teacher and classmates. Also, the class schedules are committed to a certain time as well as in face-to-face class schedules. This dynamic promotes the preparation of students in their autonomy supported by a program or plan established by the institution for the classes to maintain this dynamic between teacher and students as if it were a face-to-face class (Scheiderer, 2021).

Additionally, it is considered that the greater the social presence, the teaching presence, and the cognitive presence, students' level of class participation is affected, concluding in effective asynchronous and synchronous dynamics. According to Lehman & Conceição, (2010) in “Creating a sense of presence in online teaching: How to "be there" for distance

learners" it is understood the presence and its relationship with the student participation in a class from the physical, social, emotional, and psychological aspects, also the design of an online class can be understood as the social nature involved in human learning that must be carefully addressed in asynchronous learning environments.

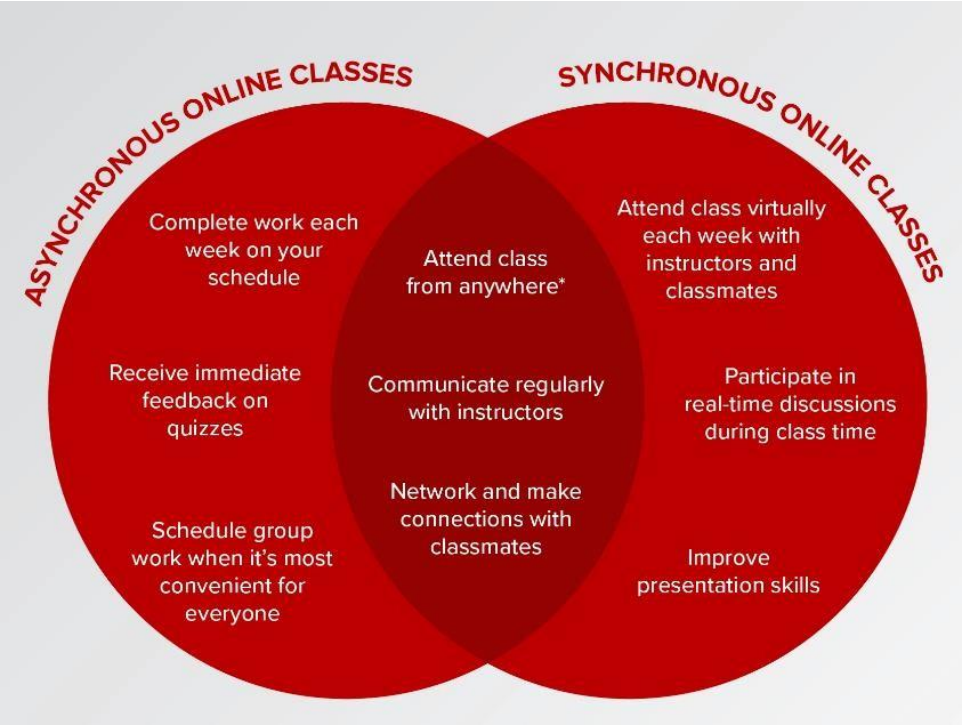

Figure. 1 Asynchronous and Synchronous class dynamic. Adapted from "What's the Difference Between Asynchronous and Synchronous Learning?" by J-Sheiderer,2022. Ohio State Online. Copyright 2022 by The Ohio State University. https://columbiacollege-ca.libguides.com/MLA9/images

The Venn diagram above has been adapted from 'What's the Difference Between Asynchronous and Synchronous Learning?' Scheiderer, J. (2021), and it shows and summarizes both definitions. As may be seen, a central part in both types refers to communication.

2.4 ERT in Mexico.

In providing educational services, there is an obligation to ensure that students are safe in school and the environment in which they are found. In addition, governments, communities, and humanitarian organizations are responsible for ensuring that all people have access to quality and relevant educational opportunities and that learning environments are safe and promote both the protection and the students' mental, emotional, and physical well-being.

In Mexico, given the speed with which the pandemic reached the country, the health sector authorities implemented the campaign "Stay at home" as a prevention strategy to protect people's lives and reduce the possibility of infections. On the contrary, it has implied promoting actions to continue with the current school year for the education sector. However, as Hernández Mondragón (2020) points out, these emergency dynamics also had tensions, conflicts, and difficulties for those involved, given the change in the roles of parents or parental figures, whom this contingency has led to assume an active role as co-educators. According to Montacute (2020), during a social emergency, schools are entirely closed, so the learning process at home and the participation of parents is necessary; the collaboration of parents in the online class is helpful, but not mandatory due to the different situations faced by families in emergencies of this type.

In the Mexican education sector, teachers faced a double job to teach the content according to what is set by the school curriculum by Secretaría de Educación Pública or the private school curriculum; for example, reviewing the work, incorporating new strategies to complement student learning using educational technologies. Managers had to provide their teachers with the necessary tools and knowledge so that teachers who knew nothing at all could continue with their classes. In Mexico, teamwork has been carried out with the teachers. National communications and agreements have also been generated through the Secretaría de Educación Pública (SEP) in order to minimize the negative effects and create more strengths in the different schools of the country. Beyond how the country has been developing during ERT since its inception, author Hernández Mondragón (2020) remarks we must be prepared for a global emergency that prevents social interaction and it is necessary to anticipate a line of communication before the probable events that may occur

in the future and thus promote a protocol with strategies to avoid a delay in the educational system and continue.

In words of Lloyd, M. (2020):

> Due to the circumstances of canceling face-to-face classes due to the virus, the Mexican government and educational institutions have turned to a variety of technologies to continue providing education to more than 36 million children and adults in the country. However, the new virtual offer faces severe limitations, difficulties, and ethical questions, especially regarding the model's fairness. Among the factors that condition access to quality online education are: social class, race, ethnicity, gender, geographic location, and the type of educational institution they belong to (p. 115).

Likewise, the term digital divide refers to inequality in access to communication technologies among Mexican students. According to the National Survey on the Availability and Use of Information Technologies in Homes, carried out by Instituto Nacional de Estadística y Geografía (INEGI) (2018), only 45 percent of Mexicans have a computer, and 53 percent have internet access at home. This statistic clarifies that access to technology affects students from preschool to university level. At the same time, it is making it clear that the digital divide only determines who can access online education. Anticipating these problems, the SEP of Mexico designed two key strategies to provide academic continuity during the social isolation generated by COVID-19, such as *Aprende en casa,* which consists of the transmission of television programs to explain topics related to each grade level. In addition to this, it offers the possibility of accessing the portal of this program to consult activities, content, and YouTube videos (SEP 2020), the other strategy is called “Estrategia de educación a distancia: transformación e innovación para México:Propuesta integral frente al COVID- 19’’ which is hosted in the same website and is based on four points:

1) Establishment of the remote platform for the SEP.

2) Contents (subjects, with methods, playful, auditory, and visual).

3) Training and support for teachers, parents, students, and officials.

4) Usage of metrics as input for possible monitoring and evaluation (pp. 1-27).

On the other hand, the institutional response capacity to contingencies depends on the investments made and the skills developed among those who make up the education sector, such as technological platforms, which suggests that these are not measures that can be fully implemented in short periods of time. (Fernandez, Hernández, Nolasco, De la Rosa, and Herrera, 2020). Similarly, Osorio (2016) mentions that many teachers need support and guidance to teach according to innovative principles; many educational innovation initiatives have failed in the past precisely because they did not provide teachers with appropriate learning opportunities. On the contrary, Ralón, Vieta, & Vázquez (2004) comment that with the advent of the Internet, online education was greeted in the name of progress, but little has been said about its downsides, so they examine the downsides of the online format in the field of education in general.

In *"Lessons from COVID-19 for the Mexican educational system"* (Fernandez, Hernández, Nolasco, De la Rosa & Herrera (2020) mention some advantages and challenges that the Mexican educational sector presents. ERT in Mexico has an opportunity for this work to collaboratively involve teachers, preparing materials, training teachers to function in a different environment. Also, offer students quality, functional, and necessary sessions. Furthermore, some of the most relevant advantages of ERT in Mexico are mentioned, such as:

1.- Accessibility: Students can access information including study programs, course assignments, presentations, and supplemental materials 24 hours a day, seven days a week.

2.- Flexibility: Online programs allow teachers and students to participate in the teaching-learning process from different places and at different times.

3.- Enrichment of the teaching-learning processes: Through online education, it is possible to register complementary feedback between teachers and students.

4.- The multimedia experience is another potential benefit.

5.- Communication technology also creates an opportunity for interaction between instructors and students and among peers.

6.- Online courses can promote teamwork and group work.

7.- Online education can help promote independent learning.

8.- Processes of preparation and adaptation of the material of the educational plans that are typically taught in face-to-face classes for their incorporation into remote instruction.

9.- Training of teachers to rely on distance tools for a satisfactory interaction for the benefit of student learning.

10.- Technological infrastructure conditions, such as coverage and internet access in homes, availability of laptop-computer equipment, tablets, or cell phones with sufficient internet access (Fernandez, Hernández, Nolasco, De la Rosa & Herrera, 2020, pp.7-8).

The same research mentions that these requirements are seriously limited in the educational systems of a significant number of emerging Mexican economies. Now, in the challenges of ERT, it is based more on whether the technological tools are fast and efficient to be implemented as a strategy in the face of the effects on the educational systems due to the closure of schools. One of the first challenges is sufficient availability and infrastructure since the main challenge is to ensure internet access for students. The digital divide and access to technological resources for students are fundamental obstacles.

Additionally, having access to the Internet is not enough because distance education requires bandwidth for the transmission, largely symmetrical (downloading and uploading of information) of audio and video. It is noteworthy that two out of every three homes in Mexico do not have an Internet quality connection (sufficient speed). Only in one out of every three cases is the connection achieved through a high-speed fixed network. Besides, in terms of the availability of technology at home, 20.1% of homes have Internet access, 24% also have a desktop computer, 31% with a tablet, 50% with a laptop, and 97% with a

cell phone. Also, the initial planning and organization of the courses is a vital challenge that can be much more time-consuming than necessary because by modifying materials to accommodate the accessible online mode, instructors must be organized, dedicated, and committed. For this reason, additional teaching skills are required for classroom work and specific to online work (Fernandez, Hernández., Nolasco, De la Rosa & Herrera, 2020). It is also necessary to prepare students who are not familiar with the use of technology for educational purposes. Online education also faces pedagogical challenges for those students who have low performance or problems with motivation and self-discipline since these students tend to drop out of online courses. According to Fernandez, Hernández, Nolasco, De la Rosa & Herrera (2020) here are some points about this situation:

1. Students who require more personal assistance in an online class can be frustrated.

2. Online education does not serve all educational purposes.

3. Online education cannot replace school space and faces a higher challenge for developing socio-emotional skills.

4. Suspension of prolonged school activities has more negative impacts on students from more vulnerable and less resilient homes.

5. Parents provide childcare at times that coincide with the working day (pp. 9-10).

The advantages and adversities that the Mexican educational system has faced are clear and real, but the experience of ERT must be taken as an advantage. Starting with a solid project and that as such remains fixed, given another social emergency; also, that it has one of the main characteristics: flexibility to the educational offer for most students.

For this reason, it is necessary to train teachers in possible teaching methods under emergency scenarios continuously; as well as to generate educational work plans that have the exact modalities and objectives considering integrating internet access into the educational sectors either in a remote or hybrid model is necessary for the following school years. Throughout the coronavirus pandemic, we have made choices about how to sustain, or provide relief to the education system. We have also had the opportunity to consider how best to proceed as we start to recover, and how to rebuild the system by taking more

decisive action on substantial, long-needed changes. Indeed, how well we rebuild the education system will determine how well we address the impacts the pandemic has had on our human capital and how prepared we are for shocks of this nature in the future (García & Weiss, 2020).

Chapter III Methodology

3.1 Chapter Overview

In this Chapter a description of the method followed to do this research is provided. The approach is also explained as well as the context. An in-depth description of the participants of this study is offered and an explanation and sample of the instruments used to collect the data. Finally, a general account of the data collection procedures is described.

3.2 Approach and method

This investigation followed by a qualitative approach. This approach can be used to understand how an individual subjectively perceives and gives meaning to their social reality McLeod (2019). In addition, qualitative research is multimethod in focus, involving an interpretive, naturalistic approach to its subject matter. It conducts studies, and it can be the tool that allows administrators, researchers, teachers, and parents to know in-depth what happens in the school and to use a new way of interpreting the educational act to open new routes of interpretation. The researcher has several methods for collecting empirical materials, ranging from interviews to direct observation, during this research project a One-on-one Interview with one teacher is. Thus, in order to describe tthe teacher'spersonal experience during ERT. Moreover, it is an option to provide a new vision and a different interpretation of the events at school.

Specifically, this study follows a mixed-method, represented in a set of systematic, empirical, and critical research processes, and involves collecting and analyzing both quantitative and qualitative data and achieving a greater understanding of the phenomenon under study (Hernandez-Sampieri and Mendoza, 2018, p.10). Also, a mixed method implements sequences, as in the case where the quantitative precedes the qualitative, and vice versa. The qualitative comes first, where it develops simultaneously or in parallel, and it is even feasible to merge them from the beginning and throughout the entire research process.

The main characteristics of the mixed method in this study includes the following 7 steps procedure:

1). - Collect and analyze both quantitative (closed-ended) and qualitative (open-ended) data.
2).-Use procedures that implement qualitative and quantitative components concurrently or sequentially, with the same sample or different samples.
3).- Integrate data collection, analysis, or discussion.
4).-Validate findings with quantitative and qualitative data sources.
5).- Use qualitative data to explore quantitative findings.
6).- Develop survey instruments.
7).- Use qualitative data to augment a quantitative outcomes study (PCMH, 2013 p.2-3).
Finally, students that participate in this research project answered two virtual questionnaires, and one questionnaire that was answered at school both with mixed-method characteristics, such as open-ended questions and closed-ended questions. This is in order to understand experiences and analyze data based on procedures and infrastructure availability among students.

3.3 Context

This research takes place at Colegio "Alma Infantil" IFEP. The institution is in Colonia Cristóbal Colón in the center of Puebla City in Mexico. This school has 134 registered students, of which 65 are women, and 69 are men. In addition, the teaching staff is continuously in training which makes them committed to educational work. In the primary level there is one director, ten teachers, one administrative assistant, and one janitor. All staff aim to offer an educational option with a humanistic approach. The institution is attached to the regulations that govern the SEP (Secretaría de Educación Pública) under official programs as an educational institution.

For this research, 29 students were considered as participants considering that 19 students are boys and 10 girls. Their ages range between 8-9 years old. The researcher worked with them for an entire school year when these students were in the 3rd year of primary school. Today these students are in 4th grade. It is essential to mention that participants have a

Cambridge Certification Pre-A.1 Starters, which certifies the primary-beginning learning level of English for young students.

Additionally, the researcher prepared an interview for a schoolteacher who completed a school year during the COVID-19 contingency. This interview provides findings and perspectives from the teacher's perspective related to Emergency Remote Teaching.

3.4 Participants

The following charts present characteristics and details of the participants, such as age of participants, number of relatives living in the same home, parents' level of education, and residence. This information will be relevant when presenting the interpretation of the collected data.

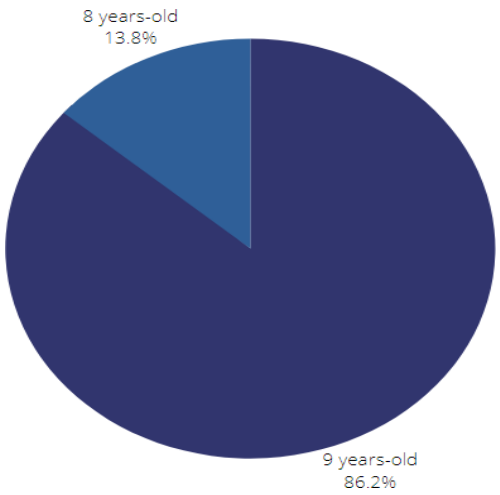

Figure. 2 Age of participants.

The bar graph below shows the range of relatives living with the participants, at the same house. As may be seen, the most common number is 4 relatives per participants. Furthermore, it also illustrates that the maximum is 6 relatives living in the same home, in the case of 4 participants.

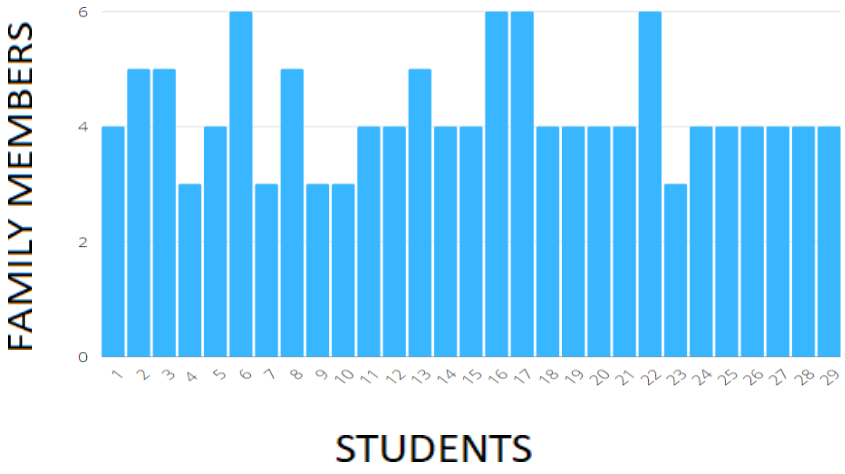

Figure 3. Participant's family members at home.

Next**,** the following graphs illustrate the educational level of the participants' parents in this study. As may be seen, most parents have a bachelor's degree, 69 percent in total. 10,3% of the participants' parents have a master´s degree and 3.4 % of the participants´ parents hold a Doctorate's Degree. 10.3 % of the participants' parents have High School and 6.9% have Technical Education. Finally, all families reside in Puebla, City.

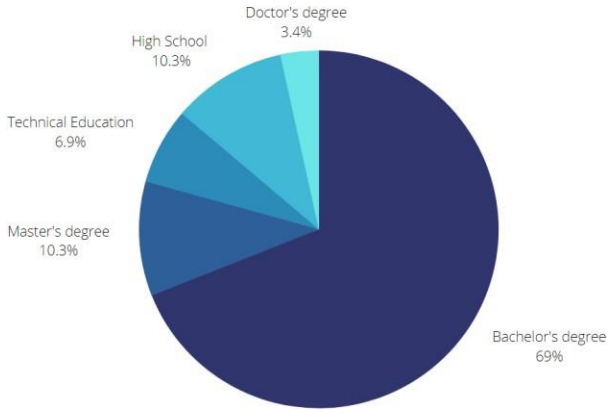

Figure 4. Degree of studies of the parents of the participants.

Another important participant is a 55-year-old male teacher. This teacher has a 25-year career in the education sector, from primary level to university career. Currently, he has been working for IFEP school for 5 years, at the primary level. He holds 3 different degrees which are Hotel Administration, Computer Science and Education Sciences. Finally, this teacher was the one who trained and adapted the school to ERT at the beginning of the pandemic.

3.5 Instruments

Since this thesis has a mixed approach, conducting questionnaires was necessary for the collection of information about the different experiences of the students during the online modality (ERT). The first questionnaire invites participants to respond to open-ended and closed-ended questions to know if the students have siblings, their opinion on the platforms used, and classes given by their teacher. Also, in this questionnaire, multiple choice questions were developed to evaluate their development during the school year, the feelings they experienced, and to obtain statistics about the electronic devices they used during the course. Furthermore, most of the questions were structured according to rank ordering and rating scales for more accurate results. You can see a sample of this questionnaire in the Appendix.

The second questionnaire is designed based on *SELFIE's Questions on Remote Teaching and Learning* (Self-reflection on Effective Learning by Fostering the Use of Innovative Educational Technologies) by the European Commission, and its information was considered to establishing 16 close-ended questions that provided information of essential steps carried out on ERT in the school, considering the students' experiences. Furthermore, there was a third questionnaire, this one focused on the emotions of the students during this process. For this reason, the students answer 5 Open-ended questions to learn a little more about the emotional experience they went through and their respective reasons which is included in the Appendix.

To test the research questions from this thesis, an interview was held with a teacher from the primary school to obtain information about the ERT adaptation process. This interview

considers the following aspects: advantages and disadvantages of this modality, the challenges they faced and their respective solutions. For this reason, an exploratory interview was designed to be conducted, enabling the interviewer to talk freely and emotionally to obtain richness, depth, authenticity, and honesty about experiences from the teacher's experiences.

3.6 Data collection procedures

For the collection of information, two data collection techniques have been developed:

1) Interview with the schoolteacher: This technique makes it possible to approach the person being interviewed to collect information from a direct source. Although this interview was anonymous, there was a consent for information collection, and the initial aspects that were considered were the age and gender of the interviewee and the time and date the interview was carried out. The nine questions addressed in the interview allowed the necessary information related to ERT to be obtained according to the teacher's experience. This interview was carried out remotely through a phone call. The transcription of the interview was done first in Spanish and later translated into English for the purpose of this research.

2) Questionnaires to students: This technique was intended to have information through questionnaires from all 4th-grade students to answer according to their experience during ERT. The questionnaires were three, developed from a social, emotional, and academic perspective, and prepared in Spanish and then translated into English. The first questionnaire has an exploratory perspective to the study population, the second questionnaire was based on the students' experiences during ERT. Finally, the third questionnaire focused more on the students' interests. On the other hand, the first two questionnaires were conducted online through Google Forms. The third questionnaire was printed and given to students to be answered. The questionnaires were given and then collected one day later to give them time to answer reflectively at home.

Chapter IV Findings

In this chapter the research findings obtained by processing, analyzing, and interpreting the data obtained from the study participants are presented. Once the information was collected by means of the instruments and proceeded to carry out the corresponding treatment for their analysis, the information proceeded elements to interpret conclusions for this investigation**.** This section covers first general aspects of this research, and then the answers to the research questions. The findings have been compiled to answer in depth the three research questions, using three different instruments.

4.1 General Findings

General aspects to be considered in the findings are the emotional characteristics that students experience during online classes. Table 1 below shows the perspective that students experienced during online classes. These findings were collected through the first exploratory questionnaire that students answered in September at the beginning of the 2021-2022 school year. Subsequently, the experiences that the students lived were expressed two months later they were exposed.

Table 3. Students' perspectives about ERT.

	Positive	Neutral	Negative
Students' perspectives	*Bien* Good (2)	*Un poco triste, pero bien.* A little bit sad, but good.	*De alguna manera triste por no poder jugar con mis amigos.* Somehow sad for not being able to play with my friends.
	Me sentí feliz. I felt happy.	*Extrañé el salón.* I missed the classroom.	*Triste porque no podía estar con mis amigos para abrazarlos y estar normal en la escuela.* Sad because I couldn't be with my friends to hug them and be normal at school.
	Bueno, un poco difícil al inicio, pero después fue más sencillo. Well, a bit difficult at first, but then it was easier.		*Aburrido/a* Bored (4)
	Feliz, y después quise regresar a clases presenciales. Happy, and then I wanted to go back to face-to-face class.		*Un poco estresado porque era difícil para mi entender los temas.* A little stressed because it was hard for me to understand the topics.
			Muy encerrado So locked up.
			Incomodo/a Uncomfortable (2)

	Muy estresado/a So stressed.
	Triste de no ver a mis amigos. Sad of not seeing my friends.
	Estresado/a Stressed
	Un poco triste y estresado. A little bit sad and stressed.
	Preocupado Worried
	Triste *Sad*
	Enojado por el COVID-19 y triste por no ver a mis amigos. Angry about COVID-19 and sad for not to see my friends.

In general terms, we can say that most participants' responses are negative perceptions. The perceptions reflect only their emotions and feelings in regard to how they felt with this ERT.

Table 4. Students' feelings and experiences during ERT.

Feelings	Reason
Me sentí muy bien. **I felt very well.**	*Porque jugamos Kahoot!* Because we played Kahoot!
Bien. **Good.**	*Porque la maestra explicaba bien y claro, así que fue fácil.* Because the teacher explained well and clearly, it was easy.
No me gusto. **I did not like it.**	*Porque por todo el ruido, no me dejaba escuchar.* Because of all the noise, it wouldn't let me listen.
Un poco bien. **Quite good.**	*Porque durante los descansos, jugaba videojuegos, pero lo malo es que se trababa.* Because during break-time I played video games, but the bad thing is that the game was stuck.
Bien, triste y un poco aburrido. **Good, sad and a little bored.**	*Porque no podía ver a mis amigos en persona, bien porque sabía que era por nuestro bien quedarnos en casa.* Because I couldn't see my friends in person, good because I knew it was for our good to stay home.
Bien. **Good.**	*Porque jugamos diferentes juegos.* Because we played different games.
No tan bien. **Not so good.**	*Porque no entendía.* Because I did not understand.
Mal. **Bad.**	*Porque no pude conocer a mis maestros y compañeros.* Because I wasn't able to meet my teachers and classmates.
Triste, aburrido y estresado. **Sad, bored, and stressed.**	*Era incómodo para mi siempre estar en una pantalla y no ver a mis compañeros.* It was uncomfortable for me to always be on a screen, and I could not see my classmates.
Incomodo. **Uncomfortable.**	*Porque no estaba acostumbrado…* Because I wasn't used to it
Raro. **Weird.**	*Porque era algo diferente…* Because it was something different.
Me sentí bien. **I felt good.**	*¡Me divertí mucho jugando Kahoot!, viendo películas, y contarnos chistes.* I had so much fun playing Kahoot!, watching movies, and telling jokes.

In the previous table (Table 3), we can see that most of the findings confirm what the authors mentioned in the literature on children's psychological response during ERT. In other words, most of the participants expressed feelings like those of depression and anxiety at the beginning and during the school year of ERT. As such, very few participants perceive this experience as positive. It is also important to note that the participants were aware of the health emergency experience; for this reason, in some of their responses, they mention the COVID-19. Finally, in the literature, it is also mentioned that students can present feelings

of loneliness, isolation, stress, anxiety, depression, and sadness due to the uncertainty of not knowing when they will return to classes and the lack of interaction with their classmates. As may be seen, the results shown in Table 4 demonstrate that the experiences the participants lived are important to emphasize the emotional aspect since the emotional aspect takes part in ERT. Similarly, it is identified that there was also a time during classes to preserve routines and coexistence among classmates through games during online classes. As mentioned by the author Lee (2020), according to the levels of mental health of the students, students' school routines have helped them cope with different mental health problems, whether of lesser or greater intensity.

According to these general findings, the feelings that the students experienced during ERT do not change significantly. Still, the reasons given are both positive and negative. However, what stands out the most is the discomfort they felt when adapting and the sadness of not being with their classmates. However, it is also relevant that the students enjoyed online activities that encouraged them to play, remote social activities, and films to promote group dynamics more enjoyably, considering the academic approach. Ute Kaden (2020), in her research, shows that the results of successful student learning begin when teachers' concern about prioritizing their mental health, fostering self-confidence during this modality, and understanding the workload during the online school year. Additionally, students were asked how the emotional support they received was from their teachers in the different subjects they were studying. This question was considered due to the emphasis placed on schoolteachers and school coordination so that coexistence in class due to the different situations that the students were living in their respective homes. According to the circumstances, Bozkurt & Sharma (2020) mention the importance of collaborating, sharing, and supporting each other as a team during remote classes. Apart from providing learning, the teachers' role is also intended to provide emotional support if needed. On the other hand, it is essential to have the flexibility that allows students to be safe and supported throughout the school year. According to the findings, it can be obvious that emotional support in class remains in the middle. Regular' emotional support dominates more with 52% during ERT, ‘Really good' has 36% and 'Good' has 12%.

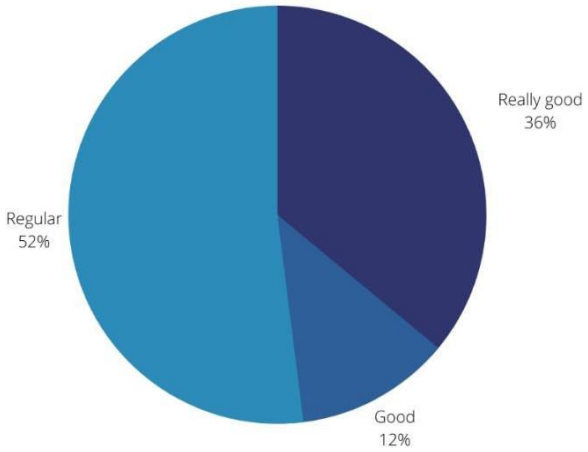

Figure. 5 Student's perceptions about teacher's emotional support.

The interaction between classmates and fluid dynamics in a remote mode is the primary key to the socio-emotional aspect that students went through in the school year during ERT. For this reason, the participants were asked if they had the opportunity to work with each other remotely, share ideas or opinions in class, as well as if they had the opportunity to have active participation during classes. Findings show that half of them had this active participation while the other half had a more passive participation in classes.

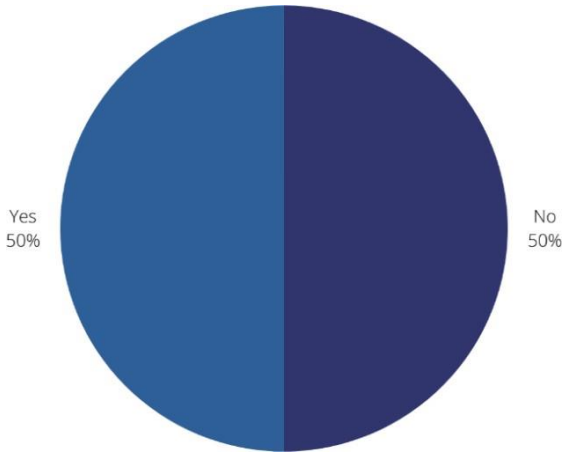

Figure 6. Students' opportunity to participate in class.

ERT maintains the balance between classes to continue with the academic program and promote recreational activities among all. Following the principles of asynchronous and synchronous communications and learning, students maintain remote communication and active participation during classes. Of course, asynchronous learning suggests that students experience meaningful learning during a participatory learning environment. However, on the contrary, the results according to class participation remain in the middle, giving us to understand that fifty percent of the class did not feel that they had the opportunity to participate during classes.

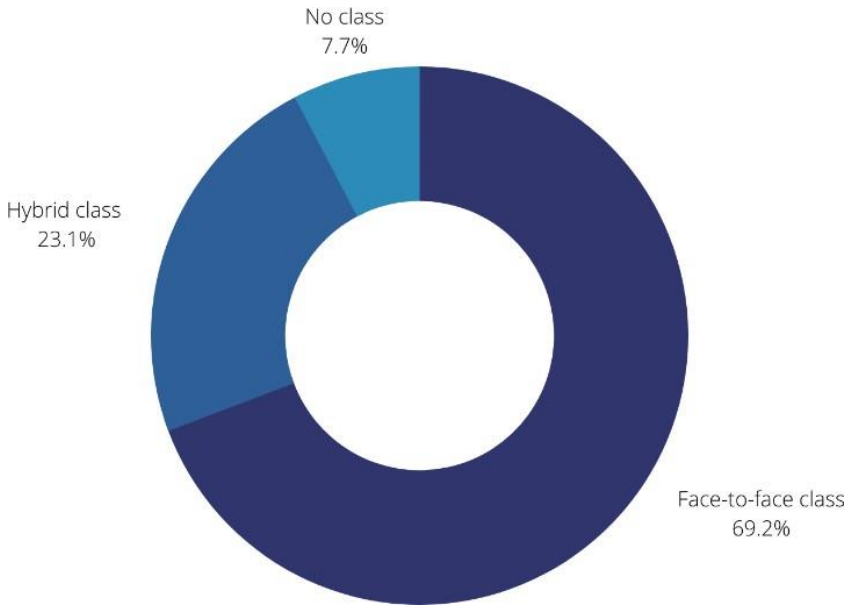

Figure 7. Students' class modality preferences.

On the other hand, students were also asked to choose what they preferred to do during class and which modality they preferred. These questions were posed to discover if students are more likely to enjoy a class that share social aspects, considering that the dynamics varied in terms of ways of learning during online classes. The results show that students' preference is a 'Face-to-face' class with approval of 69.2%, followed by a Hybrid class with 23.1% and a No class of 7.7%. It is essential to mention that the remote class is not among the students' preferences.

Graph 9 shows what the students enjoy doing during their classes. Activities with a socio-emotional, kinesthetic, artistic, and recreational focus are among the options to choose.

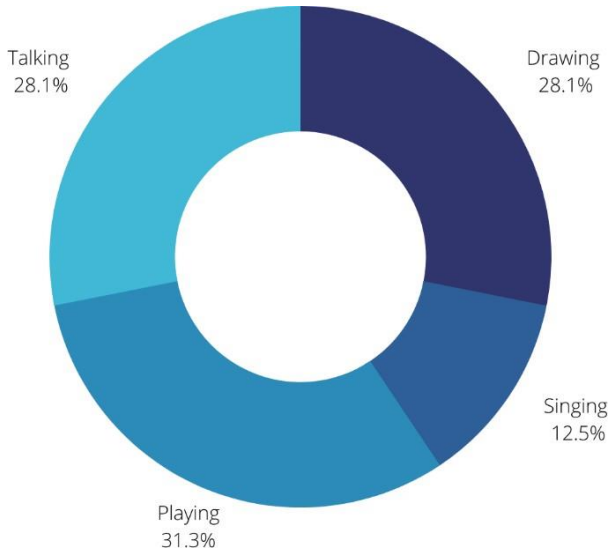

Figure 8. Preferred activities during ERT.

As illustrated in the graph above, 31.3% of the students prefer activities that involve playing with each other. This dynamics in class was carried out through the use of Kahoot! to assess students' understanding of topics. Also, it confirms that platforms have been used to complement the classes during the school year in ERT, such as Kahoot. Langford and Dam (2020) highlight those applications such as Mentimeter and Kahoot! Microsoft Teams and Google Drive help to provide a complete lecture during classes.

The same percentage is also shared between drawing, talking, playing, and singing between them. These two activities were promoted during class through specific times to share ideas among classmates, and that some time has been allocated during class for drawing activities. Finally, the singing activities with a percentage of 12.5% were carried out during classes, but not with the same frequency as the others. According to the results, most of the students prefer face-to-face classes to online classes. For this reason, by comparing it with the activities they prefer to do during ERT classes, we can see that they prefer playing, talking, and drawing the most. Subsequently, it is confirmed that games and drawings (recreational activities) help students digest the events surrounding them to develop the

experiences they have lived in a better way. Furthermore, in “Rapid Education Response in Complex Emergencies” (1998), it is mentioned that promoting these activities helps generate in students more resilience and the ability to continue with the class.

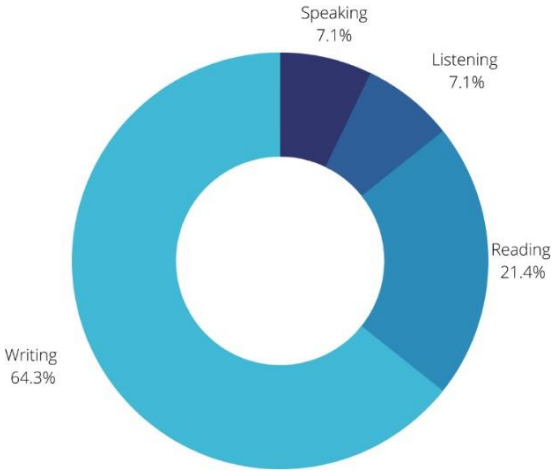

Figure 9. Activities students do not prefer during ERT.

Contrary to the previous graph, figure 10 shows that participants do not enjoy activities where they must write, showing us 64.3% disapproval. It can be inferred that for this reason, the students prefer to learn subjects where they play games and involve social interaction. It is also noted that 21.4% do not prefer reading in class. Even so, all the activities carried out by online classes promoted active reading among them during all course classes. Finally, we have the same percentages between Speaking and Listening English activities, besides writing in their notebook continued to be an essential part of the activities carried out among the students. However, it is the activity that the students liked the least. According to Mahmood (2020), online class participation can be helpful for enhancing student involvement and interest during class while participating in lectures, interactive platforms, asking and formulating questions at the same time.

As may be seen, the general findings this research has exposed allowed a much deeper understanding of the phenomenon of ERT. In the following part of this Chapter, I answer the three research questions that guided this investigation.

4.2 Answer to the First Research question

What processes of adaptation do students report during ERT because of the pandemic at school?

To answer this question, I have included different responses and points of view of the participants. First, the technological gadgets that the students used at the beginning and during the remote classes are considered, then, to continue with a useful and meaningful ERT experience, as mentioned in the reviewed literature, it was necessary that students had enough technological infrastructure conditions, such as coverage and internet access at homes, laptops, computers, tablets, or cell phones with sufficient and satisfactory internet access. The following graph below illustrates participants' technological infrastructure conditions.

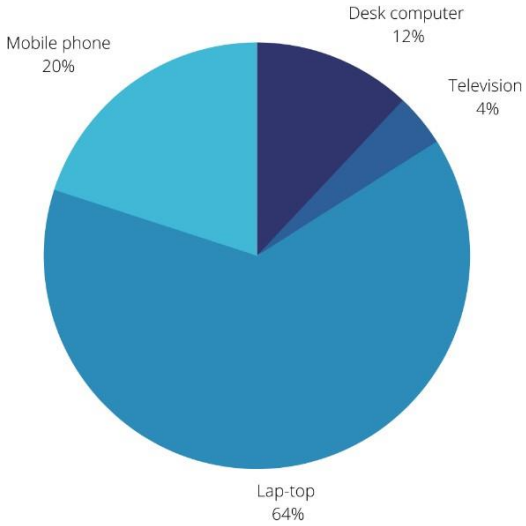

Figure 10. Devices used during ERT.

One of the most used devices among students during remote classes was the laptop, 64%, followed by mobile phones with 20% and lastly, the least used were desktop computers, 12%, and television with 4%. On the other hand, the radio was not used among these participants during ERT.

Moreover, students were asked what level of difficulty or ease they faced while adjusting to online classes in the early days of the pandemic. This question was essential to consider the availability of both equipment and service to remote classes, and the results are as follows; 46.2% of the class took time to adapt, and 30.8% found it complicated. This suggests that the adaptation process was not easy for the majority in this short time. The following graph also shows the level of difficulty between participants in order adapt to their classes and to learn how to use the devices where they took classes.

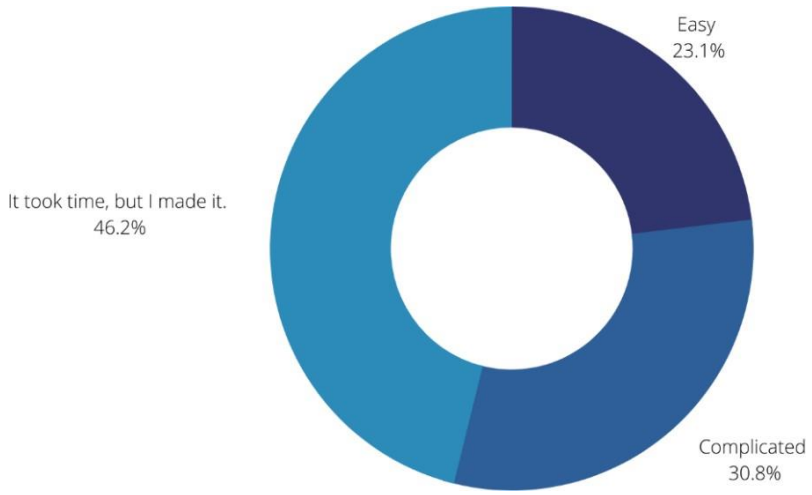

Figure 11. Adaptation process.

One of the advantages of ERT is its "Flexibility", therefore, online programs allow teachers and students to participate in the teaching-learning process from different places and at different times. However, according to the results, most of the students found that it took some time for them to adapt. According to Mahmood (2020):

> Developing student learning abilities in online classes: Online classes are entirely different from the traditional in-class lectures. Therefore, a teacher should devise various activities that can enhance student learning skills in online classes, ask challenging questions to students during online courses, and get feedback from students that can improve the capacity of the online modality (pp. 199-203).

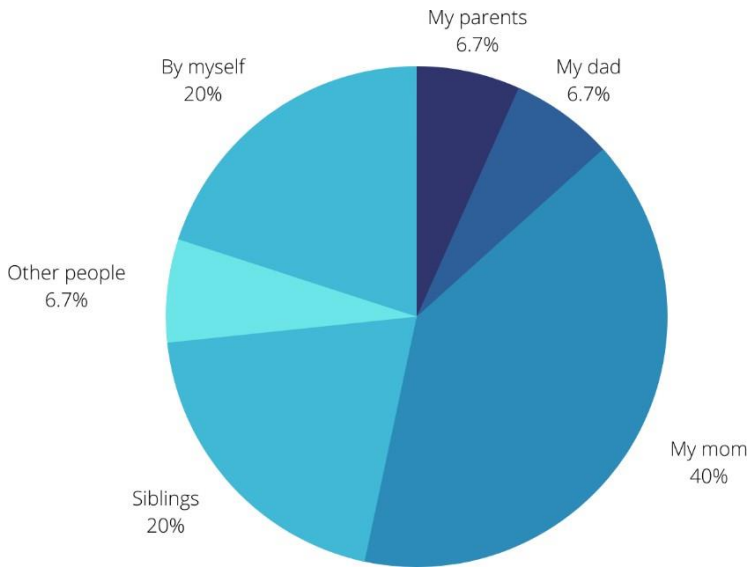

Figure 12. Family members' participation to students' needs during ERT.

One of the most relevant aspects of adaptation, and while taking online classes is the family's participation in attending the needs of the students during virtual classes. This situation is a complete exposure to an environment derived from technological access, family support, school sector, and academic expectations. This learning support is promoted through family members or group teachers. Hernández Mondragón (2020) points out, these emergency dynamics also had tensions, conflicts, and difficulties for those involved, given the change in the roles of parents or parental figures, whom this contingency has led to assume an active role as co-educators. According to Montacute (2020), during a social emergency, schools are entirely closed, so the learning process at home and the participation of parents is necessary; the collaboration of parents in the online class is helpful, but not mandatory due to the different situations faced by families in emergencies of this type. While taking classes, it was possible to witness the presence of family members with the different students, whether full-time, part-time, or without any participation.

The previous chart shows the impact family members had in adaptation to the classes. As may be seen, the mothers are the most supporting members with 40%. 20% is shared by

students who received help from their older siblings and students who learned and took the classes by themselves from the beginning. Moreover, 6.7% was shared between both parents, dad, and other people. It is worth mentioning that those who appear in the opinion of other people are the grandmothers of the students or uncles; these answers come from houses where more than four relatives live at home.

To complement the answer to this adaptation process to ERT, the following table shows how many family members took online classes. For this table, the responses of students who shared a remote space with more than two family members were considered.

Table 5. Family organization during ERT

Family members who shared an online modality.	*Organization*
2	Cada quien tiene su dispositivo. Each of us has his or her own device.
2	Uno en la sala y otro en el comedor. One of us in the living room and the other one in the dining room.
3	Cada quien tiene su lugar. Everyone has their own place.
3	Mi abuelo en su cuarto, mi hermana en la sala y yo en el comedor.
3	My grandfather is in his room, my sister is in the living room and I am in the dining room.
3	Nos organizábamos por turnos y horarios. We had schedules.

On the other hand, the adaptation process is achieved by having certain routines in the participants, so it is considered if the students were able to adapt to online class considering that this adaptation includes organizing times, carrying out activities on platforms, as well as turning in assignments on time.

Also, the class schedules are committed to a certain time as well as in face-to-face class schedules. This dynamic promotes the preparation of students in their autonomy supported by a program or plan established by the institution for the classes to maintain these dynamics between teacher and students as if it were a face-to-face class (Scheiderer, 2021). 23.6% of the students found it difficult to organize themselves in the different aspects that made the remote classes. However, 76.4% succeeded, and this was due to the routines they

implemented. Among the different ways that students organized their class dynamics and expressed in their answers are the following:

'With a calendar of activities'

'One day before I've organized according to the schedules'

'I had schedules to do my homework and my activities'

'Following the recommendations they made at school, sleep early and do homework during the week.'

'I prepared support material before, and I was doing my tasks in my spare time to send them on time.'

As may be seen, for the students to have been able to adapt to the online modality, they had to put into practice some habits that are formed from making a weekly activities calendar, having material prepared the day before, following the recommendations from teachers and the school; this to minimize the stress or complications involved in having a fluid class dynamics for most of the course.

Finally, and to conclude with the answer to the first research question, according to the results, the students at the beginning felt the change from a face-to-face class to a remote one. However, most of the participants already had the necessary devices to start taking classes online and the support of their families, where the support from the mother was the one that stood out the most from the other options. Something important here is that very few students learned to use their equipment and the platforms used by the school from start to finish. Therefore, the adaptation process was entirely different for everyone. However, they have in common that it took time, but thanks to the attention and support they received, they managed to excel and cooperate for a more dynamic class.

4.3 Answer to the Second Research Question

What were the advantages and disadvantages reported by the teacher about ERT related to the teaching-learning process?

In order to answer this research question, an interview with a school teacher was conducted. The teacher who attended the interview had the experience of having started the online modality from day one. The interview transcript shows the processes of school adaptation because of a health emergency. To answer research question number two, about the teachers´ perceptions toward ERT, parts of the transcript are shown and categorized based on this teacher's perceptions about of ERT. The interview transcript was conducted on November 25, 2021, via phone. Teacher's expressions have been categorized as positive or negative. The first five perspectives of the teacher are related to being positive. Next, the other four are characterized by being less positive.

Positive perspectives:

1.- *'My strengths are that I have fresh knowledge and an up-to-date career. My administrative career and the computer area have made me not stay quiet and still find a thousand solutions to a topic. According to that also help students along with the school's methodology they can find the solution in the best way.'*

In this first point of view, the teacher's professional career stands out, which has been part of his motivation for his development in the remote mode, combining the methodology with which the school works.

2.- *…look when we find out about the situation. I was prepared on how to solve my classes… I began to investigate how to relate it. I found the advantage of Classroom and did some personal tests and said 'Oh, I already have my space, I can communicate now'. It turns out that I already had the solution when the director asked us; I became the administrator with my personal account of the Classroom Platforms for kindergarten, the two elementary schools, and the two secondary schools of the two campuses.*

3.- *I trained the teachers, I set up the Classroom Classes for each grade level, I added the teachers, I added the students; I really mean that first year we worked*

like that, it was four months or five months while they used my account. I was fortunate to have the knowledge of Classroom and Google Meet to connect. With that, well, I achieved it, and personally, I was super motivated, and well, at the end of the day, the teachers also said, 'Let's do it!'

4.- *I prefer online classes; I advance much more.*

5.- *Since my computational ability is innate, it didn't cause me a problem. It was a challenge and a perfect one*

According to Trust & Whalen (2020), several examples have been demonstrated at the international level of teachers and schools; despite being unprepared and overwhelmed by the health emergency, they managed to use the tools and adapt the necessary pedagogy to the ERT situation. Due to this teacher's experience in the field of ICT, he prepared in advance before giving the official notice of the closure of schools due to a health emergency. Then, taking Google Classroom as the central platform to continue teaching, he presented his work plan with the school director and took care of all the logistics to start remote classes through the classroom platform, as well as the training of the teaching staff and also students. In addition, 100% of the students confirmed that the teachers used games, platforms, and interactive exercises throughout the year of online classes.

From the teacher's experience, his preference for remote classes continues thanks to the ease of exposing the class more technologically, having students in a context where they can develop technological autonomy to complement their learning according to their subjects. However, in the beginning, the adaptation also took time. The classes that he presented helped him to advance much more with the topics to be learned. Bubb & Jones (2020) comment that teachers experienced a significant contrast to the home office since they had more time to plan their classes, create dynamics or relevant tasks, and more meaningful feedback could be provided among students. Which, from the teachers' perspective, has been beneficial. It is clear that teachers who have experienced home office work managed to make it beneficial to some extent. Also, according to Fjrtoft (2020) a workload has been noticed, but the experience with digital tools has made teachers report that This experience turned to be positive. Furthermore, Hernández Mondragón (2020) remarks to be prepared for a global emergency that prevents social interaction is necessary

to anticipate a line of communication before the probable events that may occur in the future and thus promote a protocol with strategies to avoid a delay in the educational system and continue.

Perspectives with a less positive sense.

1.- *We were attacked many times during the pandemic because parents intervened in the cameras or microphones and wanted to teach us what to do and what not to do. In fact, the problem was not that they made suggestions or comments, but that they did it in front of everyone and wanted to show that you do not know what you are doing.*

As it may be seen, one of the problems that the schoolteachers faced was the continuous intervention of the family members during the classes, and these interventions started from the points of view that parents do not share with the teachers, leading them to interrupt the class and criticize their way of working.

2.-… *Still, they fell into their error because they said, 'We just didn't understand.' … They almost want you to tell them with in minute detail all the information. –*

The use of Google Classroom allowed teachers to post their assignments, projects, and announcements about the class. So, accessibility was available so students could access information including study programs, course assignments, presentations, and supplemental materials 24 hours a day, seven days a week. Thus, the communication between teachers and students was continuous, all day. Nevertheless, the instructions given by the teacher also led to confusion in. As the expression of the teacher above claims, it seemed that they were supposed to explain things to parents more than to the learners.

3.- *It was also a double job because I had to put together my presentations to make them multimedia. After all, we returned to the same thing, there were no visual students; there were more auditory, so we spent a lot of time, so much time in the afternoon to be able to achieve the online class concept.*

4.- *There was less time for personal- family time because, although it was daily and intense training, we trained as best we could, we did not have a guide on how*

to do things. So, it was like going against it. In addition, it absorbed us in more hours than expected

Finally, in perspectives 3 and 4, the teacher expresses that part of facilitating the class delivery also took extra time during the afternoons due to the preparation of multimedia materials for the students. It is visible that the teacher suggests that they felt really lost sometimes ("we didn´t have a guide").

Also, the initial planning and organization of the courses is a vital challenge that could be much more time-consuming than necessary because by modifying materials to accommodate their accessibility to the online mode, instructors must be organized, dedicated, and committed. Additionally, the teacher also states that there was not enough time for their personal aspects such as spending time with the family because, as most of the teachers had not previously used Google Classroom, more time was needed to learn to use the platform or support each other. This situation not only lasted at the beginning of the online modality but also took place even months after the training they had at the beginning. As such, both teacher and students learned every day during a school year the use of Google Classroom and other platforms that helped complement remote learning. It can be argued that the teachers' workload increased extremely and in general, due to them looking for ways to connect with the students and make a quick transition. After all remote teaching was unknown to both teachers and students at that point.

4.4 Answer to the Third Research Question

What were the challenges the participants faced and how did they solve them during ERT?

To conclude, answers to research question number three are presented, it has to do with the challenges and difficulties participants faced and how they overcame them. Students expressed the challenges or difficulties they faced during ERT by answering the questionnaires and the teacher did it during the interview. Aspects such as students' values they showed during online modality are also considered and how they would act if an emergency such as the one we are experiencing due to Covid-19 reappears.

According to Boston Consulting Group & Common Sense, the worst-case scenario for students was losing the internet connection (2020) during remote classes. It has been reported that 50 million students have had to learn remotely from home and that 15 to 16 million of those students have faced a lack of internet or digital devices to effectively continue their remote learning. For this reason, as mentioned before, for a substantial and dynamic experience during distance learning, students and teachers need high-speed Internet service and internet-enabled devices that allow them to complete their assignments.

On the other hand, Mahmood (2020) states that poverty and neglected infrastructure areas are part of the challenges students might face because few students have the essential equipment needed for online classes. The lack of high-speed internet in their neighborhoods is a significant issue facing poverty and lack of infrastructure. Therefore, it is necessary to point out the flexible teaching and assessment policies. Due to the lack of high-speed internet connectivity in some areas, students cannot perform assignment submissions and even access them. The teacher should show flexibility and give extra time to students. Teachers should not put pressure on students in a pandemic state and, therefore, should give students full support.

The graph below represents students´ answers to what different situations impeded them having access or complete learning tasks of the class:

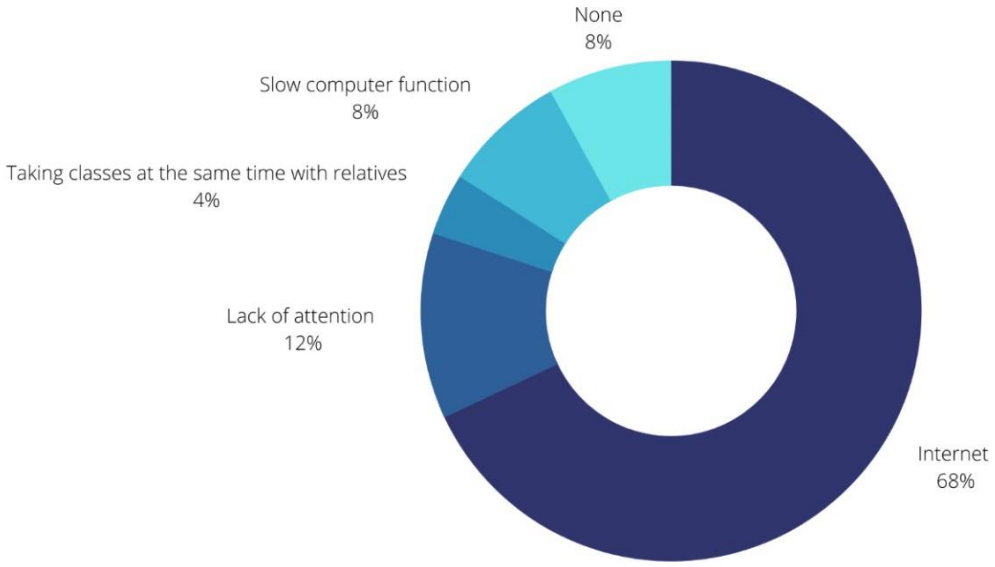

Figure 13. Difficulties during online classes.

Among the most common problems students faced during classes were lack of attention with 12%, slow computers with 8%, taking classes simultaneously with relatives with 4%, and no problems at all 8%. However, what is very common among the problems that ERT faces is internet connectivity with 68% of students. The lack of internet is undoubtedly the most common problem that can be shared with both professors and teachers. Therefore, one of the most viable solutions would be that the homes of the participants had to improve signal strength and speeds or two routers; however, not for everyone, it is an option due to the different socioeconomic status of the families. The use of the platforms was also a challenge for the students who at the age of 9 and 8 were forced to use different educational platforms, something done to adapt the class to a more didactic way and that the students could interact with different web content. It is necessary to consider whether students believe that exposure to a technological experience helped them to complement their learning.

One of the crucial findings of this research has also been the positive ways participants have found to solve these difficulties. Students and teachers need support, but they somehow found it developing their digital literacy, teacher preparation, and technical support. Some of the most relevant ways participants overcame the issues of ERT and in other parts is confirmed with these results:

> 1.- Accessibility: Students could access information including study programs, course assignments, presentations, and supplemental materials 24 hours a day, seven days a week.
>
> 2.- Online education could help promote independent learning.
>
> 3.- The multimedia experience was another potential benefit.
>
> 4.- Enrichment of the teaching-learning processes: through online education, it is possible to register complementary feedback between teachers and students.
>
> (Fernandez, Hernández, Nolasco, De la Rosa R & Herrera, 2020)

According to the results in this study, 84% of the participants did perceive that the learning was complemented with the platforms they used, while 16% disagreed with this situation. As a complement for this information, perspectives are shown by the students who support the percentage who answered 'Yes' and those who answered 'No'.

Below some of participants excerpts are presented to illustrate their perceptions toward how they overcame their difficulties and challenges:

'Because I learned, and classes were very dynamic.'

'The platform helps us to take classes easier.'

'They (platforms) helped me a lot to use technology, and I learned how to use new platforms.'

'The platform allowed me to work with material in my class supported by my teachers'

'Because they were related to the classes, and they were novel.'

'By playing Kahoot! I improved my learning.

'Manage the computer and search for information.'

'I did not understand.'

'I was distracted.'

'Well, the platform and the teachers are good, but then I'm having some doubts.'

'Then they (teachers) didn't pay much attention to us, and sometimes they didn't repeat what we didn't understand.'

Despite the different experiences that the students lived according to whether the use of ICT helped to complement their learning, most of the participants agree that the use of ICT complements their learning, another result shown in the following graph shows the perception that students have about their performance in class during online classes.

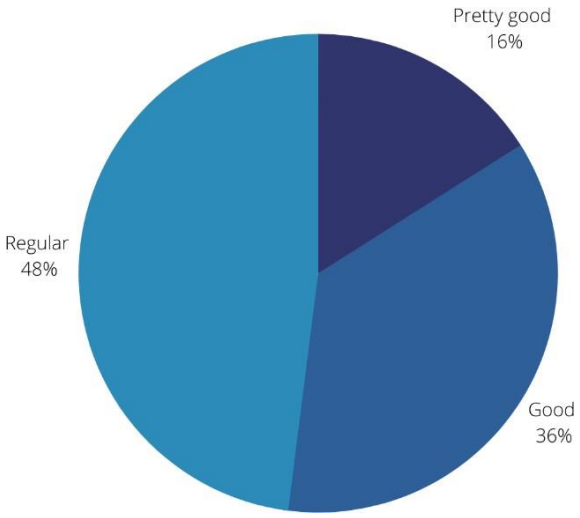

Figure 14. Students' performance during ERT.

The highest percentage in this graph is centered on a ‘Regular’ perception followed by ‘Good’ with 36% and a more encouraging ‘Pretty good’ outlook with 16%; implying that the students did perceive the challenges that ERT has and above all that the adaptation to the modality they experienced took time and cooperation on the part of them and their teachers.

Sometimes students had problems, and it was normal for them to ask the teachers for help to master an activity in class that included knowing how to use specific programs or platforms. At this school, teachers have as a priority to teach students with a mini tutorial how to perform a particular activity online, for that the students also expressed if they received the necessary support from their teachers when they did not understand how to use a web tool, results show that 72.7% of the students agree that they did receive the necessary help from the teachers to excel in the different difficulties they faced, while the other 27.3% does not agree.

Finally, the students were asked to choose which values worked the most during the year in which they took the online class due to the challenges, problems, or doubts they had every day, either academically or personally; the values are represented in the following graph.

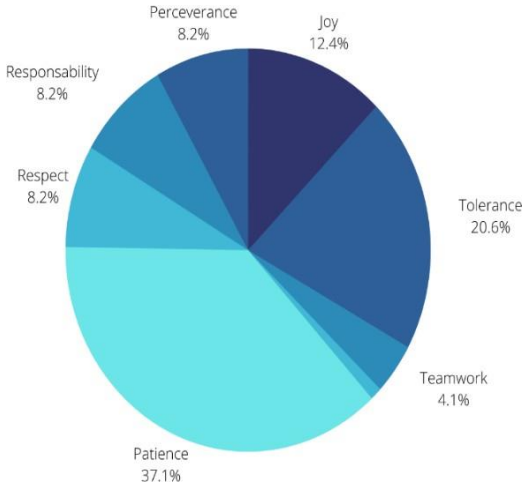

Figure 15. Values improved during ERT.

Patience is what the students have worked the most during a year of online work; this value can also be related to resilience, a value that has been named on several occasions by different educational and social media due to the health crisis that has been lived. Undoubtedly, during this teaching-learning period, different situations have been experienced in which the students had to learn to face also using their values, of which patience and tolerance were the main ones due to the uncertainty that they had each day due to the different circumstances experienced by the participants. Finally, students were asked how they would feel about relieving a health emergency and having to go back to Emergency Remote Teaching, and these were some responses that stand out:

'A little more confident of being able to handle the platforms, but for me it's boring, I like it more in person.'

'The only problem is my internet connection; I would feel comfortable taking classes from my home because I spend a lot of time with my family.'

'Well, I don't like it but if necessary, I will.'

'Bored, sad and discouraged.'

'I would feel bad for not seeing my friends and why I don't like taking classes on the computer.'

Authors like Bozkurt & Sharma (2020) mention that after this remote period of emergency ends and the education sector returns to the classroom, students will remember more how they felt at that time beyond the academic programs that so many schools and teachers have focused their attention on it. In 'Rapid Education Response in Complex Emergencies' (1998) they emphasize that throughout an emergency, it is vital to encourage and provide recreational facilities that children need. Promoting activities to students that help them generate their resilience generates the ability to make sense of the stressful and traumatic situation they may have experienced due to the Covid-19 situation. For this reason, we can confirm that the experience that the students had during the school year with a 100 percent online modality helped them generate a sense of responsibility and patience. Considering that, even though at the beginning, they found themselves with a not very

encouraging attitude, as time went by, they were able to generate patience in them in the face of the challenges and advantages that the ERT model has.

Chapter V Conclusions

5.1 Implications

This research has explored the experiences of a fourth-grade group of students and a primary school teacher at a private Elementary School in Puebla, Mexico. This research has answered the research questions from a qualitative approach, exploring and analyzing the experiences derived from Emergency Remote Teaching in a particular context due to the contingency of COVID-19 around the world. This research focused on identifying the socio-emotional processes of adaptation, and the use of technologies among students and teachers. The research was based on three research questions:

1.-What processes of adaptation do students report during ERT because of the pandemic at school?

2.- What were the advantages and disadvantages reported by the teacher about ERT related to the teaching-learning process?

3.- What were the challenges the participants faced and how did they solve them during ERT?

The schoolteacher was interviewed; this was a phone interview because the participant was the one who requested that the interview was conducted by phone. It is essential to mention that the interview was transcribed into Spanish and later translated into English.

To describe the implications of Research Question 1(What were the processes of adaptation reported by students during ERT during the hybrid model because of the pandemic at school?), we might say that students answered the two Google Forms questionnaires having the opportunity to share anonymously how the adaptation process was for them at the beginning of ERT. In this question, situations are derived, such as the feelings that the students experienced initially, what digital equipment they used to take their classes, how they organized to take their classes, and who received help at home to follow up with the classes. The students' responses were grouped in tables and graphs to have a better analysis of the results. Among the results, it can be noted that students preferred face-to-face classes and that the process of adaptation to remote classes took time; however, the objective of having continuity with the classes and, above all, that they have generated a sense of

resilience was achieved to be able to use digital devices to complement their learning from home.

The general implications of Research Question 2 (What were the advantages and disadvantages reported by the teacher about ERT related to the teaching-learning process before, during, and after the pandemic?), may be summarized into positive, and negative perspectives. To obtain results for this question, an interview with a schoolteacher was scheduled. The interview was agreed to remain anonymous, and the questions were based so that the interviewee could give more details about ERT from his experience. The results showed that the teacher found more advantages during ERT since more materials and work plans were accessible to him and the students. The only disadvantage mentioned by the participant was the parents' interference during the classes. However, the teacher was very calm and encouraged to work online. The necessary responses were transcribed into Spanish and then translated into English. In the results reported in chapter four, only relevant responses were considered according to the research question, and they were classified as ‘Positive perspectives’ and ‘Less positive.’

Finally, the implications of Research Question 3 (What were the challenges of ERT the participants faced, and how did they solve them?) may be explained in terms of solved issues. The results were obtained from the same surveys carried out by the students. However, it was impossible to get answers to how they solved the problems they faced during ERT. For example, the internet was the most recurrent issue among the participants and the one that stood out the most in the literature; however, the participants did not share how they solved this problem. On the other hand, the organization between families was a minor problem, but the solution could be obtained, which was represented in Table 3. Family organization. It is important to note that in this research question, the challenges faced by the students are the same as those initially presented by the teacher who was interviewed. Finally, in the online questionnaire, the students were asked how they would feel in a hypothetical scenario where they had to return to the ERT modality, and the results show a more secure attitude towards how they would act in an emergency such as the one they lived by COVID-19.

During the development of the results of the three research questions, it could be noted that the participants and their answers were related to each other since, from the perspective posed by ERT, teachers, and students share the same unknown field in which they must cooperate to work and that both academic and emotional support was required from the similar sides. ERT considers two fields, emotional support during crisis but also educational development for teachers, students, and students' families. In addition, during ERT panorama, the use of digital devices was incorporated to maintain communication, socialization, and learning to succeed during the worldwide crisis.

5.2 Limitations of the study

This research reports only the experiences of 30 fourth-grade primary school students and a sixth-grade teacher ERT experience for one year online. Of the thirty students, only 26 participated in the questionnaires, and it took more than a week to retrieve the results. This research could only determine what pupils and teachers have experienced and learned from ERT at this point and how these lessons learned are connected to challenges within the digitalization process. Time, and procedures of this study were limited in terms of the pandemic situation and the number of students may be another limitation to the findings and results shown in the graphs and charts.

5.3 Directions for further research

Further research is needed to explore the effects ERT has had on the digitalization process in rural regions in México. The following may be some suggestions for anyone who may want to continue this study:

Explore the same research questions in a different grade of the same elementary school.

Gather information from other teachers in the same or different schools.

Collect information from other types of schools, rural, suburban, public and private and compare the answers.

Develop a much deeper analysis (critical discourse analysis) of the answers provided in the instruments used in this study.

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Appendix

Instrument 1

CUESTIONARIO FÍSICO

Gracias por tu apoyo para responder este cuestionario. Tus respuestas serán anónimas y sólo con fines de investigación académica.

Edad: **Género: hombre/mujer/indefinido**

¿Cuántas personas viven en tu casa? Adultos: **Niños menores de 17 años:**

I) Por favor contesta de manera clara y honesta. Si necesitas más espacio puedes escribir al reverso de la hoja:

1.- ¿Cómo te sentiste durante tus clases en línea y por qué?

2.- ¿Cómo te sientes ahora en las clases híbridas y por qué?

3.- ¿Qué es lo que más te gusta de las clases en línea y por qué?

4.- ¿Qué es lo que no te gusta de las clases en línea y por qué?

II) Por favor subraya la opción que prefieras:

1. Yo prefiero: a) clases en línea b) clases presenciales c) clases híbridas d) no tener clases
2. No disfruto mucho: a) hablar b) escuchar c) leer d) escribir
3. Me gusta más: a) dibujar b) cantar c) jugar d) platicar
4. Adaptarme a clases en línea fue: a) Fácil b) Complicado c) Tomo tiempo pero lo logre
5. En mi casa quien me apoyaba para adaptarme a mis clases en línea fueron: a) mis dos papás b) mi papá c) mi mamá d) hermanos e) otras personas

Instrument 2

PREGUNTAS – ENTREVISTA – DOCENTE

Edad: Género: Hr y día de la entrevista:

1.- ¿Cuál es su formación académica y cuál ha sido la parte más gratificante de ella?

2.- ¿Qué fortalezas tiene ud. como docente?

3.- ¿Qué es lo que más le gusta de la docencia y lo que más le desagrada?

4.- ¿Cuál cree que son los mayores desafíos que enfrenta el sistema educativo en la actualidad?

5.- ¿Cómo describiría su trabajo como docente durante la pandemia?

6.- ¿Qué es lo que más le preocupaba mientras daba 'clases en línea'?

7.- ¿Qué ventajas y desventajas percibió?

8.- ¿Cómo cree usted qué afectó este evento su vida profesional y personal?

9.- ¿Cómo se siente ahora en el modelo híbrido?

Instrument 3

Cuestionario Virtual

Gracias por tu apoyo para responder este cuestionario. Tus respuestas serán anónimas y sólo con fines de investigación académica.

*Obligatorio

1. Me gustó tomar clases en línea: *

   Marca solo un óvalo.

   - Sí
   - No

2. Aprendí a organizar mi tiempo al momento de conectarme a mis clases, realizar actividades en plataformas y entregar tareas. *

   Marca solo un óvalo.

   - Sí
   - No

3. ¿Cómo organicé mi tiempo? *

4. Recibí ayuda de mis maestros cuando no entendía como usar alguna plataforma o pagina web. *

Marca solo un óvalo.

- Sí
- No

5. El usar mi computadora, internet y plataformas educativas me ayudó a aprender nuevos temas. *

Marca solo un óvalo.

- Sí
- No

6. Sé que aprendí nuevos temas porque... *

7. Mis maestros usaron juegos, plataformas, videos, ejercicios interactivos, etc. *

Marca solo un óvalo.

- Sí
- No

8. Durante clases en línea, tuve la oportunidad de convivir con mis compañeros, maestros y expresar mis ideas en clase *

Marca solo un óvalo.

- Sí
- No

9. Imagina que tenemos que volver a tomar clases en línea por alguna emergencia sanitaria como la que vivimos por COVID-19 ¿Cómo te sentirías al volver a usar tu computadora e internet para tomar tus clases? *

Instrument 4

CUESTIONARIO EXPLORATORIO

Cuestionario exploratorio para obtener resultados sobre el sistema educativo de emergencia en colegio IFEP

*Obligatorio

1. Correo electrónico *

2. Tu edad *

3. Fecha de nacimiento *

Ejemplo: 7 de enero de 2019

4. ¿Tienes hermanos? *

Marca solo un óvalo.

- Sí
- No

5. Si tu respuesta fue Sí, escribe sus edades *

6. ¿Cómo te sentiste en clases debido a la contingencia por Covid-19? *

7. Escoge ¿Cuáles aparatos tecnológicos utilizaste para tomar clases en línea durante este tiempo? *

Marca solo un óvalo.

Opción 1

Opción 2

Opción 3

Opción 4

Opción 5

8. ¿Cuántas personas tomaban clases en línea en tu casa y cómo se organizaron? *

9. ¿Qué dificultades enfrentaste para tomar clases en línea? *

10. ¿Consideras que las plataformas y las clases impartidas por tu profesor apoyaron tu aprendizaje durante este curso? *

Marca solo un óvalo.

- ◯ Sí
- ◯ No

11. Relata tu experiencia de acuerdo a tu respuesta anterior: *

12. ¿Cómo consideras que fue tu desempeño durante las clases en línea? *

Marca solo un óvalo.

- MUY BUENO
- BUENO
- REGULAR
- MALO

13. ¿Cómo fue el apoyo emocional por parte de tu maestro? *

Marca solo un óvalo.

- MUY BUENO
- BUENO
- REGULAR
- MALO

14. ¿Cómo consideras tu aprendizaje en la materia de inglés durante las clases en línea? *

Marca solo un óvalo.

- MUY BUENO
- BUENO
- REGULAR
- MALO

15. ¿Cómo percibes el modelo híbrido impartido en tu escuela? *

Marca solo un óvalo.

- MUY BUENO
- BUENO
- REGULAR
- MALO

16. Escribe tu opinión sobre el modelo híbrido en tu escuela: *

17. Escoge los valores que crees que has desarrollado durante este tiempo trabajando en clases virtuales.

Marca solo un óvalo.

- Alegría
- Tolerancia
- Trabajo en equipo
- Fortaleza
- Paciencia
- Respeto
- Responsabilidad
- Honestidad
- Perseverancia

18. ¿Cómo te sientes al regresar a clases? *

Marca solo un óvalo.

- FELIZ
- ANIMADO/A
- SORPENDIDO/A
- ANSIOSO/A
- PREOCUPADO/A

19. ¿Por qué? Fundamenta tu respuesta anterior. *