

Lived Experiences of Teachers in the Transition From Face-To-Face to Virtual Class During the Covid-19 Pandemic

Gary Anibal Vera Candela¹

garya.vera@uleam.edu.ec

<https://orcid.org/0000-0001-7726-2584>

Universidad Laica Eloy Alfaro de Manabí
Ecuador

Gabriela Katherine Almache Granda

galmache@utb.edu.ec

<https://orcid.org/0000-0002-0633-6037>

Universidad Técnica de Babahoyo
Ecuador

ABSTRACT

At the beginning of 2020, teachers had an unexpected experience. The COVID-19 pandemic forced teachers to change their way of teaching from face-to-face to virtual. The purpose of this study was to explore the challenges faced, and the strategies used for online teaching by teachers during the transition from face-to-face to virtual classes. Moreover, interpret if teachers were prepared to start virtual classes. Using a qualitative approach, a questionnaire and an interview were applied. The sample consisted of 6 volunteer teachers from different subjects for the interview and 40 teachers for the questionnaire. The challenges revealed by the interviewees were Poor connection, Lack of student resources, and Mastery of digital tools. Regarding the strategies, Role-Playing, Presentation, Repetition, and Learning based on problem-solving were used. Finally, the results of the questionnaire showed that the majority of the teachers were prepared to start virtual classes. Considering the reviews of other similar studies and the results in this study, certain implications could be mentioned. Although the teachers were able to overcome the challenge of virtual classes, it was evident how complex the transition was. It is necessary to keep in mind that virtuality is here to stay and the online classroom will continue to be part of the teaching and learning process. Therefore, training for teachers should be included not only on the use of technology but also on strategies for effective online teaching.

Keywords: covid-19; virtual classes; teachers' experience; e-learning; teaching process

¹ Autor principal

Correspondencia: garya.vera@uleam.edu.ec

Experiencias Vividas de Docentes en la Transición de Clase Presencial a Virtual Durante la Pandemia de Covid-19

RESUMEN

A principios de 2020, los docentes vivieron una experiencia inesperada. La pandemia del COVID-19 obligó a los docentes a cambiar su forma de enseñar de presencial a virtual. El propósito de este estudio fue explorar los desafíos enfrentados y las estrategias utilizadas para la enseñanza en línea por parte de los docentes durante la transición de las clases presenciales a las virtuales. Además, interpretar si los docentes estaban preparados para iniciar las clases virtuales. Utilizando un enfoque cualitativo, se aplicó un cuestionario y una entrevista. La muestra estuvo conformada por 6 docentes voluntarios de diferentes materias para la entrevista y 40 docentes para el cuestionario. Los desafíos revelados por los entrevistados fueron Mala conexión, Falta de recursos de los estudiantes y Dominio de las herramientas digitales. En cuanto a las estrategias se utilizaron el Juego de Rol, la Presentación, la Repetición y el Aprendizaje basado en la resolución de problemas. Finalmente, los resultados del cuestionario mostraron que la mayoría de los docentes estaban preparados para iniciar clases virtuales. Si bien los docentes pudieron superar el desafío de las clases virtuales, se evidenció lo compleja que fue la transición. Es necesario tener en cuenta que la virtualidad llegó para quedarse y el aula en línea seguirá siendo parte del proceso de enseñanza y aprendizaje. Por lo tanto, la formación de los docentes debe incluirse no solo en el uso de la tecnología sino también en estrategias para una enseñanza en línea efectiva.

Palabras Clave: covid-19; clases virtuales; experiencia de los docentes; aprendizaje en línea; proceso de enseñanza

*Artículo recibido 20 septiembre 2023
Aceptado para publicación: 28 octubre 2023*

INTRODUCTION

At the beginning of 2020, education had an unexpected turn around the world shifting from face-to-face classes to virtual classes due to the COVID-19 pandemic “Keeping in mind the effect of a long time shut down and maintaining social distancing” (Dubey & Pandey, 2020, p. 44) A terrible change in education began in the academic environment due to the restrictive measures taken and imposed by governments around the world (Karakose, 2021, p. 8). In this context, all academic institutions closed their doors to prevent the spread of the virus. The teachers had to overcome many challenges during this transition as the change was abrupt. This paper focuses specifically on exploring the perspective of teachers during the transition. According to Yüce, (2022), digital tools allowed teachers and students to continue language education without interruption during the pandemic. Therefore digital tools were the biggest support in education in those days.

The main change in the teaching and learning process worldwide was to start online classes. “Many governments enforced mandatory urfews and the previously noted preventatives as law, which then catalyzed schools shifting to teaching on entirely digital platforms for the first time in history” (Nayel Al-Sharah, 2021, p. 173). Around the world, before the need for online classes, EFL in their curricula had added the use of technologies (Nayel Al-Sharah, 2021, p. 174). Online learning did not appear due to the pandemic, it had been going on for almost two decades with online courses, distance classes, and tasks that required research on the internet, among others.

According to UNESCO 2020, more than 165 million students were left without attending educational institutions in 25 countries in the region and with the closure of schools and universities. “The disruption caused by Covid-19 has pushed academic institutions to focus their efforts on facilitating a swift, rapid, and unexpected transition to online education and assessment” (Jack and Smyth, 2020, as cited in Li, 2022). In the different countries of Latin America, the ministries of education implemented different actions to continue with the classes. The article by (Castro et al., 2020) mentioned the names they gave to the new way of learning during the pandemic. In some countries, it was called “I learn at home” and “I learn online”, while in others, it was called “Digital learning”. “Students who were unsatisfied with the quality of

instruction are more likely to agree that learning in a virtual format is of lower quality” (Melo et al., 2021, p. 139). A notable change that occurred in education in Latin America was the quality of education due to several factors like “For many students with problems of connectivity, provision of digital equipment and health due to socioeconomic problems” (Quispe-Prieto et al., 2021, p. 2).

Ecuador also had the transition like many countries around the world. In Ecuador “teachers have had to reassess and reformat the way classes are taught and taught” (Sevy-Biloon, 2021, p. 15). Sevy-Biloon (2021) also mentioned ESL teachers and students were learning to adapt to the new modality of online classes. Mendoza (2021) states that E-Learning needs a shift in teaching and learning processes. Despite the great challenges, both teacher and student adapted to the new way of learning. In addition, part of the changes in education was the implementation of internet services in Ecuadorian homes since. INEC (2020) data showed that only 53.2% of the population has internet access in Ecuador. “Many students were initially faced with the basic problem of not having internet access in their homes” (Sevy-Biloon, 2021, p. 16).

In the province of Manabi, the pandemic forced action by several educational institutions that had to train teachers and then students on the use of various platforms such as Whatsapp, ZOOM, and TEAMS, among other tools. Online classes were an alternative in this pandemic. The education in Manabi needed to implement new study tools and platforms, adapting to this new modality for both students and teachers in Manabi

It was evident that “Neither the educational institutions nor the teachers expect to experience the abrupt shift from “face-to-face” classroom teaching to “screen-to-screen” teaching” (Fiorella & Zhang, 2018, p. 36). In other words, no one was prepared for the transition. It shows the low knowledge that teachers have about the use of digital tools and no knowledge of online teaching strategies. Studies showed that teachers in Indonesia lacked both knowledge and competence as well as pedagogical content knowledge with ICTs (Julie et al., 2022).

In Ecuador, the use of digital tools was also implemented to continue online classes through e-learning. According to Sevy-Biloon (2021) “In the national university of education (UNAE) in Ecuador, this has proven to be almost impossible since teachers and students alike are struggling in the new medium of E-

learning where classes were previously designed to be face to face”. No educational system saw a situation like the pandemic coming and the effects it would cause in the education sector. Even though e-learning was something that already existed, in Ecuador, both teachers and students were not prepared for online classes. “At the beginning of the pandemic, teachers had little time to prepare for online classes and had to learn how to teach through video conference applications.” (Sevy-Biloon, 2021)

The pandemic forced rapid digital learning and teaching. However, it is necessary to know the errors that caused the lack of implementation of digital tools and teaching strategies through E-Learning. Therefore, the research questions will seek to identify the shortcomings in the teachers and the training provided. In the 21st century, it is inevitable to adapt to technology, so we want to explore if teachers had training about it. Furthermore, the challenges faced by teachers during the pandemic were similar throughout the country and the region. Nowadays The competencies of teachers in the digital environment are essential for the teaching and learning process. Therefore, training should be implemented regarding the use not only of digital tools but also of strategies to improve the effectiveness of online teaching.

Thus, the purpose of this qualitative study is to explore the teachers’ experiences and perspectives during the transition from face-to-face to virtual classes to know specifically the challenge, strategies used, and their abilities to identify possible deficiencies in their training in the digital or technological environment through the following research questions:

Research Questions

1. What were the main challenges that teachers faced in the transition to virtual classes during the COVID-19 pandemic?
2. What kind of strategies were applied to continue with online classes during the pandemic?
3. Were teachers prepared for that transition before the pandemic?

Literature Review

This study will seek to explore the f English teachers’ perspective during the transition from face-to-face to virtual classes. Therefore, we will delve into the variables of the teaching and learning process during the pandemic and the teacher’s perspective in the digital environment. It will also be important to define

some key concepts in the subject of study such as digital learning, E-Learning, digital literacy, ICT, perspective

Teachers' Perspective and Competencies During the Pandemic.

A study in the Philippines exploring older teachers' perspectives on online learning during the pandemic found that it was difficult for them to adapt to online learning but they had the intention of improving their performance. They also mention that the lack of introduction of online learning in schools in the Philippines is one more problem for educational administrations (Samifanni & Gumanit, 2021).

Marek (2021) stated that during the first weeks of the transition from face-to-face to remote, teachers felt that they received little attention in the process. Therefore, most of teachers were not prepared to teach online classes. In a study directed by Giovannella (2020) in the Italian school system to know the experiences of teachers two months after the start of the pandemic, he concluded that the teachers' perception of technology was positive. "A teacher has to face and conquer all the challenges present in online teaching and learning responsively to assure continuous learning to achieve the targets set" (Rasmitadila et al., 2020). So, it was a great challenge to adapt to teachers "this transition to online teaching means various requirements for their new adaptation and implementation" (Hanh, 2021).

The virtual class was a term that everyday teachers began to assimilate and at the same time try to implement. According to Granda (2021) these are basic variables to consider to implement virtual classes (1) internet connection, (2) a computer, or (3) a mobile device with an Internet connection. Before thinking about how virtual classes would be done, we thought about what would be needed to start, making sure that all or at least the majority of teachers and students have these basic digital tools. it was revealed that teachers often have limited access to ICTs and lack the necessary computer literacy skills to facilitate in the virtual classroom (Aina & Ogegbo, 2022).

Digital Literacy

An interesting concept is also that of digital literacy. "Digital literacy constitutes the basis for citizenship to be effective and efficient in the 21st Century in professional and personal lives" (Tejedor et al., 2020).

Tejedor (2020) defined digital literacy as learning about the use of information and communication technologies which would be something similar to Information and communication technologies (ICT).

Teachers' Skills

Something notable during the pandemic was that education had no alternative plans to deal with this transition Aznar Sala (2020). In other words, teachers did not have the necessary skills to begin the transition from face-to-face to virtual teaching. Competencies are the necessary qualities that a professional requires for optimal job performance (Griethuijsen, 2020, as cited in Mendoza, Navarro, Martinez, Vinueza, Vega, 2021, p. 1342). Osbeck (2018) mentioned that teachers should have conceptual training regarding ICT.

Perspectives

According to the website, www.significados.com perspective has different meanings, depending on what environment is being treated, for example: In the economic area, gender perspective, holistic perspective, theoretical perspective, etc. On the other hand, perspective is the way to analyze a certain situation, it is a point of view on a certain situation and each person has a personal perspective on the situation in question. The dictionary of the Spanish Royal Academy in one of its definitions says that perspective is a point of view from which an issue is considered or analyzed.

The Teaching Process During a Pandemic

At the beginning of 2020, the world takes strict distancing measures and mandatory quarantine in most countries due to the coronavirus disease or also known as COVID-19. This affects many sectors in the countries, specifically, we are going to focus on education. Rahayu and Wirza (2020) mentioned that all academic institutions were closed because the Ministry of Education implemented the study from home for all levels through online classes. For that reason, most teachers enter a new environment and that is to work from home using digital tools since it was not usual for them. Therefore “Conducting online classes is itself a great challenge for teachers who are habitual of conducting classroom teaching from many years” (Gurung, 2021).

Although terms such as virtual classes or online learning were not new when the pandemic began, this type of teaching was not practiced in public education. A very common question among teachers was, how are classes taught virtually? In the article of Rinekso (2021) It is mentioned a basic methodology of virtual classes very quickly the teachers were adapting to this. According to Lestyanawati (2020), Indian teachers found three teaching methods: 1) online chat, 2) videoconference, and 3) both methods in the teaching and learning process

The Learning Process During the Pandemic

One of the questions that the researchers asked themselves when they perceived the teachers' lack of knowledge about online classes and the use of digital tools was, did the fact that teachers are not prepared affect the students' academic performance? Realyvásquez-Vargas (2020) mentioned in his research several cases where they found negative and positive things as in a specific case where the effect was negative for students' performance, for example, it was due to the lack of internet access and the researchers detected the need for face-to-face interaction by students. In another, on the contrary, a group experiment was carried out where the students who had the online classes had a better performance, helping them to have a better learning strategy

Veselina and Snejana (2020) mentioned several benefits such as being able to learn and advance in their studies and have time to work, flexible hours, progress at a pace according to their commitment, time savings by not having to be physically at the university, economic savings by having to spend on transportation or rent, and development of certain skills to adapt, but a scholar paper showed that “benefits of virtual teaching were less than expected as a result of issues of network connectivity, training, and lack of the personal touch limited the adoption and success of virtual classrooms” (Arora & Srinivasan, 2020, as cited in Marek, 2021, p. 92).

Digital Learning

Digital learning, is also known as E-Learning. Moreover, with the advancement of technology, terminologies began to appear that are synonymous with digital learning, like Internet-based training, web-based training, online learning, network learning, and distance learning (Lin, Chen, and Liu, 2017, p. 3555).

Despite online learning is not new, after the pandemic, there was an increase in the use of virtual classrooms in an online setting (Hamed and Bolbol, 2021, as cited in Aina and Ogegbo, 2022, p. 130). Aina and Ogegbo (2022) also defined this concept as an online learning environment where teachers and learners can participate in learning activities. Furthermore, Anderson (2008) defined online learning as part of distance education and always focused on providing facilities such as flexibility of time and space.

METHODOLOGY

Using a qualitative approach, the study adopts an exploratory design. For data collection in this qualitative research, we will use interviews and questionnaires as instruments. The purpose of this qualitative research will be to explore the lived experiences of teachers during the transition from face-to-face to virtual classes due to the COVID-19 pandemic. The instruments will be applied to teachers of different ages and years of experience to have different contexts and perspectives.

Participants

For the interview, a sample of six teachers was chosen, 5 female and 1 male volunteer from an urban public educational institution in the province of Manabí, Ecuador. Three school teachers and three college teachers from different subjects were chosen to explore various academic contexts. They were teachers who have gone through the transition process from face-to-face class to virtual class. For the questionnaire, responses were accepted from 40 teachers, 31 (79.5%) female and 9 (20.5%) male, aged between 28 and 61 years.

Ethical Considerations

As a first step for the use of the instruments within the educational institution, it was necessary to request permission in writing to the Educational District 13D07 Chone-Flavio Alfaro, the same was addressed to the Director of Education of the District. With the approved request, it was presented to the rector of the school for his knowledge. Then it was possible to apply the instruments and collect the necessary information for the investigation. A letter was written to the participants indicating that they will not be exposed to being identified to guarantee confidentiality.

Instruments

The instruments that were used for data collection are interviews and questionnaires. First, the interview was with open questions to obtain information for the analysis of the first and second research questions *What were the main challenges that English teachers faced during the transition to virtual classes during the COVID-19 pandemic?* And *What kind of strategies was applied to continue with online classes during the pandemic?* Then for the questionnaire, we used the dichotomous questions and the Likert scale focused on obtaining information on the third research question *Were teachers prepared for that transition before the pandemic?* In both interview and questionnaire instruments, the questions were created and validated by five experts. Also, they were applied in Spanish because the teachers were from different subjects

Data Analysis

To respond to the first research question and explore about the teachers' main challenges, the interview was conducted and then transcribed in its entirety. Within the answers of the interviewees, all were categorized in which the challenges that the teachers had were mentioned. There were three categories: (1) Bad connection, (2) Lack of student resources, and (3) mastery of digital tools. Then, they were tabulated in an Excel spreadsheet to obtain absolute frequency results in percentages of each category. For the anonymity of the participants, their names are replaced with letters and numbers based on code. One type of code was used: for teachers (T). For example, T4 meant teacher number four.

To identify the strategies used by teachers, in the same way, the answers of the interviewees were categorized, looking for everything related to the strategies they used during the transition. Here the same code was used for the anonymity of the participants

For the third research question, the data from the questionnaire was created in Google Forms. The link to the questionnaire was sent to forty teachers and their answers were obtained in percentages and analyzed.

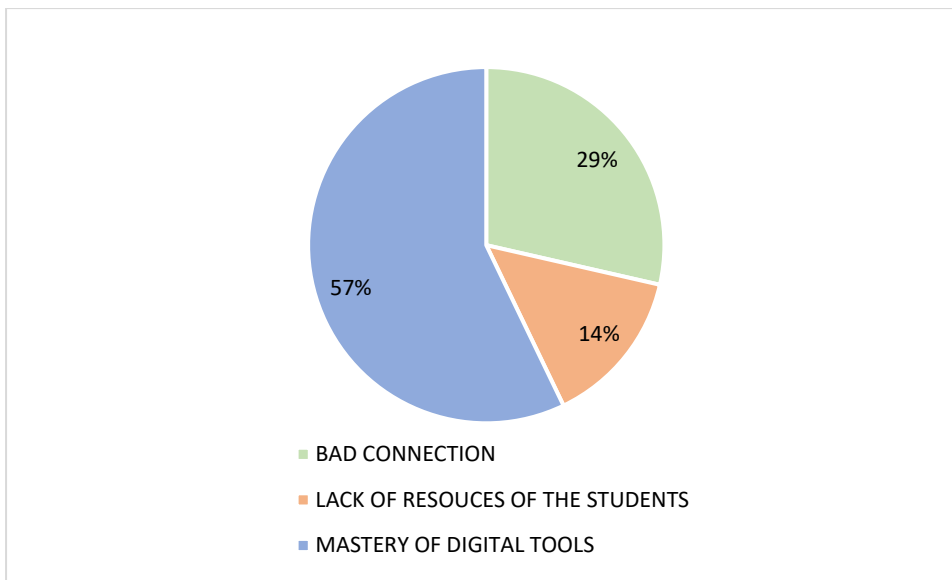
Findings

This section shows the findings obtained from the application of the instruments. The results were organized around the research questions.

1. What were the main challenges that teachers faced in the transition to virtual classes during the COVID-19 pandemic?

To answer this research question, an interview was applied which served to collect information regarding the challenges faced and thus be able to analyze each of the perspectives of the six participants, the findings of the analysis are shown below:

Figure 1. Challenges Faced by Teachers During Pandemic



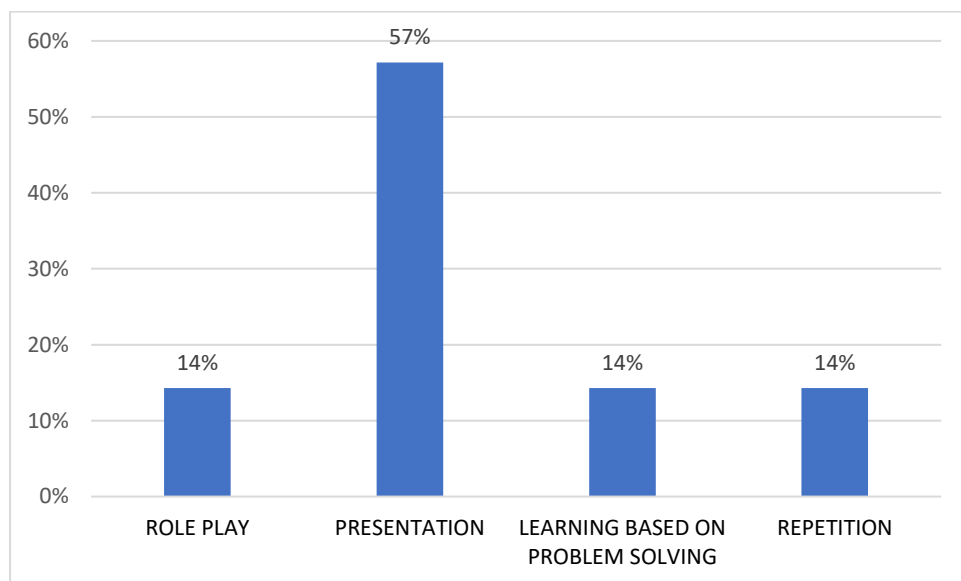
According to figure 1 teachers expressed their main challenges, which were organized into three categories. The first category was "Bad connection". The 29% of participants responded as "it was also the failure of the internet due to the capacity that we sometimes had at home but it did not supply us for our children" (T2) and "the internet, I changed the internet three times" (T3). The second category was "Lack of resources of the students". In this case, 14 % of participants said that "there were boys who did not have access to be able to connect so we tried to solve it with them by sending them the files" (T4). The last category was "Domain of digital tools". It was the most mentioned by participants, here 57% of the teachers stated that "Well, the biggest challenges that I had, rather once I was already adapted, was to adapt to the students and the parents" (T1), other comments were that "the biggest challenges were learning to master the virtual

classes through the different blogs” (T2) and "not knowing anything about technology" (T5). Lastly, another teacher said, "it was managing the use of platform technology, which was something new for us" (T6).

2. What kind of strategies were applied to continue with online classes during the pandemic?

To answer this research question, an interview was applied which served to collect information regarding the strategies used and thus be able to analyze each of the perspectives of the six participants, the findings of the analysis are shown below:

Figure 1. Strategies Used During the Pandemic by Teachers



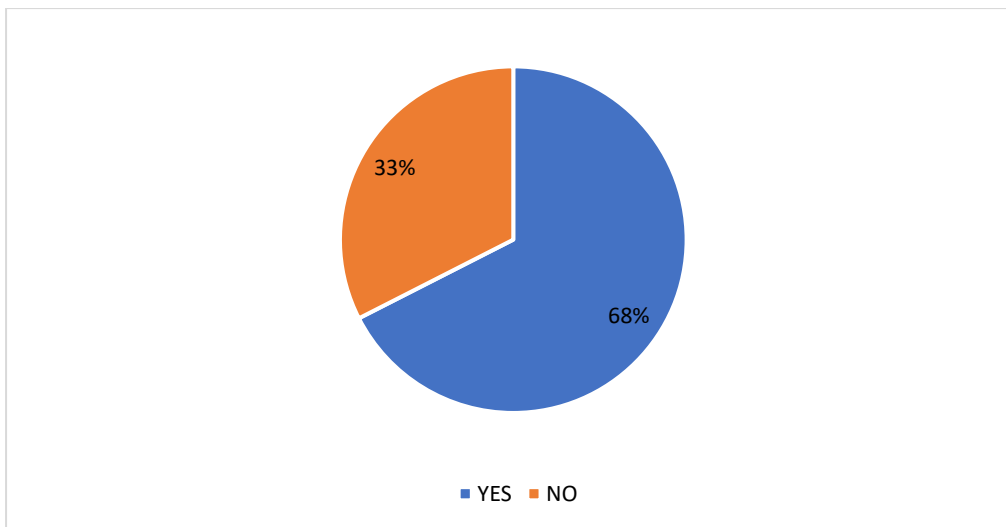
In the same way, the answers about the strategies used were organized into categories. The results were: The first category was “Presentation”. The 57% of the participants answered things like: “and then work with slides, with graphics, something that they catch their attention”(T1), also “the zoom board or the board of us the teacher's platform” (T3), moreover “we recorded the video ourselves” (T4), and finally “slides, videos that were sent home and then played” (T6). The second category was “Learning based on problem-solving”. Here 14% commented “Sometimes they told us "I don't have internet" others that "I can't connect" (T2). The third category was “Repetition”. The 14%, of the teachers stated that “repetition, always in the

studio of us, we have is repetition repeat repeat” (T5). And the last one was “Role Play”. 14% made comments like “also interaction” (T6). These four strategies were expressed by the teachers interviewed.

3. Were teachers prepared for that transition before the pandemic?

To answer this research question, a questionnaire was applied and the most relevant data was selected. From the 40 responses of the participants in this instrument, the findings are shown below:

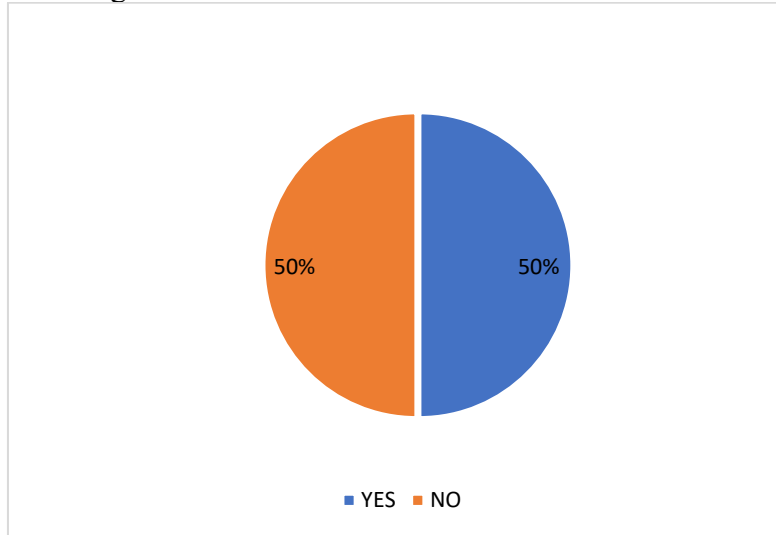
Figure 2. Teachers Who Had ICT Training Before the Pandemic



Note. The results expressed in the figure 3 were obtained from the questionnaire with the following question: Did you have any type of training on the use of Information and Communication Technologies (ICT), virtual classes or online learning before the pandemic?

Figure 2 indicates that 68% of those surveyed stated that they had had ICT training before the pandemic and 33% did not have any type of ICT training

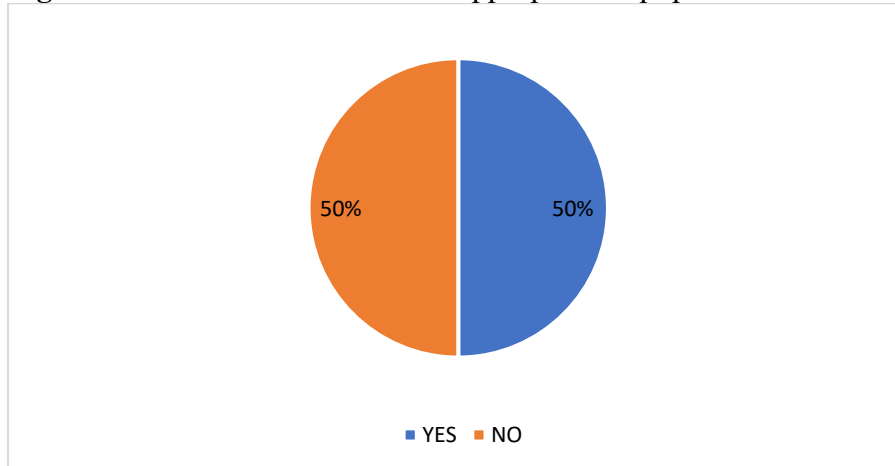
Figure 3 . Teachers Who Received Training on Methodologies and Strategies for Online Teaching



Note. The results expressed in the figure 4 were obtained from the questionnaire with the following question: Did you have any training on online teaching methodologies and strategies before the pandemic?

shows that about 20 participants (50%) received training on online teaching and the same number of participants stated that they have not received training on it.

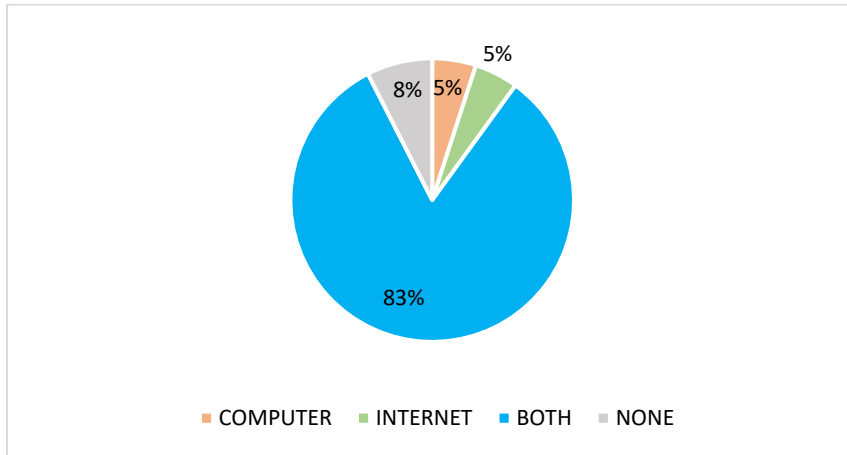
Figure 4 . Teachers Who Had the Appropriate Equipment for Learning ICT



Note. The results expressed in the figure 5 were obtained from the questionnaire with the following question: Did your institution have adequate equipment for learning the use of Information and Communication Technologies (ICT)?

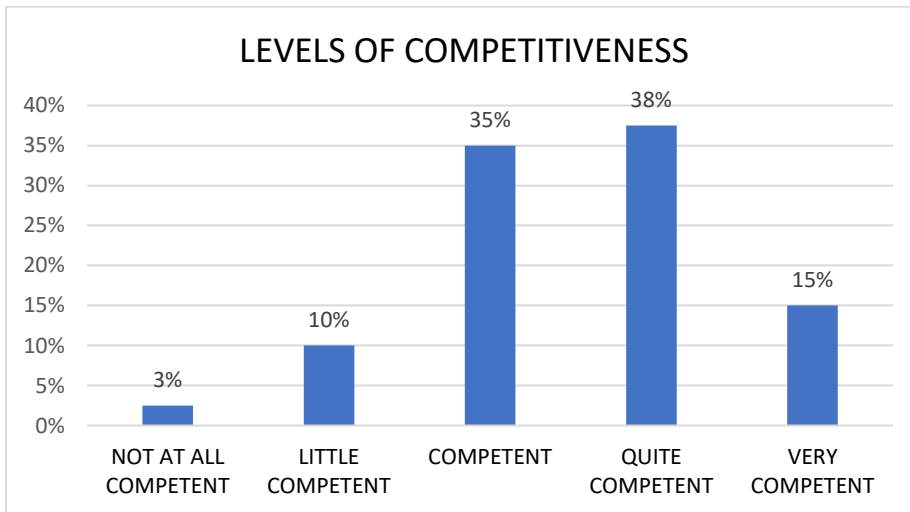
Figure 4 shows that 50% of the participants had the appropriate equipment for learning the use of ICT in their institutions.

Figure 5. Basic Tools Teachers Had During Transiti



Note. The results expressed in the figure 6 were obtained from the questionnaire with the following question: Did you have basic tools like a computer and internet during the transition? shows that 83% of those surveyed mentioned that they had the basic tools such as a computer and the internet to start virtual classes. On the other hand, 5% had a computer and another 5% had internet. Finally, only 8% did not have any of the basic tools

Figure 6. How Competent Teachers Feel for Online Classes



Note. The results expressed in the figure 7 were obtained from the questionnaire with the following question: How competent do you think you were to lead an online class effectively from 1 to 5? Being 1 as not at all competent and being 5 as very competent.

In the figure 7, it was found that: first, the 3% of participants felt “not at all competent”. Then, the 10% of participants felt “little competent”. The following result shows that 38% of participants felt "Quite

competent" and the 35% of participants felt "Competent". Finally, the 15% of participants felt "very competent".

DISCUSSION

Having the results of the challenges expressed by the participants, it was found similarities in the study by Munastiwi (2021), which mentioned several challenges, and among them is "Possession of smartphones and network coverage" which referred precisely to the lack of resources of the students.

Results related to Internet connection issues and technology proficiency were also similar to the research conducted by Gurung (2021). It was found that 63.94% of the participants agreed that the lack of technical and software knowledge becomes one of the greatest challenges for both teachers and students. While the result of this study indicated that, 57% of the participants agreed with this challenge.

Shahnama, Yazdanmehr, and Shirvan, (2021) stated that, the main challenge was the slow speed of the Internet. In other matters, the main challenges found in the Mishra, Gupta, and Shree (2021) study were not only unstable network connections but also students did not have essential resources to join online, with no mention of technology proficiency as a challenge. Unlike the results of this study, the poor connection and lack of resources of the students had a minimal appearance in the responses of the participants.

Tukan (2020), who had a similar objective to this research, to explore some of the challenges faced and the strategies used by teachers during the COVID-19 pandemic. They found in the results and discussion of "application performance during online learning" and "little connection" between the challenges of the participants, coinciding with our results. And as a strategy, "watching the video tutorial" was found among others, therefore, it would be another similar result with this study, which is the presentation.

In these results, the presentation strategy had a lot of mention (57%) from the participants. On the contrary, in the results of Gavilanes González, Altafulla Macias, López Zea, and Carrillo Rosero1 (2022), it was the least mentioned (6,3%) by the participants. The most mentioned strategies were summaries, diagrams or graphic organizers, and questionnaires.

This study showed that 67.5% of the participants had training on the use of ICT, 72.5% felt prepared to start virtual classes, while another study showed that 78% of the respondents used ICT before of the

situation of starting virtual classes, 30% of the sample did not have training in that area and only 36% felt prepared for classes through ICT (Castillo-Retamal, 2021).

CONCLUSION

The drastic change from face-to-face to virtual classes generated a lot of dissatisfaction and concern among teachers, since most of them had never worked online. Factors such as the lack of equipment in the institutions, the lack of ICT training, the lack of mastery of technologies, among others, were issues of concern for teachers during the transition. This qualitative study focused on exploring the experiences lived by teachers during the pandemic. Specifically, this study focuses to explore the challenges faced, and the strategies used in teaching online, and analyzing whether or not teachers were prepared for virtual classes in a school located in the province of Manabí, Ecuador

In summary, this study has shown through the results that factors such as "not mastering the technology" or "poor connection" were indeed challenges faced by teachers, causing dissatisfaction and concern. On the other hand, it was also found that although they used strategies such as presentation, role play, repetition, and learning based on problem-solving, they were not sure if were applying effective online teaching strategies. Finally, based on the most relevant information from the questionnaire, could be concluded that most teachers were prepared for virtual classes. They were the ones who did have ICT training and had the basic tools, but there were also teachers who were not prepared.

Recommendations

This qualitative study explored the experiences of teachers from schools and colleges in urban areas during the transition from face-to-face to virtual classes. Therefore, the recommendation for future research in this regard would be to add the experiences of university and rural teachers to explore more academic contexts and increase the number of participants to obtain more information.

Limitations

The limitations that existed for the development of this research were time and population. For the application of the instruments, it was complex to get volunteers for the interview and having a limited time to carry out the research, it was not possible to get more participants.

BIBLIOGRAPHIC REFERENCES

- Adebunmi, Y. A., & Ayodele, A. O. (2022). Investigating TVET college educators' experiences while transitioning from the traditional classroom to the virtual classroom during the COVID-19 pandemic. 40((1): 129-142), 14. doi:<http://dx.doi.org/10.18820/2519593X/pie.v40.i1.8>
- Aina, A. Y., & Ogegbo, A. A. (2022). Investigating TVET college educators' experiences while transitioning from the traditional classroom to the virtual classroom during the COVID-19 pandemic. (1): 129-142. doi:<http://dx.doi.org/10.18820/2519593X/pie.v40.i1.8>
- Aji Budi Rinekso, A. B. (June de 2021). Teaching Online in Pandemic Time: the Experience. 18. doi:<https://doi.org/10.24252/Eternal.V71.2021.A9>
- Aliyyah, R. R. (2020). The Perceptions of Primary School Teachers of Online Learning during the. Journal of Ethnic and Cultural Studies, 7 (2), 90-109, 20.
- Aznar Sala, F. (2020). La Educación Secundaria en España en Medio de la Crisis del COVID-19. International Journal of Sociology of Education - Special, 27. doi:
<http://dx.doi.org/10.17583/rise.2020.5749>
- Derling Jose Mendoza Velazco, M. N. (June de 2021). Digital Andragogical Competences of Ecuadorian Higher Education Teachers during the COVID-19 Pandemic. European Journal of Educational Research, 10(3), 18. <http://www.eu-jer.com/>
- Dr. Pushkar Dubey, D. D. (2020). Distance learning in higher education during pandemic: challenges and opportunities. The International Journal of Indian Psychology, 8(2), 4. doi:10.25215/0802.204
- Gavilanes González, E., Altafulla Macias, S., López Zea, M., & Carrillo Rosero1, D. (2022). Estrategias Didácticas Digitales Aplicadas en las Clases Virtuales Durante la Pandemia del 2020. Revista Conrado, 18(86), 8.
- Giovannella, C. (2020). Measuring the effect of the Covid-19 pandemic on the Italian Learning Ecosystems at the steady state: a school teachers' perspective. 22. on at:
<https://www.researchgate.net/publication/343127257>

- Grace Melo, D. S.-L. (September de 2021). What does the pandemic mean for experiential learning? Lessons from Latin America. *Applied Economics Teaching Resources*, 3(3), 16. doi:doi:10.22004/ag.econ.313690
- Gurung, S. (January de 2021). Challenges Faced by Teachers in Online Teaching During COVID19 Pandemic. *The Online Journal of Distance Education and e-Learning*, 9(1), 11. <https://tojdel.net/journals/tojdel/articles/v09i01/v09i01-02.pdf>
- Hanh, H. N. (2021). Vocational English Teachers' Challenges on Shifting Towards Virtual Classroom Teaching. *AsiaCALLOnline Journal*, 12(3), 16. <https://asiacall.info/acoj>
- Hongki Julie, V. F. (January de 2022). Indonesian mathematics teachers' views on distance learning barriers during the early Covid-19 pandemic. *Journal of Research and Advances in Mathematics Education*, 9. doi:<https://doi.org/10.23917/jramathedu.v7i1.15616>
- Karakose, T. (2021). The impact of the COVID-19 epidemic on higher education: Opportunities and implications for policy and practice. *Educational Process International Journal*, 10(1), 7. <http://dx.doi.org/10.22521/edupij.2021.101.1>
- Lestyanawati, R. (2020). Strategies and Problems Faced by Indonesian Teachers in Conducting E-Learning System During COVID-19 Outbreak. *CLLiENT Journal*, 2(1), 12. <https://ojs.unsiq.ac.id/index.php/clients/article/view/1271/734>
- Li, D. (2022). The Shift to Online Classes During the Covid-19 Pandemic: Benefits, Challenges, and Required Improvements from the Students' Perspective. *The Electronic Journal of e-Learning*, 20(1).
- Lin, M.-H., Chen, H.-C., & Liu, K.-S. (2017). A Study of the Effects of Digital Learning on Learning Motivation and Learning Outcome. *EURASIA Journal of Mathematics Science and Technology Education*, 13, 12. doi:DOI 10.12973/eurasia.2017.00744a
- Marek, M. W. (2021). Teacher Experiences in Converting. *International Journal of Distance Education Technologies*, 21.

- Marek, M. W. (2021). Teacher Experiences in Converting Classes to Distance Learning in the COVID-19 Pandemic. *International Journal of Distance Education Technologies*, 19(1), 21. doi:10.4018/IJDET.20210101.oa3
- Mendoza Velazco, D., Navarro Cejas, M., Cejas Martinez, M., Vinueza Naranjo, P., & Vega Falcón, V. (2021). Digital Andragogical Competences of Ecuadorian Higher Education Teachers during the COVID-19 Pandemic. *European Journal of Educational Research*, 10(3), 18. doi:<https://doi.org/10.12973/eu-jer.10.3.1341>
- Mishra, L., Gupta, T., & Shree, A. (3 de September de 2021). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. Elsevier, 8. doi:<https://doi.org/10.1016/j.ijedro.2020.100012>
- Munastiwi, E. (2021). Adaptation of Teaching-Learning Models Due to Covid-19 Pandemic: Challenge Towards Teachers Problem-Solving Skills. *Jurnal Ilmiah Sekolah Dasar*, 5(1), 12. <https://ejournal.undiksha.ac.id/index.php/JISD/index>
- Nayel Al-Sharah, S. A. (2021). EFL Teachers' Perceptions towards English Language Teaching During the Pandemic: Jordanian Perceptive. *Eurasian Journal of Applied Linguistics*, 7(2), 15. <http://dx.doi.org/10.32601/ejal.911514>
- Nezhadmehr, M., & Khatoony, S. (2020). EFL Teachers' Challenges in the Integration of Technology for Online Classrooms during Coronavirus(COVID-19)Pandemicin Iran. *The Asian Journal of English Language & Pedagogy*, 8(2), 16. doi:<https://doi.org/10.37134/ajelp.vol8.2.7.2020>
- Osbeck,, C. (2018). Possible competences to be aimed at in ethics education – Ethical competences highlighted in educational research journals. *Journal of Beliefs & Values*, 15. doi:<https://doi.org/10.1080/13617672.2018.1450807>
- Rahayu, R. P., & Wirza, Y. (2020). Teachers' Perception of Online Learning during Pandemic Covid-19. *Jurnal Penelitian Pendidikan*, 20(3, 392 - 406), 15. n at: <https://www.researchgate.net/publication/349611973>

- Realyvásquez-Vargas, A. (2020). The Impact of Environmental Factors on Academic Performance of University Students Taking Online Classes during the COVID-19 Pandemic in Mexico. Sustainability,
- Samifanni, & Gumanit, R. L. (2021). Survival with Technology: Elderly Teachers' Perspective Towards Emergency Online Learning During the COVID-19 Pandemic in the Philippines. *Studies in Learning and Teaching*, 2(3), 17. doi:<https://doi.org/10.46627/silet>
- Sevy-Biloon, J. (2021). Virtual or face to face classes: Ecuadorian university students' perceptions during the pandemic. *English Language Teaching Educational Journal*, 4(1), 10.
- Sevy-Biloon, J. (2021). Virtual or face to face classes: Ecuadorian university students' perceptions during the pandemic. *English Language Teaching Educational Journal*, 4(1), 10. doi:[doi:doi.org/10.12928/eltej.v4i1.3935](https://doi.org/10.12928/eltej.v4i1.3935)
- Shahnama, M., Yazdanmehr, E., & Shirvan, M. (2021). Challenges of Online Language Teaching during the COVID-19 Pandemic: A Process Tracing Approach. *Journal of Teaching Language Skills*, 40(3), 37. doi:[10.22099/jtls.2021.40964.3015](https://doi.org/10.22099/jtls.2021.40964.3015)
- Quispe-Prieto, S., Cavalcanti-Bandos, M. F., Caipa-Ramos, M., Paucar-Caceres, A., and Rojas-Jimenez, H. H. (2021). A Systemic Framework to Evaluate Student Satisfaction in Latin American Universities under the COVID-19 Pandemic. *SYSTEMS*, 9(15), 21. <https://doi.org/10.3390/>
- Tejedor, S. (2020). Digital Literacy and Higher Education during. Santiago Tejedor, doi:[doi:doi:10.3390/publications8040048](https://doi.org/10.3390/publications8040048)
- Tukan, F. (2020). Challenges and Strategies Using Application in Teaching Online Classroom During Pandemic Covid-19. *Elite Journal*, 2(2), 18.
- Veselina, N., & Snejana, D. (2020). Advantages and disadvantages of virtual and classical training experience gained from COVID-19 pandemic. 6. <http://www.c3.icvl.eu/papers2020/30.pdf>
- Walter F. (2020). A Mathematics Education Research Agenda in Latin America Motivated by Coronavirus Pandemic. *EURASIA Journal of Mathematics, Science and Technology Education*, 16(12), 14. <https://doi.org/10.29333/ejmste/9277>

- YÜCE, E. (2022). The Immediate Reactions of EFL Learners towards Total Digitalization at Higher Education during the Covid-19 Pandemic. *Journal of Theoretical Educational Science*, 15((1), 1-15), 15. <https://dergipark.org.tr/en/download/article-file/1777721>
- Zhang, C. (2020). From Face-to-Face to Screen-to-Screen: CFL Teachers' Beliefs about Digital Teaching Competence during the Pandemic. *International Journal of Chinese Language Teaching*, 1((1) 35-52), 18. doi:<https://doi.org/10.46451/ijclt.2020.06.03>