University Education Policies for the Sustainability of Education in Venezuela during COVID-19: The Case Study of Universidad Central de Venezuela

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ABSTRACT

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| COVID-19 caused a global crisis, impacting the dynamics of education systems, which risked the right to education and the continuity of the teaching-learning process, generating the countries to define and implement policies based on the use of technology to secure education. However, many countries were not ready to embrace virtual education. The Venezuelan State defined “*Universidad en Casa*” as a policy to give continuity to the educational process at the university level in times of pandemic. Guided by a qualitative approach, this paper analyses this policy with the aim of establishing its guiding principles and identifying the challenges of its implementation under the perspective of the Theory of Chaos and Complexity taking as case or study the Central University of Venezuela. The information was collected from 7 informants to authorities of the Central University of Venezuela. The information analysis technique was the content analysis. Among the findings were: the right to education established at the Constitution was at risk, due to conditions resulting from COVID-19; and the implementation of educational policies supported by technology that were not consulted. The postulates that emerge from the Theory of Chaos and Complexity were not properly applied, because adaptability, resilience, and planning are required. The University acted with the resources available to meet the objective. Good practices such as training, information, and collaborative work yielded results. The context requires flexibility and analysis, considering that an educational modality such as the virtual one was assumed. |

***Keywords:*** *Universidad en Casa, Estate, Policy, teaching-learning process, right to education, virtual education.*

1. INTRODUCTION

The 21st century brought transformations and changes at different levels. One of these changes was related to incorporating technology into the educational process. It progressively occurred due to fears and misunderstandings implied by the increasing teaching-learning process mediated by Information and Communication Technologies (ICT). However, platforms, tools, applications, and instructional models were emerged based on e-learning.

Virtual education has been applied since the beginning of the 21st century. However, the structure and tools used to mediate the learning process have varied. Augmented reality, simulations, and other strategies have been used to guarantee the objective of education: learning. The integration of ICT in the education system is part of the challenges of the new millennium. Different countries worldwide have introduced various strategies to reinforce the use of technology during the teaching-learning process. Online libraries, TV broadcasts, guidelines, resources, video lectures, and online channels were introduced in at least 96 countries, contributing to building technological capabilities to overcome the digital gap.

Humanity faced in 2020 a public health situation: COVID 19 or SARS-CoV-2, a virus. World Health Organization -WHO- (2020) defined this virus as “...an infectious disease caused by the SARS-CoV-2 virus". Cucinotta (2020) added that “The World Health Organization (WHO) on March 11, 2020, has declared the novel coronavirus (COVID-19) outbreak a global pandemic”.

COVID-19´s accelerated spread led to the implementation of drastic isolation measures to stop its transmission and somehow contain the number of infected. World Health Organization (2020) suggested a lockdown as the most secure measure. So, countries acted to prevent the spread of the virus, limiting the use of mass transportation and, in many cases, stopping commercial, financial, and, therefore educational activities. Consequently, it was necessary to define strategies to guarantee education. COVID-19 contributed to reinforcing virtual learning as a modality in the educational world.

Ariza (2020) wrote that the Venezuelan government established a lockdown measure on March 16, 2020. Due to the first confirmed case of COVID-19 in the country. The Venezuelan government had to design actions to provide continuity to the learning-teaching process during a pandemic crisis. The school year was halfway finishing it. The Venezuelan State had to think about how to plan the next school considering the isolation measurements implemented. According to the social rights established in the new constitutional framework (Constitution, 1999) and, the affirmation in the Organic Law of Education -OLE- (2008) that education was a fundamental right, Venezuelan State faced challenges to guarantee the right to education and the continuity of the learning process.

OLE defines and regulates how the educational act has to be carried out in the country. OLE stipulated in Article 16 the characteristics of the Venezuelan educational system. It also referred to educational modalities. Higher education is one of them. Ministry of People´s Power of University Education (MPPUE) [*Ministerio del Poder Popular de Educación Universitaria*] is the authority on educational policy in the university sector. In 2020, César Trómpiz minister of the MPPEU gave guidelines about the university educational process during the pandemic of COVID-19. The plan “*Universidad en Casa”* was born.

This plan as a part of a sectoral social policy in Venezuela established according to MPPEU (2020a) seven measures:

Suspension of face-to-face academic activities; academic pursuit at a distance or not in person for undergraduate and graduate; the conformation of Council University AntiCOVID-19; the AntiCOVID-19 Committee University in each university; Conformation of Voluntary Brigades of the university community; vital activities and reservation Plan Facilities and services; and permanent communication with the university authorities.

These actions were intended to guarantee the right to education as established. They represented the guidelines universities will follow to keep on going the learning process during pandemic times. However, it is necessary to orientate actions. So, rights can be achieved and the learning process promoted.

Venezuelan universities’ situation is critical and complex, due to the humanitarian crisis and the network conditions to fulfil the planned *Universidad en Casa*. According to the study State of broadband in Latin America and the Caribbean, by the Commission Economic for Latin America and the Caribbean (ECLAC) (2016), “Venezuela was the country with the lowest percentage change in terms of growth in Mobile Broadband (BAM). Regarding the measurement of speed in mobile connections, Venezuela had the lowest average at the regional level (1.9 Mbps), finding itself within the three countries with the least number of high-speed connections "with 0.5% of connections over 10 Mbps and 0.2% of connections over 15 Mbps” (p. 26).

This reality provides challenges to implementing the policies. Besides, it requires understanding the policies defined and knowing universities' authorities’ perspectives regarding the issue, considering the context. Cecilia García-Arocha university president of the Universidad Central de Venezuela in an interview with García (2020), highlighted that “the UCV is resuming its academic activities through its web platform, which is supported and recognized by international organizations as well as certified by the International Institute of the United Nations Organization for Education, Science and Science. Culture, (Unesco) for Higher Education in Latin America and the Caribbean (Iesalc)” **[Translation from the researcher]**.

This article analyzes *Universidad en Casa*, the educational policy implemented by the Venezuelan State to ensure the continuity of the teaching-learning process in the country during COVID-19. It focused on Universidad Central de Venezuela (UCV) as a case study, being the first university in the country, as well as the one with the largest number of students. It was proposed to collect information from three different faculties of the UCV: humanities, economics and social sciences, and pharmacy. The information came from deans, school principals, academic coordinators, and a platform coordinator. All this provided answers to three specific questions:

- What has the Venezuelan state done to give continuity to the university education process during the pandemic?

- How does the Theory of Chaos and Complexity support the implementation of *Universidad en Casa* in the Venezuelan context?

- What were the challenges faced by Universidad Central de Venezuela in the implementation of *Universidad en Casa*?

The general objective is to analyze the policy implemented by the Venezuelan State at the university level to guarantee the teaching-learning process during COVID-19, taking as a case study the Universidad Central de Venezuela. The research used the Chaos and Complexity Theory as a theoretical model to explain the State and university management for implementing the policy. The study also established the perception that UCV authorities have about the subject and how they would comply with this precept during the pandemic period [(Arial, normal, 10 font, justified) (Detailed instruction about this section is given below. After reading these instructions, please delete this paragraph and begin typing your text here. If you are using copy-paste option then select ‘match destination formatting’ in paste option OR use ‘paste special’ option and select ‘unformatted Unicode text’ option).

2. THEORETICAL FRAMEWORK

COVID-19 provided a context of emergency. Actions were defined to guarantee the learning process and, the right to education. Therefore, policies need to be designed to fulfill this objective. Considering this context, it is necessary to use a theoretical framework that helps to comprehend the reality, being considered as suitable the Chaos Theory because is not completely new in policy analysis. Overman (1996) observes “chaos theory has its roots in simple systems theory and owes much to this now-familiar approach”. Nevertheless, Chaos Theory has been developed further by generating its perspectives on the understanding of policy processes.

About the systems, it is a set of parts that interact with each other, where the parts usually function as a unified whole, from which the feedback between inputs (information) and outputs (results) is given. The policy systems approach argues that government or decision-makers receive inputs or support from the social, economic, and political environment. Consequently, they proceed and make decisions or policy actions referred to as outputs. In other words, analysis of the context is necessary, so the policy design has every interested party´s point of view.

Bechtold (1997) considers that a system as continuously transforming itself to a higher level of complexity and making irreversible changes. In this respect, the link between chaos and complexity is a little bit tricky. However, the relationship with complexity relies on chaos. In other words, even though a dynamic system may look chaotic, other elements provide a sense of purpose (strange attractor), which defines its boundaries and guides its evolution and growth.

There are some uncertainties in the system. They will tend to bend or distort the rules on which the predictions are posed. Therefore, Cloete (2004) states that the edge of chaos is somewhere between order and disorder or between a chaotic and complex situation like the context provided by COVID-19. Praught (2004) establishes this is the best scenario for an organization or policy system because it will provide a higher level of creativity and innovativeness. According to Kayuni (2010), crisis forms a critical element in the policy process and, crisis ushers an institution or the policy issue to be rightly placed on the edges of chaos.

This study goes with the assumption that the name "chaos theory" comes from the fact that systems are disordered. However, they go further and, find the underlying order in apparently random scenarios through its extension to the analysis of complexity theory. In other words, the research uses the definition provided by Bechtold (1997) when he establishes that “chaos is a system theory that attempts to understand the behavior of nonlinear, unpredictable systems”.

Regarding the conceptual framework guiding this study, the following categories were specified: state, policy, social policy, and virtual education. **State** may have a specific definition, depending on the conceptual framework that each author has. However, there are common elements that allow a definition to be generated. This study assumes the concept proposed by Jessop (2015), who speaks of the state from the traditional theoretical normative approach, identifying three elements: "a demarcated territory, an organized and structured permanent political-administrative power, as well as its population" (p. 74), not forgetting sovereignty, which is part of the modern state. In the case of Latin America, the idea of a state is raised in the constitutional postulates; for Venezuela, the state is defined in the Constitution (1999), in article 2.

States establish a system of policies to guide their actions. Policies can be defined according to Anderson (1975) as the course of actions that are implemented by one or more actors. In this sense, the policy is the operation of a framework plan, such as the education policy designed by the Venezuelan state to deal with the crisis caused by COVID-19.

In Venezuelan context, **Social Policy** can be defined according to Reisman (2001) as "the occupation of the state by those in conditions of social vulnerability, which must be satisfied while the social fabric continues its existence. This type of policy is not only in its essence but also in its functions deeply linked to the community’s objectives" (p. 30). So social policy is the action of the state to solve problems of a public nature, generating well-being in the population.

As far as **virtual education** is concerned, it can be said that it involves the use of online technological channels to provide the educational act. Garrison and Anderson (2005) explained that this does not exclude different technologies or methods. Virtual education is thus seen as a technology-mediated model of teaching and learning in which elements such as time, space, and communication are no obstacles to the educational act.

3. material and methods

The research used a qualitative approach, which allowed the analysis of the policies applied by the Venezuelan State at the university level to guarantee the learning process during COVID-19. It was mainly based on the information from interviews applied to 7 informants to authorities of the Central University of Venezuela: 3 Deans, 1 School Director, 1 Faculty Academic Coordinator, 1 School Academic Coordinator and 1 Platform Expert; leading to a content and policy analysis. According to Bryman & Bell (2003), this is part of the qualitative approach. The research focused on answering the questions of why and how typically part of the qualitative approach (Leedy & Ormrod, 2009).

The method used was the Case Study because its purpose is based on taking an aspect of social reality and analyzing it in depth. The Case Study allowed using the elements provided by the key participants of the Universidad Central de Venezuela to build categories for the analysis. It helped to focus on the implementation of the policy. The method selected provided the ability to adjust to reality. The analysis obtained from the specific case (Universidad Central de Venezuela) showed the interaction of all the change factors.

The research had a documentary design since the information also came from official sources that provided the guidelines of university educational policy. It was a field design because the information was collected from live sources (authorities of the Universidad Central de Venezuela). The collection of secondary data used the documentary bibliographic research design. This design consisted of taking information collected in previous investigations (documentaries, reports, Articles, and even interviews) to support theoretical research.

The research used as instrument to collect the information: Semi-structured interviews via email and, it was validated by experts who reviewed the interview script. The experts consulted belonged to different professional areas. The analysis unit of this research was the Universidad Central de Venezuela, particularly the Faculties of Humanities, Economics, and Social Sciences and, Pharmacy, since these key informants provided a broad perspective of the operation of the university's educational policy, and the researcher had the liaison with the deans, directors, and those in charge of implementing the virtual strategy at the Universidad Central de Venezuela. Similarly, the number of interviewees represents a manageable amount concerning the number of researchers doing the work and the study execution time. The perceptions of the interviewed population of the three faculties established how the University operationalized and implemented the guidelines that are based on the university educational policy to give continuity to the university-teaching process at a said educational level during the COVID-19 pandemic.

To ensure the key participants´ confidentiality, their participation was coded as follows: Dean of Faculty (DF1-DF3), with a letter added by the respective faculty DFE 1, DFH2, and DFP3; Academic Coordinator of Faculty (FAC1); School Director (SD1); School Academic Coordinator (SAC 1); and Platform Administrator (PA1).

The perceptions of interviewees in all three faculties established how the university operationalized and implemented the guidelines that are based on university education policy to provide continuity to the teaching-learning process at the education level mentioned during the COVID-19 pandemic.

4. results and discussion

The results came from the implementation of semi-structured interviews via the email. Therefore, the findings show the interrelation between theoretical approaches and the testimonies of those who perceived the context that they are in. This article focused on three dimensions: the fundamental principles of the policy, chaos, and transformation in policy implementation, and the challenges faced by UCV in the execution of *Universidad en Casa*. It provides an understanding of the policy applied in Venezuela during COVID-19 at the university level to guarantee the right to education in the teaching-learning process.

**4.1 Main principles of the policy**

The Venezuelan State defined *Universidad en Casa [[1]](#footnote-1)* as a National University Plan for addressing the challenges raised by COVID-19. It was a group of measures that the university system must follow to deal with the crisis contingency generated by physical isolation due to COVID-19. MPPEU (2020b: 6) established the plan as the following “Each institution of University Education of public management and private management of the country must present to the MPPEU, a plan for distance academic pursuit”.

Maitta (2020) cited a declaration from César Trómpiz minister of the Ministry of the People’s Power for University Education (MPPEU), who gave guidelines about the university educational process during the pandemic of COVID-19. The minister said about *Universidad en Casa* the follows "The methodology to be used will be distance classes, in which phone calls, text messages, email and messaging through WhatsApp will be used". These orientations became the main principles of the policy.

A policy requires a systematic research process for its implementation, and the establishment of indicators that will measure the impact of the existing policy (ex-post analysis) providing inputs for the respective correction as well as the options for a new policy (ex-ante analysis) (Weimer and Vining, 1999; European Commission, 2014). In other words, defining a policy requires an analysis of the context and establishing the principles that govern it.

The principles of the policy were based on two categories: fundamental principles that supported *Universidad en Casa* and the objectives of the policy, related to the academic and social.

The key participants established regarding the foundations of the policy that *Universidad en Casa* was designed to seek continuity to the teaching-learning by using digital media during the lockdown caused by COVID-19; in other words, it was a response to the crisis and contingency situation resulting from the pandemic. This precept is viewed from different perspectives, depending on the level of the key informant.

The Deccan level mentioned that *Universidad en Casa* had been little officially communicated. This assumption was supported as follows **DFE 1**: *From what we have read, the policy is to be able to attend to the teaching process from home. Be able to transfer a set of telematics-mediated activities into the home. But, at an operational level, using technology involved* **SAC 1**: *continuing the training process from home, using digital media to teach classes either synchronously (online sessions) or asynchronously, where the teacher previously records the content of the class and transmits it in digital media (WhatsApp, Telegram, etc.), among others*.

On the other hand, the key participants established that although it is a matter of state action to guarantee continuity of education at the university level, the pedagogical and didactic bases to support the policy were not established. The official documents only showed generic aspects of the development of virtual educational activities, as well as strategies and means to operationalize policy.

Regarding the academic and social objectives of *Universidad en Casa*, the key participants highlighted the weakness of the policy due to the low level of student resources to carry out the teaching-learning process mediated by technology.

The key participants similarly stressed that there was a low level of coordination between the institutions for the implementation of the policy since the ministerial authorities' announcements regarding *Universidad en Casa* were only by social media, without evaluating the status of connectivity and access to equipment to fulfill the objectives of the policy, minimizing the possibilities to achieve the academic objectives. The **DFH 2** expressed as follows: *University at Home sought the continuity of the learning process at the university level, and that should be so, but there was no articulation for this to be done in the best way*.

The implementation of the policy leaving aside the consultation with the universities, the experts in areas such as planning and virtual education to specify the technical requirements, as well as the required training actions to meet the contingency, can be interpreted as a failure to consolidate the learning process of the students, which will impact negatively in their technical skills. **FAC 1**: *Universidad en Casa was implemented without consulting public universities. This situation created distortions because the academic objectives were not met*. This aspect demonstrates improvisation in the definition, planning, and implementation of policy.

**4.2 Chaos and transformation in policy implementation**

The COVID-19 pandemic has had a multidimensional impact globally. A large number of students are deprived of their education. According to Strauss (2020), the pandemic contributed to the closure of more than 90% of the world’s schools, which led to chaos. Consequently, educational institutes entered into crisis regarding how to continue the learning process. Mogaji (2020) explained the context associated with universities across the world by saying that they "are facing similar problems due to the pandemic, but the universities from emerging countries have scarce resources to deal with this global issue. While universities in the developed countries may be better prepared to adapt and transit to online challenges." (p. 5).

Therefore, online education started as an emergency alternative to traditional face-to-face education during the pandemic period, which required planning and organization. According to Smith (2011), citing authors like Rhee (2003) and Sullivan and Daniels (2008), “Chaos Theory is a concept that should be given serious and significant consideration by all strategic managers, regardless of the industry in which they operate." (p. 192). These theoretical concepts become important basic planning considerations in assessing risks, especially in designing better strategies to face the contingency during COVID-19. Chaos theory orients organizations' transformation to mitigate the consequences of errors and hazards with opportunities.

The COVID-19 context provided, according to the followers of Chaos Theory, apparent randomness in many phenomena, recognizing inherent predictability that cannot be removed by a simple process of collecting and analyzing data. Smith (2011) explains that "to achieve long-term success and survive the turbulent and hypercompetitive business environment, managers should both embrace the inevitable uncertainty within their system and avoid attempts to control and manage their business." (p. 192). This does not mean entering the situation without planning. In other words, it states developing actions.

In the Venezuelan context, particularly from the case study taken, concerns arise about what did the UCV do in the chaos and crisis context to ensure the teaching-learning process? The key participants explained that actions that produced results were necessary, and how to adopt virtual education to reality. Each faculty identified the requirements to comply with the state guidelines. They established that ICT training for both teachers and students was the first problem to face. Therefore, the primary action focused on defining training processes regarding digital tools, and platforms to guarantee the minimum elements to work in the middle of the chaos. This dynamic was mentioned by the three deans interviewed.

The **DFP 3** provided support to this fact when she explained that *One of the things that developed was the training of teachers and students in ICT necessary in a situation like the pandemic. Courses were held, considering the practical characteristics of this faculty, realizing that, although it was not clear what and how to do it, the university should guarantee the right to education*.

In the Venezuelan case, another element added to the context of the crisis promoted by COVID-19 was the economic and financial crisis (ENCOVI, 2021), which involved defining actions from chaos and complexity. This aspect was pointed out by **FAC1**, who explained as follows: *Despite economic constraints over many years, many measures have been taken. The pandemic has worsened the situation. The Faculty of Humanities and Education, together with the support of the Distance Learning Unit, has promoted virtual teaching and the mixed mode to continue the academic periods from 2020 to the present with synchronous and asynchronous modalities. The UCV has a virtual classroom that allows all teachers to give classes remotel*y. Even though the conditions were not fully guaranteed for the implementation of *Universidad en Casa*, UCV had protocols to deal with the situation, so the right to education and the continuity of the teaching-learning process were guaranteed.

**4.3 Challenges for the implementation of *Universidad en Casa***

Most countries have digital resources and platforms that can be accessed remotely. Consequently, ministries of education established guidelines to continue the learning process during COVID-19. So, they implemented virtual education. Commission Economic for Latin America and the Caribbean (ECLAC) (2020) mentioned that States “launch of free-to-air television or radio programming” (p. 3). However, according to Álvarez Marinelli et al (2020), few countries in the Latin American region have national digital education strategies with a model that takes advantage of ICT.

The suspension of face-to-face teaching activities to make way for virtualization has meant that teachers and students have high pressure. González-Calvo, Barba-Martín, Bores-García, and Gallego-Lema (2020) established that the transition to online teaching has been abrupt, ignoring the long training processes, and redesign of subjects, and infrastructures that support the demand for tele-teaching.

Río Campos (2020) has established that in several Latin American countries, there was a negative influence on the teaching-learning process due to COVID-19. The primary reason is the lack of investment through the years for the adaptation of virtual campuses, institutional websites, digital scientific journals, and the training of teachers and students in the management of ICT. Therefore, it turns out relevant to establish the challenges faced by the Universidad Central de Venezuela in the implementation of *Universidad en Casa* during COVID-19.

The key informants identified five common factors that challenged the implementation of *Universidad en Casa*: poor connectivity, low salaries, less access to updated equipment, personal pressure, and lack of ICT training. These approaches are based on what was described by **DFH 2**: *Weak Internet connection. Lack of technological resources for teachers and students. The low pay of teachers and their increased responsibilities with virtual activities. The social, economic, and political context affects the learning process. So far, the government has not given incentives to pay teachers for using connectivity to secure jobs and reduce the cost of living*.

This context reinforces that the economic and social conditions of Venezuela complicated the implementation of the policy since virtual actions require equipment, time, training, electricity, and a stable internet connection, based on what was expressed by **SAC 1**: *On a personal level, it was a complete challenge. My home phone broke two days before the lockdown was decreed. During the pandemic, a broken home phone posed a challenge and a high-security risk. I had to travel to a neighbor’s house to broadcast my classes. I had to reduce my schedule from two classes per week to one, with which I only managed to dictate half of the content during the confinement and mobility restriction phase. Failure of public services (telephone and internet) and mobile phone coverage failures could also be added to the problems faced not only by professors but also students. Recurrent power blackouts. Lack of knowledge about digital learning platforms (Zoom, Aula, among others)*. This situation was resolved months later.

Besides, the improvisation is reinforced, since there was a lack of consultation with specialists in policy and educational technology from university educational institutions to define the policy, generating challenges to UCV for the definition of internal guidelines to guarantee education. This aspect was supported by **AP 1** who stated that: *Difficulties and complications have always been associated with the country’s connectivity infrastructure problems and lack of investment in this area. Venezuela does not have a national virtual education plan. The challenges have been largely associated with problems generated by improvisation and ignorance. The main difficulty teachers and students encountered during the pandemic was related to the training process on ICT tools, causing dropouts in these sectors*.

There was a response from the Venezuelan state for contingency. Based on this context, the Universidad Central de Venezuela decided how it would deal with the difficulties related to taking over the policy, considering the connectivity conditions, intermittent electricity service, and the low level of ICT knowledge and training demonstrated by teachers and students.

**4.4 Learned lessons in the implementation of *UNIVERSIDAD EN CASA***

Lesson learned refers to developing effective approaches to the implementation of actions, and it also means learning from the experience systematically to improve the management systems used.

The context provided by COVID-19 represented an opportunity to analyze the strategies usually applied in the learning process. So, better formulas come to improve educational systems, improving a program, project, or action in different aspects like innovation or creativity, effectiveness, replicability, sustainability, relevance, ethics and responsibility, efficiency, and execution, or articulation with different actors.

EcuRed (NY) defines Lessons learned as “…the conclusions obtained once a certain task has been carried out. They result from the analysis and reflection on fulfilling the proposed objectives, the time spent, the effort, and the money invested”. The International Labor Organization (2007) comments regarding a Lesson learned that

…is helpful information regarding the effects of an action or set of actions on reality, which is obtained from processes of 'trial and error'. A Lesson Learned allows you to optimize the model, focus, or amplitude of an action to its future implementation, or evaluate the advisability of its non-application (p. 14)

Therefore, a lesson learned refers to the implemented actions that worked or not evaluating their improvement.

The Project Management expresses in its PMBOK Guide that a Lesson Learned is “…the learning gained from the process of performing the project. Lessons learned may be identified at any point. Also considered a project record, to be included in the lessons learned knowledge base” The key participants identified several lessons learned during the implementation of *Universidad en Casa*, like the possibility of learning about the different tools and education strategies provided by software and platforms. The chance to evaluate Venezuelan technological infrastructure to support virtual education. This element is supported by **PA 1** when he expressed that *The possibility of asynchronous work as a knowledge exchange tool was presented to us as a lesson in this contingency. Self-training and the development of technological support tools were and are a strength acquired in these times.*

The other element considered by the key participants referred to as the contingency of the actions, and how COVID-19 proved to be the breaking point to reinforce the educational policies regarding the use of technology. Besides, *Universidad en Casa* represented an action to face the contingency, although, it was not consulted evidencing that it did not have the perspective of all the stakeholders of the university sector. **SD 1** supported this precept when she expressed *Seeking solutions and making appropriate adjustments to the situation, respecting the rights of all those involved. Consult the proposals before approving and implementing them. Flexibility*.

Quality teaching at a university level during COVID-19 requires a culture in the organization. Therefore, universities are called to seek excellence in education, which relates to top management and recognition of the flaws in the definition of the policy to provide insights and improvements, in other words, the policies require the perspective of all the members of the State.

Consequently, this implicates a depth study of the State and the University. What the key informants expressed regarding the learned lessons in the implementation of Universidad en Casa allows us to understand the actions implemented by UCV to keep on the teaching and learning process during COVID-19. Analyzing the organization on the inside is a key factor to success. Communication and active listening for the consolidation of proposals became the primary learned lesson during the process.

5. Conclusion

Education during COVID-19 demonstrated the need to incorporate educational strategies besides the traditional face-to-face class method. So the teaching-learning process could continue. COVID-19 context put in evidence that health is vital. Besides, it showed a reality inside higher educational systems: few teachers knew how to use ICT, and they used little platforms for virtual teaching. Most of them implemented platforms as a repository of information, ignoring the instructional design to generate Virtual Learning Spaces (VLS). Some teachers worked with synchronous tools to carry out activities. It can also be noted that few teachers implemented tools to generate interactive content that allows them to show their themes innovatively.

Universities experienced forced virtualization due to confinement measures for the COVID-19 pandemic. This situation emerged as an opportunity to adopt digital tools at this educational level. However, it is necessary to plan virtual education. Furthermore, it is important to assume new forms of teaching and learning, considering a quality alternative inspired by ICT. Kumar (2022) has pointed out that COVID-19 led universities to undertake innovative initiatives worldwide. It is notorious how higher educational institutions have exhibited resilience to adapt and transform during the pandemic. However, there are still challenges to face.

The return to face-to-face activities at the universities was a slow process. *Universidad en Casa* was maintained during the pandemic, and it generated reflection on the various pedagogical models and didactic strategies to be implemented under the virtual educational modality that proposes the maintenance of ICT-mediated university classes. Technology is here to stay. Consequently, it is necessary to understand and appropriate ICT advantages. The study came in handy to analyze the policy defined by the Venezuelan state to guarantee the right to education and the continuity of the learning process.

COVID-19 generated a complex social and health situation. Theories regarding policy analysis cover some aspects that helped to understand the consequences the virus left at the educational level. However, the theories were not developed considering a situation like the pandemic, which is supposed a limitation. However, the purpose of the article is to generate knowledge, allowing us to have the opportunity to widen things out and, support the policies to solve problems.

Considering the ICT and the growing rise of the Artificial Intelligence (AI) context nowadays, the Venezuelan State should define policies focusing on the regulation of how to design, implement, and evaluate virtual education. COVID-19 evidenced that teachers need preparation for managing and using technology in education, so they acquire digital skills. Training in ICT and virtual education will provide anticipation, toward scenarios of total isolation or confinement, similar to the one produced by COVID-19 measurements. These actions will prepare the educational system. It will also provide continuity to the learning process and guarantee the right to education.

University education is a sectoral social policy in Venezuela. Public policies and strategies to develop Higher Education changed significantly with the approval of a new Constitution in 1999 and a new Organic Law of Education in 2008. Beyond this current legal context, the implementation of actions is according to Rojas (2019) "a series of reforms within the national education system and built through the policy of the Educational Missions a parallel institutionally, whose effects on professional training and the production of science and technology" (p. 157), constituting a reduction of university´s quality of professionalization, due to resources were toward this parallel system instead of the national one established.

Finally, Izarra (2009) states that solid pedagogical knowledge needs to be elaborated. The best way to do so is by assessing. It is necessary to see the good practices carried out by different universities implementing *Universidad en Casa*, which can serve as a reference to improve the policy and will also help to evaluate the university´s dynamic.

Ethical approval

The research was sent to an IRB committee to check whether the research aims and research design were ethically acceptable. Besides, the proposal approved was examined by five professors who established it was according to East China Normal University´s (ECNU) code of conduct.

Besides, the principle of Confidentiality was guaranteed in the research. Therefore, the real names of the key informants (deans, headmistresses, and platform experts) do not appear in the research. A codification was established. This codification was used for the analysis categories and the technical sheets. Consequently, the identifications used in the analysis were fictitious and were in no way related to their real names. However, it should be clarified that the verbatim came from real people, belonging to the staff of the Faculties Social Science, Humanities and Pharmacy of the Universidad Central de Venezuela.

**Definitions, Acronyms, Abbreviations**

**BAM**  Mobile Broadband.

Teléfonos de Venezuela)

**ECLAC** Commission Economic for Latin America and the Caribbean

**ENCOVI** Encuesta a Hogares

**ICT** Information and Communication Technologies

**IESALC** Higher Education in Latin America and the Caribbean

**MPPUE** Ministry of Popular Power for University Education

**OLE** Organic Law of Education

Universitario)

**UCV** Universidad Central de Venezuela

**UNESCO** The United Nations Educational, Scientific and Cultural Organization

**USA** United States of America

**WHO** World Health Organization

**Disclaimer (Artificial intelligence)**

Option 1:

Nazarelys Blanca Arcila and Li Mei hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

References

Álvarez Marinelli, H. et al. (2020). *La educación en tiempos del coronavirus: los sistemas educativos de América Latina y el Caribe ante COVID-*19. Document under discusion. <https://publications.iadb.org/publications/spanish/document/La-educacion-en-tiempos-del-coronavirus-Los-sistemas-educativos-de-America-Latina-y-elCaribe-ante-COVID-19.pdf>

Aponte, C. (2017). Breve revisión de la historia oficial La política social durante la gestión de Maduro (2013-2016). *Solidaridad Social*. <https://www.researchgate.net/publication/318239780_La_politica_social_durante_la_gestion_de_Maduro_2013-2016>

Ariza, J. (2020). Presidente Maduro anuncia que este martes todo el país entra en cuarentena social. <http://mppre.gob.ve/2020/03/16/venezuela-cuarentena-social/>

Bechtold, B. (1997). Chaos theory as a model for strategy development. *Empowerment in Organizations*, 5 (4), 193-201.

Bolivarian Republic of Venezuela. (1999). Constitution. N°5.908 Extraordinario. <http://www.asambleanacional.gob.ve/documentos_archivos/constitucion-nacional-7.pdf>.

Bolivarian Republic of Venezuela. (2008). Organic Law of Education OLE. <https://www.oas.org/juridico/spanish/mesicic2_ven_anexo_33_sp.pdf>

Commission Economic for Latin America and the Caribbean (ECLAC). (2016). *State of broadband in Latin America and the Caribbean*. <https://repositorio.cepal.org/bitstream/handle/11362/40528/6/S1601049_es.pd>

Cloete, F. (2004). *A brief note on quantum theory* (pp. 1-39). In.: Cloete, F. (Ed.). Contemporary trends in public policy analysis. Stellenbosch: Stellenbosch University.

Cucinotta, D. (2020). *WHO Declares COVID-19 a Pandemic?* <https://pubmed.ncbi.nlm.nih.gov/32191675/>

EcuRed. (NY). *Learned lessons*. <https://www.ecured.cu/Lecciones_aprendidas#Buenas_pr.C3.A1cticas_y_lecciones_aprendidas>

ENCOVI (2021). *Informes de resultado de la encuesta de condiciones de vida*: ENCOVI. Caracas: UCV-USB-UCAB. <https://www.proyectoencovi.com/encovi-2021>

European Commission. (2014). Guidance Document on Ex-ante Evaluation. URL: http://ec.europa.eu/regional\_policy/sources/docoffic/2014/working/ ex\_ante\_en.pdf

World Health Organization. (2020). *Coronavirus disease (COVID-19)*. <https://www.who.int/health-topics/coronavirus#tab=tab_1>

MPPEU. (2020a). *Boletín Universidad en Casa*. Año 1. N°1.: <http://universidadencasa.educacionuniversitaria.gob.ve/nextcloud/index.php/s/Dd2jcnjZiN8d9mT#pdfviewer>

García, S. (2020). *La lucha de la UCV por mantener la educación en medio de la pandemia*. <https://eldiario.com/2020/06/04/la-lucha-de-la-ucv-por-mantener-la-educacion-en-medio-de-la-pandemia/>

Garrinson, D., y Anderson, T. (2005). El e-learning en el siglo XXI: investigación y práctica. Barcelona: *Octaedro*, p. 11.

González-Calvo, G. et al. (2020). Aprendiendo a Ser Docente Sin Estar en las Aulas. La COVID-19 Como Amenaza al Desarrollo Profesional del Futuro Profesorado*. International and Multidisciplinary Journal of Social Sciences*, 2(9), 152- 177. <http://doi.org/10.17583/rimcis.2020.5783>

González, L y La Cruz, T. (2007). Política Social en Venezuela. <http://biblioteca2.ucab.edu.ve/iies/bases/iies/texto/GONZALES_Y_LACRUZ_2007.PDF>

Izarra, D. (2009). Development of the teaching formation in Venezuela. Venezuela. *INFANTES*, volume 1, N° 1.

International Labour Organization. (2014). *Evaluation Lessons Learned and Emerging Good Practices*. <https://mandeguidelines.iom.int/sites/g/files/tmzbdl2306/files/2023-03/wcms_165981.pdf>

Jessop, B. (2015). *The State: Past, Present, Future*. https://www.ritsumei.ac.jp/acd/re/k-rsc/hss/book/pdf/vol07\_08.pdf.

Kayuni, H. (2010). Chaos-complexity theory and education policy: lessons from Malawi’s community day secondary schools. *Bulgarian Journal of Science and Education Policy (BJSEP)*, Volume 4, Number 1.

Kumar, C, Mukherjee, M, Belousova, T, and Nair, N Editors. (2022). Global Higher Education During and Beyond COVID-19. Perspectives and Challenges. Singapore: Springer. <https://doi.org/10.1007/978-981-16-9049-5>

Leedy, P, and Ormrod, J. (2009). *Practical Research: Planning and Design*. United States of America: Pearson Editorial.

Maitta, D. (2020). *Plan Universidad en Casa deja a la educación superior a su suerte*. <https://otrasvoceseneducacion.org/archivos/346850>

Mogaji, E. (2020). *Impact of the Pandemic on Higher Education in Emerging Countries: Emerging opportunities, challenges and research agenda*. <https://ssrn.com/abstract=3622592>

Overman, F. (1996). The new sciences of administration: chaos and quantum theory. *Public Administration Review*, 56, 487-491

Project Management Institute (PMI), 2010. *A Guide to the Project Management Body of Knowledge (PMBOK Guide*). 4th Edn, Project Management Institute, Newtown Square, PA., ISBN: 1933890665, pp: 466.

Praught, H. (2004). *An overview of complexity science and its relevance to the health care sector* (pp. 433-446). In.: Cloete, F. (Ed.). Contemporary trends in public policy analysis. Stellenbosch: Stellenbosch University.

Reisman, D. (2001). *The Definition of Social Policy*. https://link.springer.com › content › pdf.

Ríos Campos, C. (2020). COVID-19 y Educación Superior Universitaria Pública del Perú. *Revista Clake Education*, 1(02), 1-1. <http://revistaclakeeducation.com/ojs/index.php/Multidisciplinaria/Article/view/1>

Strauss, V. (2020*). Schools of more than 90 percent of the world’s students closed during this pandemic. This graphic shows how fast it happened*. Washington Post. <https://www.washingtonpost.com/>

Smith, A. (2011). Chaos Theory and recessional business environments: case studies of operational health of service and manufacturing organizations. *Int. J. Services and Operations Management*, Vol. 8, No. 2. <https://www.researchgate.net/publication/264837949>

Weimer, D.L. and Vining, A.R. (1999). *Policy analysis: Concepts and practice*. Englewood Cliffs Prentice-Hall.

World Health Organization. (2020). Coronavirus disease (COVID-19). <https://www.who.int/health-topics/coronavirus#tab=tab_1>

1. The Constitution (1999) of the Bolivarian Republic of Venezuela is following the principles and objectives of the Universal Declaration of Human Rights, the International Covenant on Economic, Social, and Cultural Rights, the American Convention of Human Rights, and the Additional Protocol of the American Convention of Human Rights regarding economic, social, and cultural rights (San Salvador Protocol). The administrations on duty expand and include –with reason– these principles and concepts in their political vision. Venezuelan State has different legal instruments to guarantee the right to education in the country. Education is a sectoral social policy in Venezuela, according to Aponte (2017) and González (2007). It is part of the actions to guarantee the right established. [↑](#footnote-ref-1)