https://doi.org/10.15446/ma.v16n1.110762

Post-COVID Education in Leticia: Challenges and Implications

Educación Post-covid en Leticia: Retos e implicaciones

Educação pós-covid em Letícia: Desafios e implicações

Mariana Aristizabal Romero[1]

Reflection article
Editor: Edgar Bolívar-Urueta
Received: August 23rd, 2023. **Returned for revision:** July 23rd, 2024 **Accepted:** November 19th, 2024.

How to cite: Aristizabal Romero, M. (2025). Post-COVID Education in Leticia: Challenges and Implications. *Mundo Amazónico*, 16(1), e110762. https://doi.org/10.15446/ma.v16n1.110762

Abstract

The COVID-19 pandemic shocked the world in 2020, altering almost every aspect of daily life. One of the areas that suffered the most during the pandemic was the education system. As urban areas transitioned to online platforms and software, rural towns lacked the technological resources to handle internet connectivity challenges that deepened the crisis. One such example is the city of Leticia, the capital of the Amazonas Department in Colombia. Located in the southern part of the country, Leticia can only be accessed by flight or boat. In 2020, Leticia was already facing significant educational inequalities, and teachers and students alike struggled with remote learning due to the limited access to technology and internet connectivity. Established offline teaching practices were barely modified for remote learning and the crisis was aggravated when the rapid spread of COVID-19 impacted entire families and communities. Unable to work and already facing financial issues that hindered access to food and services, residents witnessed the death of loved ones and community leaders before the arrival of vaccinations. Now that in-person classes have resumed, it is worthwhile to analyze the implications of the last year´s gap in students' learning process, the role of administrators through government initiatives, and the current challenges that teachers and students face in their new classroom reality. This article provides valuable information to understand the urgent needs of the educational community in Leticia in the Post-COVID scenario.

[1] Master of Arts in Applied Linguistics and TESOL. Escuela Normal Superior Marceliano Canyes Santanca. ORCID: https://orcid.org/0000-0002-4678-4539 E-mail: marianita1709@hotmail.com

https://doi.org/10.15446/ma.v16n1.110762

Keywords: Education, Pandemic, COVID-19, Information and Communication Technologies (ICTs), Amazon

Resumen

La pandemia causada por el covid-19 conmocionó al mundo en 2020 cambiando casi todos los aspectos de la vida diaria. Uno de los ámbitos que más sufrió durante la cuarentena fue la educación. Las poblaciones urbanas lograron recurrir a plataformas y software en línea, pero las zonas rurales sin recursos tecnológicos enfrentaron desafíos de conectividad que empeoraron la crisis. Un ejemplo de esta situación se vivió en Leticia, Amazonas, Colombia. Ubicada en el extremo sur del país, Leticia solo se puede acceder por avión o en barco. En 2020, Leticia ya enfrentaba grandes desafíos en su sistema educativo, y tanto docentes como estudiantes, sufrieron casi a diario especialmente con el aprendizaje remoto debido al acceso limitado a la tecnología e Internet. Las anticuadas prácticas de educativas apenas se modificaron durante el aprendizaje remoto y la crisis se agravó cuando el rápido brote de Covid afectó a las familias. Al no poder trabajar, los habitantes de Leticia se enfrentaron a problemas financieros para acceder a alimentos y servicios, los locales fueron testigos de la muerte de muchas personas antes de la vacunación. Ahora que se retomaron las clases presenciales, vale la pena analizar las implicaciones de los últimos dos años en los procesos de aprendizaje de los estudiantes, el papel de los administradores a través de iniciativas gubernamentales y los desafíos actuales que enfrentan docentes y estudiantes en su nueva realidad presencial. Este documento proporciona información valiosa para comprender las necesidades urgentes de la comunidad educativa Leticia en el escenario Post-covid.

Palabras clave: Educación, pandemia, Covid-19, Tecnologías de la Información y Comunicación (TIC), Amazonas

Resumo

A pandemia de covid-19 chocou o mundo em 2020, mudando quase todos os aspectos da vida quotidiana. Uma das áreas que mais sofreu durante a quarentena foi a educação. As populações urbanas conseguiram recorrer a plataformas e software online, mas as zonas rurais sem recursos tecnológicos enfrentaram desafios de conectividade que agravaram a crise. Um exemplo desta situação foi vivenciado em Letícia, Amazonas, Colômbia. Localizada no extremo sul do país, Letícia só pode ser acessada por avião ou barco. Em 2020, Letícia já enfrentava grandes desafios em seu sistema de ensino, e tanto professores quanto alunos sofriam quase diariamente, principalmente

https://doi.org/10.15446/ma.v16n1.110762

com o ensino remoto devido ao acesso limitado à tecnologia e à Internet. As práticas educativas desatualizadas quase não foram alteradas durante o ensino à distância e a crise agravou-se quando o rápido surto de Covid 19 afetou as famílias. Não podendo trabalhar, os moradores de Letícia enfrentaram problemas financeiros no acesso a alimentos e serviços, os moradores presenciaram a morte de muitas pessoas antes da vacinação. Agora que as aulas presenciais foram retomadas, vale a pena analisar as implicações dos últimos dois anos nos processos de aprendizagem dos alunos, o papel dos administradores através de iniciativas governamentais e os desafios atuais que professores e alunos enfrentam em sua nova realidade presencial. Este documento traz informações valiosas para compreender as necessidades urgentes da comunidade educativa de Letícia no cenário pós-covid.

Palavras-chave: Educação, pandemia, COVID-19, Tecnologias da Informação e Comunicação (TIC), Amazônia

Introduction

The following reflexive article is a result of review and revision of information primarily gathered from the author's lived experiences and the experiences of other teachers from Leticia, Colombia, during the COVID-19 crisis in 2020, and the virus's impact on education in this region. The author presents a descriptive analysis, triangulating teachers' perspectives (gathered through conversations, informal interviews, and surveys), as well as official documents issued by the Colombian government and local authorities and public data from the media in order to provide a broad panorama of what the educative community of Leticia, particularly high school teachers, endured at the pandemic's peak and to assess the challenges that affected the post-COVID classroom when in-person teaching resumed.

This article employs a qualitative methodology to capture the social reality from the perspective of the study subjects (Sanchez and Murillo, 2021). As such, the author follows Monje's (2011) definition of qualitative methodology, as the primary objective is to describe, explain, and understand a particular historical event.

We follow Monje's (2011) definition of qualitative methodology, as the primary objective is to describe, explain, and understand a specific historical event."

> "It attempts to make a global approach to social situations to explore, describe and understand them inductively. That is, based on the knowledge that the different people

involved in them have and not deductively, based on hypotheses formulated by the external researcher." (p. 16).

This article aims to provide valuable insight into the events of 2020 and the subsequent two years, analyzing the performance of various institutions and actors while documenting the testimonies of those who experienced them firsthand. It begins by describing the context and characteristics of the region, its demographics, and pre-pandemic class routines. It then examines the onset of the COVID-19 in Leticia, detailing government mandates, media-documented events, and local impacts. The author further explores the pandemic's impact on education, focusing on infrastructure, teacher-student interactions, and national testing. Finally, the closing section discusses the lessons learned and the ongoing challenges in returning to in-person classes and adapting in the years that followed.

The information presented aims to provide a basis for future and in-depth analysis and scrutiny, as we continue to identify the long-term effects of the pandemic on education and students' learning processes.

Context: Characteristics of the Territory and its People

To understand the significance of this analysis, it is essential to examine the unique context of Leticia. As the capital of the state of Amazonas, Colombia, Leticia has an urban population exceeding 50,000[2] (DANE, 2022). Located in the southernmost part of the country, it borders Brazil and Peru, and is accessible only by a two-hour flight or a boat journey that can take up to a month. This geographical isolation dictates the availability and cost of essential goods such as food and construction material prices while also restricting access to healthcare and technology.

Even before 2020, Leticia's education system faced considerable challenges, including adequate infrastructure, poor network coverage, and outdated teaching practices. The outbreak of COVID-19 exacerbated this pre-existing issue, creating an even greater crisis fore administrators, teachers, students and parents

The Leticia municipality contains a total of 12 educational institutions providing pre-school, primary, and secondary levels of education. (Chamber of Commerce of Leticia, 2022). Eight are public and offer the three levels of basic education that are subsidized by the government: pre-school,

[2] Total population of inhabitants in the urban center is 54,110. Data Retrieved from www.dane.gov.co

https://doi.org/10.15446/ma.v16n1.110762

primary, and secondary education, with students graduating from high school in the 11th grade. The public schools are found throughout the Leticia territory, with 37 educational institution located in both urban and rural areas. There are also four private schools; three dedicated only to pre-school and primary levels and one that offers secondary-level education (Table 1).

Table 1

Educational institutions in the Leticia Area

Number	Educational Institutions	Classification	Number of E. I. Centers	Higest grade offered	Area
1	I.E. Francisco De Orellana	Public	8	Secondary	Rural
2	I.E Colegio Femenino Indigena Maria Auxiliadora	Public	11	Secondary	Rural
3	I.E. Indigena San Juan Bosco	Public	5	Secondary	Rural
4	I.E Francisco Jose De Caldas	Public	4	Secondary	Rural
5	I.E. Francisco Del Rosario Vela	Public	1	Secondary	Urban
6	I.E. Inem Jose Eustasio Rivera	Public	1	Secondary	Urban
7	Institucion Educativa Sagrado Corazon De Jesus	Public	1	Secondary	Urban
8	I.E. Escuela Normal Superior Marceliano Eduardo Canyes Santacana	Public	4	Secondary	Urban
9	Colegio Naval De Leticia	Private	1	Secondary	Urban
10	Liceo Los Angeles	Private	1	Primary	Urban
11	Colegio Infantil San Jose	Private	2	Primary	Urban
12	Corporacion Educativa Selva Alegre	Private	1	Primary	Urban

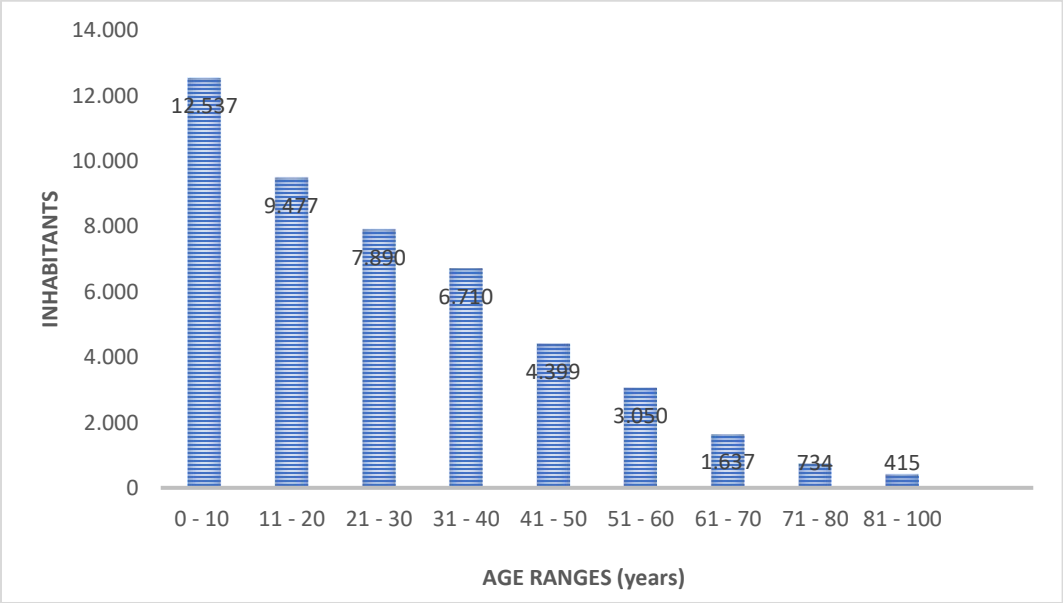
Note. Source Data graphed by author (Camara de Comercio de Leticia, 2022)

These institutions serve a significant portion of the city's population. However, the exact number of enrolled students varies annually, depending on the source, making it difficult to determine a precise figure. The 2022 population report from the National Administrative Department of Statistics (DANE) classifies the population by age groups, allowing for an estimate of approximately 14.000 students.

https://doi.org/10.15446/ma.v16n1.110762

Figure 1

Average population 2011-2021 by age groups

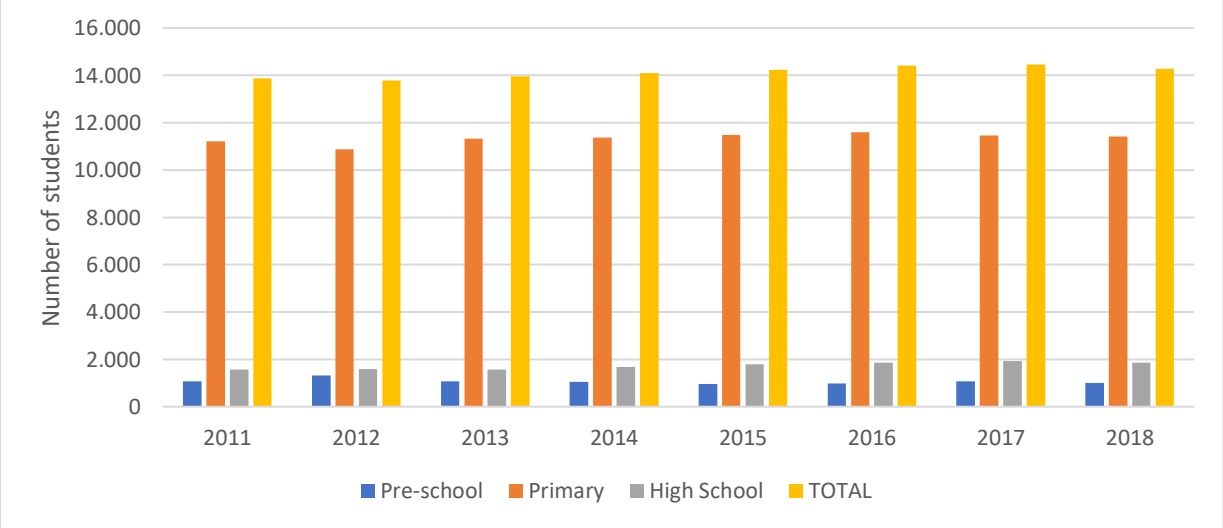


Note. Source (DANE, 2022).

The same report indicates that student enrollment has remained stable over the years, However, a footnote (p. 41) clarifies that no data is available for 2019, 2020 and 2021.

Figure 2

Number of registered students



Note. Source (DANE, 2022).

https://doi.org/10.15446/ma.v16n1.110762

Leticia has three universities offering a limited range of undergraduate programs and three technical education centers. However, this analysis will focus solely on primary and secondary schools in the town center.

Notably only 39.7% of Leticia's schoolteachers hold a bachelor´s degree, while the remainder are certified as ethno-educators (Chamber of Commerce of Leticia, 2022). Ethno-education, a government-approved certification, qualifies teachers for pre-school and primary levels with technical training in any subject, combined with a pedagogical component.

To better illustrate school conditions before the COVID-19 pandemic, it is important to highlight several challenges. School buildings were deteriorated, classrooms averaged 35 students per teacher, and temperatures of 33°C were moderated by a few fans, typically around four depending on classroom's size. There was no internet access for teachers or students, and the lighting fixtures, rain protection, and computers were often in critical condition.

Figure 3

Classroom of a school in Leticia

Note. Source (Aristizabal, M. 2019).

Most primary and secondary schools in Leticia follow a constructivist pedagogical model with an intercultural approach. These guidelines are outlined in each institution's educative project (IEP or

https://doi.org/10.15446/ma.v16n1.110762

PEI, by its acronym in Spanish). One of the largest public schools in the town center, Escuela Normal Superior, educates over 3.500 students under the principle of "Pedagogy for the Integral Human Development". This principle defines pedagogy as "the body of knowledge in permanent construction, interaction, and reflection mediated by spatial and temporal variables. Knowledge is re-signified and transformed while addressing fundamental questions around the purpose, methods, and recipients of education."[3]

COVID-19 in Leticia: A Timeline

State of Emergency

In 2019, the COVID-19 virus emerged in Asia, and by March of 2020, it had escalated into a global pandemic with reported cases in nearly every country. In Colombia, the first case was reported on March 6th, and within ten days, 75 more cases were detected. The President's rapid response was to declare a State of Economic, Social and Ecological Emergency on March 12th, with the first preventive measure being to restrict all outings for citizens over 70 (Ministerio de Salud y Protección social, 2020)

Later that month, the Presidency announced the first two COVID-19-related deaths, leading to the cancellation of all domestic flights and the closing of all borders. (Ministerio de Salud y Protección social, 2020). While the general Colombian population largely supported the decree, remote border regions like Leticia in the southern part of the Colombia were severely affected by the sudden control measures.

While the broader population of the country faced the immediate consequences of quarantine, the residents of Leticia were initially unconcerned about the virus due to the town's geographical isolation. In early March, schools, stores, and restaurants remained open, and tourism continued as a key economic activity. However, by the end of the month, the declaration of the State of the Emergency and the implementation of a nation-wide self-isolation mandate disrupted all aspects of the daily life.

On March 22nd, the Colombian government announced the closure of international borders via press release, separating Colombo-Brazilian-Peruvian families with no indication of when they

[3] Escuela Normal Superior (2015). Taken by the IEP of the school and translated by the author.

https://doi.org/10.15446/ma.v16n1.110762

would see each other again. Classrooms emptied, and businesses shut down. (Ministerio de Salud y Protección Social, 2020).

Although no local cases had been reported at the time, Leticia quickly became a ghost town with informal workers facing immediate financial hardship and students left in uncertainty. While the pandemic severely impacted developed nations, the specific circumstances of the Amazon region made indigenous communities particularly vulnerable. Education, in particular, suffered some of the worst consequences.

Following school closures and the enforcement of quarantine measures, classes transitioned to remote instruction. Students in urban areas were able to adapt to remote learning due to modern technological advancements. However, as a remote rainforest community, people in Leticia had always experienced connectivity issues and unreliable internet access. Unlike other regions where online platforms were available for learning, education in Leticia relied almost exclusively on WhatsApp (a messaging App) via asynchronous interaction. Teachers, students, families, and administrators had to develop alternative strategies to navigate the precarious situation.

A. The Crisis

Although the closure of Leticia's airport initially reduced the risk of viral spread, the twin city, Tabatinga, on the Brazilian border, was not under the same restrictions. Unlike the Colombian government, the Bolsonaro administration did not impose domestic travel control measures, allowing the airport and port in Tabatinga continued their regular routes to nearby cities and towns, including Manaus. On March 16, The Health Secretary of the State of Amazonas confirmed the first COVID-19 case in Manaus and implemented health measures to contain the virus. However, as cases surged, the Brazilian government declared a state of public emergency on March 20. Despite mask mandates and hygiene campaigns, an infected Colombo-Brazilian passenger traveling from Manaus to Tabatinga crossed the border into Leticia seeking medical treatment when symptoms appeared.

Unknowingly, doctors at the Leticia Clinic, who treated the patient, attended a social gathering with about 10 other healthcare workers that night. On April 17, the first COVID-19 case was reported in Leticia. By May 11, according to National Health Institute and State government reports compiled by Antonio Paz from Mongabay, Leticia had 718 confirmed cases, though limited testing suggested the actual numbers were three times higher. The city also reported 26 deaths, making Leticia the municipality with the highest death rate per capita in Colombia, representing 6.6%

https://doi.org/10.15446/ma.v16n1.110762

of the national death toll. As described by the national newspaper El Tiempo, both the public hospital and private clinic were quickly overwhelmed by the number of patients requiring specialized care. The clinic and hospital treated patients with only two ICU units, requiring emergency flights to transport patients to Bogotá. However, even with the assistance of Air Force planes, medical resources proved insufficient, leading to more deaths.

These numbers were especially alarming for the inhabitants of such a small town, where every life lost was that of a co-worker, neighbor, friend, or family member. At one point, pictures of an body abandoned on the street and an overflowing cemetery were circulated online. National media outlets such as Caracol and El Tiempo reported extensively on the crisis in Leticia[4].

Figure 4

Deceased person on Leticia

Note. Source (Caracol radio, 2020).

4

https://doi.org/10.15446/ma.v16n1.110762

Figure 5

Dilapidated cemetery of Leticia

Note. Source (Forero, J.,2020).

Many residents opted to care for themselves at home, using natural medicine and avoiding the hospital. Meanwhile, the rising death toll continued to generate panic in the town for months. Fortunately, by August 2020, transmission rates began to declines. Although deaths continued to be reported, the crisis gradually subsided by the end of the year.

In fact, Leticia was among the first cities in Colombia to begin vaccinating its population in March 2021. According to the Colombian newspaper *El Espectador*, herd immunity was achieved by October 2021. While mask mandates remained in place for enclosed spaces, Leticia largely returned to "normality" by January 2022, marking the long-awaited return to in-person classes.

Impact of COVID on Education

National and Local Educational Guidelines

(i) Circular 19

Following the presidential declaration of a State of Emergency, in 2020, the Ministry of Education issued Circular No. 19 on March 14, providing guidelines for local governments, secretaries, and principals for managing the crisis. The document outlined hygiene measures, masks requirements, and allowed local governments and school principals to modify the school calendar

https://doi.org/10.15446/ma.v16n1.110762

while sanitary conditions remained unsafe for the community, thus preventing in-person classes—which, in the case of Leticia, was unavoidable (Ministerio de Educación Nacional, 2020).

The second section of the document introduced an online platform with over 80,000 educational resources available as of March 16, 2020. Schools were encouraged to use other flexible resources that schools in alignment with their Institutional Educational Plan (PEI in Spanish) and local context. Additionally, the *All to Learn Program* (PTA in Spanish) was recommended for math and language classes, along with book loans from libraries. It also established that local Secretaries of Education had to supervise and guarantee the continuity of educational services by taking necessary measures according to the needs of each context.

The document further indicated that local Secretaries of Education should work in parallel with the Office of Information Technologies and Communications to integrate resources that would help guarantee educational services. It also included all the health and sanitary measures established in the presidential decree, providing details on an educational helpline, and urged collaboration between teachers, administrators, and parents to safeguard children' physical and mental well-being.

(ii) School Directions

When quarantine measures were enforced, both teachers and administrators were unprepared and lacked resources for remote education. In response, school principals made the decision to move the two-week summer vacation to the beginning of quarantine in March, allowing time to prepare for the transition. Teachers were instructed to develop self-study guides with activities and exercises to ensure the learning process to continue uninterrupted. The guides had to align with the already stablished syllabus and the proposed learning outcomes for each subject and level. Each teacher created WhatsApp groups for their respective classes, which become the communication medium for sharing the self-study guides. For students without WhatsApp access, digital copies were sent to school administrators, who printed and made them available for school pick-up. . Each self-study guide covered two weeks of coursework, and teachers were expected to be available for student inquiries and guidance.

When the first set of self-study guides were sent out to students at the end of the early two-week vacation, administrators struggled to standardize the guide format and length, with some as long as 15 pages. After a quick review, students began their remote learning period. Teachers soon

https://doi.org/10.15446/ma.v16n1.110762

realized that many students did not have access to smartphones or the internet, often borrowing their relatives' devices or sharing between siblings, and asking neighbors to use their internet. In an interview for Caracol Radio, a school principal in rural Leticia, Helberth Abreo Cubides, reported that most of his students were receiving no instruction, as they lived in remote areas without mobile devices or internet access (Caracol radio, 2020). Moreover, to prevent the spread of COVID, printed self-study guides were not delivered.

A. Remote Learning

(i) Self-study guides

As was the case for teachers all over the world, remote learning was a completely new concept to the teachers in Leticia, and they received little to no training on effectively adapting teaching methods. Most teachers had no exposure to digital tools during the entire course of their careers (over 30 years of experience in some cases). Communication between colleagues was also hindered by generational gaps, and many teachers prioritized the health and financial needs of their families amid the crisis.

Before the pandemic, traditional teaching in Leticia followed a lecture-based approach. Class began once the teacher entered the classroom to take attendance and get students' attention. In most cases, teachers explained lessons using markers on a whiteboard. Some classes could include audiovisual materials, readings, and class discussions to illustrate and engage students. Assessments often included checking notebooks, written quizzes, oral presentations, and interactions in the classroom among students and/or with the teacher.

When designing their self-study guides, many teachers simply copied textbook readings, questions, and exercises, while others assigned research-based questions that required students to do the research on their own with minimal guidance. Ideally, self-study guides should encourage independent learning through books, digital resources, and community knowledge. However, quarantine restrictions, limited libraries, and poor internet connectivity made it extremely difficult for students to carry out their assignments.

In an attempt to reduce guide length, many teachers provided insufficient instruction. Furthermore, due to limited internet access, teachers struggled to explore alternative teaching methods, resources, or learn from remote learning models in other schools, as self-study guides failed to offer effective learning strategies. Despite WhatsApp's multimedia capabilities (voice

https://doi.org/10.15446/ma.v16n1.110762

messages, videos, images, and PDF), most self-study guides relied on outdated classroom practices such as note-taking, pen-and-paper exercises, and written assessments, failing to leverage digital tools effectively.

Students expressed[5] they felt overwhelmed as they received 15 self-study guides (one per subject). Some required them to handwrite instructions in their notebooks, and each guide demanded time to research information, answer questions, and solve exercises. They also stated that few teachers provided specific resources students could rely on or audiovisual support. As students struggled with searching for information, they also struggled with finding guidance and explanations.

(ii) Teacher-Student Interaction

Until February of 2020, teachers and students spent approximately six hours together Monday through Friday. It was common for teachers and students to develop close relationships since, in addition to in-classroom time, teachers commonly doubled as coaches, neighbors, and even family. Furthermore, the whole community came together during town events. Teachers generally encouraged students to approach them during office hours or breaks to discuss concerns and challenges. It is important to highlight that all teachers were mindful of students' family and financial situations; therefore, they were always willing to listen to students and make adjustments when necessary to help students perform better in school.

Unfortunately, during quarantine, all in-person encounters were completely prohibited, and measures hardened] in the summer of 2020 with the outbreak of cases. Teachers and students already used *WhatsApp* for informal school-related communication. Therefore, it became the main medium for teacher-student interaction while in isolation. Considering the connectivity limitations and the small amount tech resources in the households, smartphones and *WhatsApp* proved to be the best and only reliable tool for asynchronous messaging.

Although the app allows group and individual chatting and sharing images, videos, audios and voice recordings, students soon manifested that both self-study guides and teachers' explanations were constrained to text and Word documents. According to a non-official survey carried out in 2021[6] with 10th grade students, 79,9% of the students had internet coverage and 88%

[5] Semi-structured interview with students of 11th grade performed by the author via *Whatsapp* in March of 2021

[6] Non-official survey carried out by math teacher via *Whatsapp* gathering data from students of 10th grade throughout 2021.

https://doi.org/10.15446/ma.v16n1.110762

had their own smart phones, but 51% of them struggled with understanding the self-study guides. A concerning 80% of students considered their learning process was negatively affected during pandemic.

Students also mentioned that seeking guidance became a challenge as some classes did not have a corresponding group chat where they could communicate directly with the instructor or classmates. Instead, guides were sent through the homeroom chat groups. Additionally, some teachers did not respond to messages quickly, limited their answers to short text, or were not available during regular hours. For students, communication was also limited because sometimes, even if they had a personal device, restricted access to the internet made it difficult to find help for explanations. Several students had to share the same device and internet time with the rest of their household. Teacher-student interaction was impacted in all aspects, changing and affecting students' sense of guidance and support and consequently their motivation to learn.

(iii) National Testing

In Colombia, students normally take different standardized tests called *Pruebas Saber* to keep track of their progress throughout the third, fifth, and ninth grades. In the eleventh grade, students are required to take another standardized test to graduate and gain access to higher education. High scores are recognized by universities and the government, providing opportunities for scholarships and discounts to start their undergraduate studies. These tests assess four basic subjects: math, language, social and natural sciences. In the eleventh grade, critical reading and philosophy are added to the language section, and physics and chemistry to the natural sciences. There is also an English section. (ICFES mejor saber, 2022). Students prepare from the beginning of the school year, practicing multiple-choice questions, sessions of up to 52 questions and time frames. Generally, private schools and affluent families can afford special preparatory courses. Even in Leticia, there have been both government and private programs with that same purpose. Teachers of those subjects are highly encouraged to include preparation exercises in their classes.

For years, Leticia has ranked last in exam scores. According to the Ministry of Technology and Communications, the Amazonas Department ranked 30th among the 32 departments in 2019 with an average score of 212.96, 50 points below the average score of students in Bogotá. (Ministerio de Tecnologías de la Información y las Comunicaciones, 2024). Poor performance on these tests can be attributed to different factors, and unfortunately, the COVID-19 crisis has only aggravated the situation. Following National Health guidelines, in 2020 none of the standardized tests were offered,

https://doi.org/10.15446/ma.v16n1.110762

and in 2021, the government offered a completely online version. However, the limited access to internet prevented most students from taking the exam. According to the local newspaper, Yanüecu (2022) schools in the area ranked among the worst twenty in the country in a study published by Javeriana University. Also, in 2021, considering the conditions of remote learning around the country, the Ministry of Education launched an alternative test called *Evaluate to Advance* as a strategy to support and guide the teaching processes and strengthen the educational development of children in the country. Similar to the *Pruebas Saber*, the *Evaluate to Advance* is a standardized test, and its first available online version, could not be accessed by several students in Leticia. Despite the difficulties, the *Evaluate to Advance* test includes a guide to analyze students' scores, identify their weaknesses and knowledge gaps, and allows teachers to redirect and adapt their syllabus to develop more specific skills.

B. Implications for In-person Classes in 2022

December 20, 2021, the Colombian government released *Resolución* 2157, a document decreeing the return to in-person classes at the beginning of the 2022 school year (Ministerio de Educación Nacional, 2021). According to the Ministry of Health, the number of vaccinated individuals in the population and the low occupation of ICU units in the country allowed the return of in-person classes in most public schools (Ministerio de Salud y Protección social, 2021). As mentioned, the population in Leticia currently boasts one of the highest vaccination rates, making it possible for students to return to the classroom while maintaining strict safety measures, such as masks requirements, sanitation stations, and social distancing.

One of the biggest obstacles was the infrastructure of school buildings. After two years of vacancy, buildings had visibly deteriorated by the harshness of the climate and exhibited poor conditions to hold students again. An online news report from a national news radio station denounced the deplorable state of several schools in Leticia and urged the Ministry of Education to address the situation (W Radio Colombia, 2022).

https://doi.org/10.15446/ma.v16n1.110762

Figure 6

Images of a school in the rural area of Leticia

Note. Source (Asociación de institutores de Antioquia, 2022)

In January of 2022, teachers and students met again in the classroom. However, it was clear that the state of the buildings was only part of the challenges. The new transition presented as many hardships as remote learning had.

Figure 7

Common area outside classrooms in a school in Leticia

Note. Source (Asociación de institutores de Antioquia, 2022)

https://doi.org/10.15446/ma.v16n1.110762

(i) Teaching Practices

During quarantine, while struggling with online resources and structuring lesson plans and materials, some teachers, particularly at the primary levels, turned to Richard Cardona, an All to Learn tutor (PTA in Spanish). The All to Learn program started in 2010 as a government initiative to improve students' quality of learning at different levels in primary, middle, and high school. (Ministerio de Educación Nacional, 2010). Over the years, the program has offered advising and guidance for establishing coherent learning objectives, materials development, and assessment. Accordingly, Cardona has actively worked with many teachers in Leticia, helping their syllabus meet the National Standards, sharing resources, and assessment strategies. Unfortunately, in his most recent meetings with teachers and class observations, he witnessed that despite adapting to online resources during the two years of quarantine, teaching practices returned to the limited use of whiteboard and marker, note-taking, and textbooks once back in the classroom. There are still great difficulties in breaking from traditional practices where knowledge is presented in linear contents instead of practical abilities. Finally, assessment focuses on contents that were established in the Institutional Education Plan prior to the pandemic and carried out through pen and paper quizzes. Cardona believes the *Evaluate to Advance* test and result analysis is a useful tool to rethink assessment in terms of prioritized practical knowledge and skill development. He considers it urgent that teachers revise their syllabus, taking into account the suggestions of the *Evaluate to Advance* to identify students' largest strengths and weaknesses so that teaching practices can be adapted and transformed accordingly. Only by acknowledging the "new reality" can lesson plans respond to the current needs of the classroom.

Additionally, it is important to mention that students also struggled during remote learning, not only with schoolwork, but with the impacts of isolation in general. The stress of the workload and self-achievement, combined with continued confinement, affected students' motivation to a point where the majority barely fulfilled the requirements for passing grades. Parents and students were mostly concerned with financial and health issues, leaving little room for conscious learning. Hence, the remote learning period has left a serious gap in conceptual learning and skill development that was noticeable from the first day of in-person classes that year.

In other regions of the country, instructors can rely on digital tools and platforms, exploring alternative materials and methodologies. However, in Leticia, teachers have little to no supplies, pushing their capacities to the point of experiencing exhaustion and burnout

https://doi.org/10.15446/ma.v16n1.110762

(ii) Institutional Monitoring

After describing the reuniting of teachers and students in 2022, it is crucial for authorities and institutions to get involved in overseeing the transition of all parties, guaranteeing a high-quality educational service.

Accordingly, both national and local institutions have implemented different instruments that allow administrations to better understand the impact of remote learning and the best techniques to face the current challenges. For instance, the Ministry of Education released a form asking all teachers at public schools, through local Secretaries of Education, to assess the state of development of learning and skills (Ministerio de Educación Nacional, 2023). The document requires teachers to state the number of learning objectives that students should have achieved at their school level. According to their observations of the first months of classes in 2022, teachers rated the general performance of students regarding each of the mentioned learning objectives as superior, high, basic, or low. With this information, the Ministry of Education is working with consultants and experts to provide coherent guidelines for teachers in Colombia. However, as often happens with nationwide initiatives in Leticia, geographical isolation causes delays and interruption of processes. Nevertheless, administrators and teachers at public schools, like Normal Superior School in Leticia, are using the obtained data to better direct their practices. With the advising of PTA tutors, such as Cardona, they are currently working towards closing the knowledge gap caused by the pandemic.

Another initiative from the Colombian government is the standardized testing. The *Pruebas Saber* were modified so students could access the online version of the test. Unfortunately, many students in Leticia and other remote territories were excluded due to the lack of connectivity. By 2021, the vulnerable population, not just in Leticia, but in other rural areas of the country, have been provided with a paper version that are sent to schools around the national territory. In particular, the administration of the *Evaluate to Advance* test seems to target critical aspects of students' performance and learning processes that can provide specific feedback for teachers' practices. Additionally, the briefing of the test includes detailed instructions for a precise analysis of the results that are directly and coherently related to the *National Learning Standards*. More efforts to identify students' needs and different strategies to effectively reach learning objectives are required in the present and the coming future.

https://doi.org/10.15446/ma.v16n1.110762

Learnings and Conclusions

The reflexive analysis provides valuable insights into the educational system in Leticia, highlighting the key areas in need of transformation. By documenting the events during the COVID-19 crisis, it examine how teachers and students experienced the transition, how administrators responded, and which factors had the most significant impact on education in Leticia. These findings serve as a foundation for further analyses and future reforms.

One of the most critical conclusions is that connectivity remains the most urgent necessity. The lack of access to digital devices and reliable internet severely hindered remote learning and exacerbated pre-existing educational inequalities. Worldwide, the educational community has increasingly incorporated a variety of digital supplies as part of post-pandemic classroom routines. The Center for Excellence in Learning from EAFIT University underscores the importance of integrating technology into education as a means to enhance learning experiences. Therefore, it is imperative that teachers adopt available online tools as complementary resources to modernize classroom practices and bridge the gap between local and globalized education (Centro para la excelencia en el aprendizaje, 2022).

It is evident that limited access to basic technological resources -such as computers, smartphones, and reliable internet – remains one of the greatest barriers preventing Leticia from reaching national and international educational standards. Even after the two-year crisis, poor connectivity and the scarcity of technological devices in schools continue to be pressing issues. It is worth mentioning that since 2020 government representatives are well aware of these constraints. In a press report, the Ministry of Technologies of Information and Communications explained they were working with the internet provider Skynet to provide broadband service to institutions, offices, and residents (MinTIC, 2020). However, in October 2021, the national news channel RCN reported that because of the continued difficulty in accessing online platforms, university students were forced to drop some of their classes due to ongoing connectivity challenges. Likewise, the report highlights that local tourism agencies have expressed concerns about the severe impact of poor connectivity on their businesses (Noticias RCN, 2021). Given these circumstances, the full extent of the impact on primary and high school classrooms remains uncertain, but it is reasonable to expect significant consequences for students and teachers alike.

To illustrate how technology plays a part of the learning process for young students nationally and internationally, one only needs to look at the tools created by the government in the

https://doi.org/10.15446/ma.v16n1.110762

beginning of 2020, such as the platform *Aprender Digital: Contenidos para Todos*, launched by the Colombian government (Ministerio de Educacion Nacional, 2020).

Additionally, better access to the internet would allow teachers to diversify their teaching materials based on numerous sources of information. It would provide them with the ability to learn about how other teachers are handling the new reality in post-COVID classrooms. Under normal circumstances, teachers usually reflect on their experiences, share successful practices, and collaborate to create an adequate classroom environment. Unfortunately, the connectivity situation clearly limits this communication between teachers from Leticia and their peers in other cities and regions of the country.

Moreover, teenagers in Leticia that do have a smart device are accessing Facebook and Tik Tok for creativity and enjoyment, but are still not familiar with platforms like Moodle or Canvas, which have facilitated remote learning around the world. It is worth reflecting on how future high school graduates will transition to higher education and how prepared they will be to navigate university resources. Furthermore, securing reliable internet access for the school population would positively impact students' performance on National Standardized tests. Currently, there are many websites that offer different preparation exercises for these types of tests, including the *Aprender Digital, Contenidos para Todos* platform produced in 2020. According to a study by EAFIT university, the option of using modern gadgets can provide a wider range of activities that respond to the different learning styles of children and teenagers. (Centro para la excelencia en el aprendizaje, 2022).

Another significant barrier to confronting the two years of remote learning is the teachers' indifference in transforming their pedagogical approaches. The classrooms after the pandemic are questionably similar to the classrooms prior to the crisis. Most instructors have restored their lesson plans without concern for their influence on today's students' learning processes. EAFIT University highlights the benefits of a renovated syllabus that features diverse online resources and tools available today. Embracing new, updated methods and resources can revitalize classes, providing a more amicable learning environment for students. (Centro para la excelencia en el aprendizaje, 2022).

Additionally, teachers, not only in Leticia, but worldwide, have expressed the undeniable two-year "hole" in the children's learning processes. This two-year period of remote classes has been described as a "learning gap" by Dorn, E., Hancock, B., Sarakatsannis, J., Viruleg, E. (2021), who

https://doi.org/10.15446/ma.v16n1.110762

published a quantitative report comparing students' performance before and after the pandemic. A study from the Ministry of Education and the Banco Mundial in Chile reveals that students can lose up to 88% of what they learn in a year. Therefore, with remote learning it is calculated that only 20% of the learning objectives are reached, making the return to in-person classes an urgent matter. Moreover, the study concludes it could take about 1.3 years to recover from each year of remote learning. (Centro de Estudios Mineduc, 2020).

Along with teachers' unchanged practices and the learning gap, many teachers have expressed that they notice significant modifications in students' behavior. They state that students are struggling to stay focused for periods of time, follow class rules, and acknowledge their teachers' authority. A publication from the Antioquia Teacher's Union (ADIDA in Spanish), reflects on the behavioral changes of students, highlighting a clear lack of respect for rules and a concerning level of neglect towards homework. The publication emphasizes how the lack of discipline is affecting interactions among students and between teachers and students. (Asociación de institutores de Antioquia, 2022).

Students' conduct today is not just different but concerning, as more evidence of their affected state of mind is emerging. Similar to what the students surveyed for this article expressed, others around the world seem to have experienced stress during confinement. The tension has continued to impact learners' processes, just as Leticia Alvarado, a master's student of psychology, explained in her analysis of the level of stress in students of public high schools in Peru. The data reports that 42.6% and 19.8% of the students were experiencing mid-high and high levels of stress. The study describes context that shares similarities with the situation of students in Leticia. In her investigation, the author attributes the high levels of stress to an overwhelming amount of homework, tiredness, and absence of guidance. (Alvarado, 2021).

Additionally, motivation levels are also hindering learning processes. According to a study from the Latin-American Journal of Social Sciences and Humanities only 28% of students expressed feeling motivated. Therefore, the majority of learners demonstrate an apathetic and indifferent attitude during classes and towards teachers' efforts. (Ceballos, J. J., Alulema J. I., Tutillo, N. C., Toapanta M. G., Zambrano M. A., 2022). Another report that raises concern about students' mental health is by the Ministry of Education and Banco Mundial, which explains that parents, teachers, and the community in general ought to be aware of the mental health of teenagers. As the stress and lack of motivation has proven to impact students' well-being, adults are obligated to pay extra

https://doi.org/10.15446/ma.v16n1.110762

attention to possible signs of discomfort or low self-esteem and be informed on how to respond in order to protect students (Centro de Estudios Mineduc, 2020). All agents in the education system are now urged to be observant and help guide and assist children and teenagers who may be struggling with the post-pandemic reality. Both institutions and parents are advised to be more prepared to offer the required support in vulnerable times.

On the other hand, the fact that infrastructure was in such deplorable conditions before 2020 already presented a disadvantage for young learners from Leticia. Moreover, by the time students returned to in-person classes, the tropical climate had clearly damaged school buildings. Sadly, in January 2022, the classrooms, common areas, and restrooms were not safe spaces for students, providing an even less friendly or motivating environment for learning. In fact, Claudia Muñoz[7], a technology and informatics teacher from one of the city schools, explained that before the pandemic they worked with about 10 functioning computers, but now they don't have a single working computer. She stated her technology classes have to be illustrated through images and texts drawn on a whiteboard. Hence, there is clearly an urgent need for intervention. It is undeniable that both the local and national government need to pay careful attention to the corresponding protocols to guarantee an adequate learning environment for children and teenagers. Future administrations are required to implement infrastructure adaptations and the modernization of schools in general in the entire Leticia area in order to provide safe conditions and welcoming spaces that allow both teacher and students to perform better.

Finally, it is essential that administrators continue monitoring the evolution of in-person classes. A thorough exploration of data collection techniques that can provide insights into students' emotional and academic needs is crucial. While government-issued forms and reports have already shed some light on classroom realities, certain aspects still further attention. Assessing the long-term impacts of remote learning demands a careful and collaborative review by national and local administrators, alongside teachers.

From an optimistic standpoint, the combined efforts of all stakeholders in the educational system in Leticia will generate enough information to help schools to adapt to the post-pandemic reality of in-person classes, despite the severe challenges posed by COVID-19 and the existing technological and connectivity limitations. Undoubtedly, the people of Leticia have demonstrated

[7] Semi-structured interview teachers from Escuela Normal Superior Marceliano Canyes Santacana performed by the author via *Whatsapp* in April of 2022.

remarkable resilience in overcoming historical hardships, offering hope for continued progress in education.

References

Alvarado, L. S. (2021). Estrés académico en estudiantes de secundaria de un colegio público del distrito Imperial, Cañete, 2020. *Masters thesis at the Universidad Católica de los Ángeles Chimbote.* https://repositorio.uladech.edu.pe/bitstream/handle/20.500.13032/27221/ESTRES_ACADEMICO_ESTUDIANTES_ALVARADO_LAURA_LETICIA_STEPHANY.pdf?sequence=1&isAllowed=y

Ardila, H. (2021) Así logró el Amazonas la inmunidad del Rebaño. *El Espectador.* https://www.elespectador.com/colombia/asi-logro-el-amazonas-la-inmunidad-de-rebano/

Asociación de institutores de Antioquia. (2022). *Pandemia afecto comportamiento de estudiantes.* https://adida.org.co/circular-delegados-2022/

Ávila, C. (2020) Retrato de Leticia: Pueblo que llora la peor tragedia de su historia. *El Tiempo.* https://www.eltiempo.com/colombia/otras-ciudades/coronavirus-en-leticia-amazonas-drama-de-indigenas-y-numero-de-casos-496418

Bryson, D. (2021) A time line of the Coronavirus pandemic. *The New York Times.* https://www.nytimes.com/article/coronavirus-timeline.html?auth=link-dismiss-google1tapA

Cámara de Comercio del Amazonas. (2022). *Estudio económico del municipio de Leticia, departamento del Amazonas año 2021: Un Diagnóstico económico regional de la actividad registral empresarial de la Cámara de Comercio del Amazonas.* Ccamazonas.goc.co. https://ccamazonas.org.co/web2018/wp-content/uploads/2022/02/ESTUDIO-ECONOMICO-2021.pdf

Caracol radio. (April 24th, 2020). Primer muerto por coronavirus en vía pública en Leticia. *Caracol Radio.* https://caracol.com.co/radio/2020/04/27/regional/1587944785_733389.html

https://doi.org/10.15446/ma.v16n1.110762

Caracol radio. (May 5th, 2020). Sin clases los estudiantes de Leticia por falta de recursos. *Caracol Radio.* https://caracol.com.co/programa/2020/05/21/lo_mas_caracol/1590083244_642099.html

Ceballos, J. J., Alulema J. I., Tutillo, N. C., Toapanta M. G., and Zambrano M. A. (2022). Retorno a clases post pandemia: Problemas de conducta en el aula y su manejo. *Código Cientifico . 3* (3). https://revistacodigocientifico.itslosandes.net/index.php/1/article/view/69

Centro de Estudios Mineduc. (2020). *Impacto del Covid-19 en los resultados de aprendizaje y escolaridad en Chile: Análisis con base en herramienta de simulación proporcionada por el Banco Mundial.* Ministerio de Educación. https://www.mineduc.cl/wpcontent/uploads/sites/19/2020/08/EstudioMineduc_bancomundial.pdf

Centro para la excelencia en el aprendizaje. (2022) *Efectos de la Pandemia en el Desarrollo de los Estudiantes.* Dirección de desarrollo Vicerrectoría de Aprendizaje. Universidad EAFIT. https://www.eafit.edu.co/academia/Documents/efectos-de-la-pandemia-en-el-desarrollo-de-los-estudiantes.pdf

Corpoamazonia. (2005). *Cobertura en educación.* https://www.corpoamazonia.gov.co/region/Amazonas/Cartografia/Ama_eduacacion.html

Dirección Administrativa Nacional Estadística. (2022). *La información del DANE para la toma de decisiones regionales.* https://www.dane.gov.co/files/investigaciones/planes-departamentos-ciudades/220502-InfoDane-Leticia-Amazonas-fin.pdf

Dorn, E., Hancock, B., Sarakatsannis, J., and Viruleg, E. (2021). COVID-19 and education: The lingering effects of unfinished learning. McKinsey & Company. https://www.mckinsey.com/~/media/mckinsey/industries/public%20and%20social%20sector/our%20insights/covid%2019%20and%20education%20the%20lingering%20effects%20of%20unfinished%20learning/covid-19-and-education-the-lingering-effects-of-unfinished-learning-v3.pdf

Escuela Normal Superior. (2015). Proyecto Educativo Institucional.

https://doi.org/10.15446/ma.v16n1.110762

Forero, J. (May 2nd, 2020). Una carrera contrarreloj para detener el coronavirus en Leticia. *El tiempo*. https://www.eltiempo.com/politica/gobierno/coronavirus-contrarreloj-en-leticia-para-detener-la-pandemia-491116

Hurtado, A., Gonzalez, E. C. and Licht, M. (2020) Impacto de la pandemia por covid 19 en el Amazonas, Colombia. *Revista de la Universidad Industrial de Santander. Salud* 52(2):187-189

ICFES mejor saber (2022) *Acerca del Examen Prueba Saber 11*. https://www.icfes.gov.co/web/guest/acerca-del-examen-prueba-saber-11%C2%B0

Ministerio de Educación Nacional. (2023). *Evaluar para avanzar*. https://www.mineducacion.gov.co/portal/micrositios-preescolar-basica-y-media/Evaluar-para-avanzar/

Ministerio de Educación Nacional. (December 28th, 2021). *Resolución 2157 de 2021: Actividades del sector educativo*. https://www.mineducacion.gov.co/1759/articles-408456_archivo_pdf.pdf

Ministerio de Educación Nacional. (March 16th, 2020). *Estrategia "Aprender Digital: Contenidos para Todos" reúne contenidos digitales educativos en una misma plataforma para los niveles escolares en todas las áreas del conocimiento*. https://www.mineducacion.gov.co/portal/salaprensa/Comunicados/394002:Estrategia-Aprender-Digital-Contenidos-para-Todos-reune-contenidos-digitales-educativos-en-una-misma-plataforma-para-los-niveles-escolares-en-todas-las-areas-del-conocimiento

Ministerio de Educación Nacional. (2020). *Circular No. 19 Orientaciones Con Ocasión a la Declaratoria de Emergencia Sanitaria Provocada por el Coronavirus (COVID-19)*. https://www.mineducacion.gov.co/1780/articles-393910_recurso_1.pdf

Ministerio de Educación Nacional (2010) *Todos a aprender Programa para la Transformación de la Calidad Educativa*. https://www.mineducacion.gov.co/1621/articles-299245_recurso_1.pdf

Ministerio de Salud y Protección social (2021, March 9th). *Boletín de Prensa No 348 de 2021*. https://www.minsalud.gov.co/Paginas/Amazonas-completa-22-mil-vacunas-contra-el-COVID-19.aspx

Ministerio de Salud y Protección social. (March 6th, 2020). *Boletín de Prensa No 050 de 2020*. www.minsalud.gov.co

https://doi.org/10.15446/ma.v16n1.110762

Ministerio de Tecnologías de la Información y las Comunicaciones. (2024). *Puntaje ICFES por departamentos.* https://www.datos.gov.co/Educaci-n/PUNTAJE-ICFES-POR-DEPARTAMENTOS/x9vi-iv8c

Ministerio de Tecnologías de la Información y las Comunicaciones (February 21st, 2022) *Internet Fijo Penetración Departamentos.* https://www.datos.gov.co/Ciencia-Tecnolog-a-e-Innovaci-n/Internet-Fijo-Penetraci-n-Departamentos/4py7-br84

Ministerio de Tecnologías de la Información y las Comunicaciones (June 23rd, 2020) *Conectividad para el Amazonas.* https://www.mintic.gov.co/portal/inicio/Sala-de-Prensa/MinTIC-en-los-Medios/145861:Conectividad-para-el-Amazonas

Monje, C. (2011). Metodología de la investigación cuantitativa y cualitativa. *Guía didáctica. Colombia*. Universidad Surcolombiana / Facultad de Ciencias Sociales y Humanas.

Noticias RCN (October 21st, 2021)Estudiantes en Leticia podrían perder el semestre por problemas de conectividad. *Noticias RCN*. https://www.noticiasrcn.com/colombia/estudiantes-podrian-perder-semestre-por-falta-de-internet-en-leticia-391947

Observatorio EXE Gestión Educativa. (2024) *¿Cómo está Amazonas en Educación? Retos y prioridades* 2024-2027. Fundación Empresarios Por la Educación. https://fundacionexe.org.co/wp-content/uploads/2024/03/%C2%BFComo-esta-el-Amazonas-en-educacion-Retos-y-prioridades-2024-2027.pdf

Paz, A. J. (May 12th, 2020) Colombia: COVID-19 se dispara en Leticia y atemoriza a los pueblos indígenas de la Amazonía. *Mongabay*. https://es.mongabay.com/2020/05/covid-19-en-amazonas-pueblos-indigenas-colombia/

Presidencia de la República de Colombia (2020) *Decreto 417 del 17 de marzo del 2020.* https://coronaviruscolombia.gov.co/Covid19/decretos.html

Sánchez, A. A. and Murillo, A. (2021). Enfoques metodológicos en la investigación histórica: cuantitativa, cualitativa y comparativa. *Debates Por La Historia*, 9(2), 147–181. https://doi.org/10.54167/debates-por-la-historia.v9i2.792

https://doi.org/10.15446/ma.v16n1.110762

Secretaria de estado de saúde do Amazonas. (2020) *Amazonas confirma 1º caso de Covid-19 e autoridades garantem que rede de assistência está preparada*. Governo do estado do Amazonas. http://www.saude.am.gov.br/visualizar-noticia.php?id=4327

Teleencuestas (2023) Cuántos habitantes tenía Leticia, Amazonas en 2023. https://telencuestas.com/censos-de-poblacion/colombia/2023/amazonas/leticia

W Radio Colombia (January 19th, 2022) Los colegios del Amazonas parecen del siglo pasado por abandono y falta de internet. *W Radio Colombia*. Retrieved from https://www.youtube.com/watch?app=desktop&v=HSC5xVInLPA

Yanüecu Colombia (March 19th, 2022) Cinco Colegios del Amazonas están dentro de los 20 peores de Colombia, según Universidad Javeriana. https://www.facebook.com/Yauanecu