

## Artículos de investigación

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### ENFRENTANDO Y ADAPTÁNDOSE A LA CRISIS: RESILIENCIA EN LAS INSTITUCIONES DE EDUCACIÓN SUPERIOR TURÍSTICA DE AMÉRICA LATINA Y EL CARIBE DURANTE LA PANDEMIA DE COVID-19



### COPING AND ADAPTING TO CRISIS: RESILIENCIA IN TOURISM HIGHER EDUCATION INSTITUTIONS IN LATIN AMERICA AND THE CARIBBEAN DURING THE COVID-19 PANDEMIC

#### Abstract

The purpose of this paper is to explore how higher education institutions (HEIs) adapted and modified their strategies to successfully cope with and overcome the lockdown crisis due to COVID-19. It also aims to evaluate their resilience, defined as the ability to adapt and recover from adversity by developing social and academic capabilities in response to extreme stress, in this case, caused by the pandemic. A survey was conducted in 18 countries and 162 universities in the Latin American and Caribbean region, specifically in tourism and hospitality schools, to understand the resilience process developed by HEIs during the COVID-19 pandemic. A total of 260 responses were collected. HEIs reacted to the contingency by rapidly adapting their teaching, administration, and evaluation processes to a remote mode. The vulnerability of the teaching-learning process was due to the lack of both student connectivity and teachers' technological skills, which were two significant obstacles to academic continuity.

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Para citar el artículo: Covarrubias, R., Ricaurte, C., Ochoa, I., & Parra, G. (2024). Coping and adapting to crisis: Resilience in tourism higher education institutions in Latin America and the Caribbean during the COVID-19 pandemic. *Turismo y Sociedad*, XXXV, pp. 29-48. DOI: <https://doi.org/10.18601/01207555.n35.01>

Fecha de recepción: 12 de noviembre de 2021  
Fecha de modificación: 16 de marzo de 2022  
Fecha de aceptación: 7 de septiembre de 2023

**Keywords:** higher education, COVID-19, Latin America & the Caribbean, resilience, digital gap, online-based learning

## Resumen

El propósito de este trabajo es explorar cómo las instituciones de educación superior (IES) adaptaron y modificaron sus estrategias para enfrentar y sobreponerse exitosamente a la crisis por el aislamiento debido al COVID-19. Se pretende también evaluar su resiliencia, entendida como la habilidad para adaptarse y recuperarse de una adversidad desarrollando capacidades sociales y académicas en respuesta a un estrés extremo, en este caso, provocado por la pandemia. Se desarrolló una encuesta en 18 países y 162 universidades de la región de América Latina y el Caribe, específicamente en escuelas que enseñan turismo y hospitalidad, para comprender el proceso de resiliencia desarrollado por las IES durante la pandemia por COVID-19. Se recolectaron 260 respuestas. Las IES reaccionaron a la contingencia adaptando rápidamente sus procesos de enseñanza, administración y evaluación a la modalidad remota. La vulnerabilidad del proceso de enseñanza-aprendizaje recayó en la falta de conectividad de los estudiantes y de habilidades digitales de los docentes, que representaron dos obstáculos relevantes para la continuidad académica.

**Palabras clave:** educación superior, COVID-19, América Latina y el Caribe, resiliencia, brecha digital, aprendizaje en línea

## 1. Introduction

In an attempt to contain the spread of the COVID-19 pandemic, since the dawn of 2020, most governments worldwide have temporarily closed educational institutions at all levels (Instituto de Investigaciones sobre la Universidad y la Educación [IISUE], 2020; United Nations Educational, Scientific and Cultural Organization [UNESCO] - International Institute for Higher Education in Latin America and the Caribbean [IESALC], 2020). Most of HEIs have been impacted by COVID-19, and 90% of them have fully or partially stopped their campus activities (Marinoni et al., 2020). From that reality, higher education sector has made efforts aimed at mitigating the immediate impact of the closure of campuses and at facilitating the continuity of education for all, which is mainly the reason to their quick shift to remote teaching (Pedró et al., 2020; Rasouli et al., 2020). Such a situation demanded an adaptation process of the entire educational system (students, teachers, administrators, regulations, and facilities) to overcome such challenges and to minimize the temporary closure negative impacts. In other words, the various actors in this system had to be resilient to the pandemic.

The issue becomes relevant because the health crisis has disrupted and significantly challenged the traditional face-to-face teaching system in most educational institutions (Hilburg et al., 2020), and has exhibited vulnerability to the severity of the crisis (IISUE, 2020), from both the institutions and the various actors that are involved in educational, administrative, operational, financial and social processes.

The transformation of higher education due to the COVID-19 pandemic's effects has been delved by academics and organizations from several perspectives. One of the most examined topics is the impacts and opportunities in undergraduate education that the lockdown due to pandemic caused, such as the shift from traditional face-to-face to online education, that urged and increased the use of technology to maintain the education (Carolan et al., 2020; Chick et al., 2020; Gazzo, 2020; Vidal et al., 2021). The effects on teaching and learning in remote environments, specifically physical and mental health consequences, both students and staff (academic and professional), has been also a topic that researchers have addressed (Nandy et al., 2021; Pedró et al., 2020).

Globally, Aristovnik et al. (2020), Izumi et al. (2021) approaches and lessons of the higher educational institutions (HEIs, Marinoni et al. (2020), The Boston College Center for International Higher Education (Altbach & De Wit, 2020), and The International Association of Universities (IAU, 2020) explore the impacts and challenges relating to the COVID-19 crisis in higher education around the world. Pedró (2020) does the equivalent in the Latin America and Caribbean context. These authors provide perspectives from all continents and agree that main impacts are related with quick transformation of the pedagogic models.

These effects seem to be easily documented; however, it must be considered that each area of study has its own particularities. For instance, medicine and nursing require clinical fields for the development of practices, or tourism, gastronomy, and hotels, which, in the same way, depend on laboratories, practical learnings and jobs in companies in the sector, for the development of professional practices. Under this scope, the pandemic has put tourism education in front of multiple challenges, not only academic but also administrative, operational, financial, and social.

Following this order of ideas, the main research question guiding this work is aimed to analyze, within higher education in tourism field, what are the institutional and individual capacities to resist and recover from the academic disruption caused by the COVID-19 pandemic? Based on this question, the purpose of this research was to examine the capacities and strategies that HEIs with tourism programs have been implementing to adapt, overcome and transform themselves facing the impacts on educational processes caused by the COVID-19 pandemic along with completing successfully the training cycles that were underway. The study seeks to obtain current and quality information from HEIs that have tourism and gastronomy programs within the Latin America region.

## **2. Literature Review**

### ***2.1. Resilience and Higher Education***

Resilience has increasingly become a prominent notion in various academic disciplines and research fields (Keck & Sakdapolrak, 2013). This construct arises initially from the basic sciences. In physics, it refers to the resistance of materials as well as their ability to recover (Del Castillo et al., 2016; Fletcher & Sarkar, 2013; Ortunio & Guevara, 2016). In ecology, it emphasizes the general persistence of ecological systems (Adger, 2000; Keck & Sakdapolrak, 2013). From this approach and analogy, this notion has been adopted and

approached, since the middle of the 20th century, in various fields of the human sciences, mainly in psychology.

In more recent decades, research on this paradigm has been widely expanded and has moved from an exclusive focus on individual resilience to broader levels that pose resilience in social systems, which include community (Kimhi, 2015; Norris et al., 2008), institutional (Kwok et al., 2016), and organizational levels (Prayag et al., 2020). This is due to the adoption of social systems' perspective along with the growing threats from crises and disasters of various kinds that transcend aspects of the individual affecting the social aspects (Ajduković et al., 2015).

As a basic system for the functioning of a society, education, which must provide equal conditions to the members of the community, may become vulnerable if experiencing internal tensions, injustices, or disasters (The International Consortium for Organizational Resilience [ICOR], n. d.). Since risk cannot be disassociated from any form of education, students, educators, and all educational system participants are permanently exposed to multiple adversities or threat situations (Holdsworth et al., 2018).

When such scenarios are overcome, resilience in education is understood as a set of attitudes and behaviors that are associated with the capacity of the individual or the social system to transform, recover, overcome and adapt successfully in the face of adversity along with developing social, academic and vocational competence, despite being exposed to serious stress or simply the stresses inherent in today's world (Holdsworth et al., 2018; Rirkin & Hoopman, 1991). The adaptation achieved is manifested in the well-being of social groups. That is to say that the individuals in these groups have high levels of mental and behavioral health, functioning, and in short, quality of life (Norris et al., 2008)

Given the particularities of the teaching of tourism and the COVID-19 profound impacts, the notion of resilience becomes a key focus for the study of coping and adapting strategies that have been drawn up by institutions in the tertiary education environment. In this context, an overall scenario must be considered in the HEIs resilience, in terms of what Nandy et al. (2021) argue, HEIs have to cross through three stages during the lockdown: a survival period during the Covid-19 crisis, a rebuild period during the coming out of the lock period and to thrive after the end of the lockdown.

## ***2.2. Higher Education in Latin America and the Caribbean***

In various regions of the world, especially in less developed economies, the discourse on the higher education growth has been linked to the need of quantitatively expansion of this educational level with the imperative aim of overcoming socio-economic challenges, strengthening population development, and incorporating the population into the sphere of professionalism (Henríquez, 2018; Hernández et al., 2015; De Menezes, 2017). It is considered that through higher education, "a country forms a qualified labor force and builds the capacity to generate knowledge and innovation, which increases productivity and economic growth" (Ferreyra et al., 2017, p. 39)

In addition to this, the change of the millennium and the transition towards knowledge societies (Dinu, 2008; UNESCO, 2005), characterized by the spread of information and communication technologies (ICT), have led to a transformation in higher education in Latin America and the Caribbean (Brunner & Miranda, 2016). The most evident change is observed in the increase in coverage and demand for this educational level, which is identified as a phenomenon of universalization (massification) of access to higher education (Brunner & Ganga, 2016; Ferreyra et al., 2017)

Since 2000 the number of programs and institutions has expanded significantly, due to the need of a trained workforce in various social and productive sectors (Ferreyra et al., 2017). In accordance with Brunner and Lebraña (2020), the student population in Latin America went from 1.7 million in 1979 to 27 million in 2017, enrolled in 10,589 higher education institutions. In this universe of institutions, private institutions' dominance is evident, as they have 60% of participation. Despite these factors, the rate of quality and efficiency have not followed the same rhythm, and only 50% of the students obtain the degree on time, when they have reached an average age of 25 years (Fiszbein & Stanton, 2018).

In Latin America and the Caribbean, equity in access to and quality of education remain essential challenges. Although access to education has become more equal, socioeconomic status continues to play a large role in determining educational opportunities and student outcomes. Similarly, lax regulations of some institutions lead to questioning their quality (Ferreyra et al., 2017; Fiszbein & Stanton, 2018)

### ***2.3. Tourism Higher Education in Latin America and the Caribbean***

Despite the strength that natural and cultures assets represent, the countries of this region have been mired in constant socioeconomic problems. For this reason, tourism has been presented as an opportunity for job creation, and for most countries, it has been the main economic activity since the second half of the 20th century (World Tourism Organization [UNWTO], 2019b; Zornitta, 2017). As it occurs in other regions of the world, the constant expansion of tourist destinations in Latin America and the Caribbean since the mid-twentieth century boosted the labor outlook and highlighted the need for human resources with capacities and skills to serve the various jobs along with providing a solution to the multiple needs of the tourism value chain (De Menezes, 2017; UNWTO, 2019a).

The changes in the labor market resulting from the development of a service economy led to the creation of new options in education, especially at the tertiary level. Despite the fact that only 10% of tourism occupations require graduates of some degree, and only between 1 and 2% require graduates in tourism (César-Dachary & César-Arnaiz, 2016), various public and private institutions made efforts to open programs for the training of specialists in different areas of tourism. Higher education in tourism is recent in Latin America and the Caribbean, and within the academic context it has not been widely discussed (Leal & Padilha, 2005). The early antecedents of education in Latin America and the Caribbean for this sector have its origins in the 1920s, in informal training programs for tour guides and workers (Novo, 2018; Zúñiga & Castillo, 2012). However, the creation of the first tourist training schools and programs at the tertiary level occurred until the end of the 1960s.

The first school of tourism in Latin America was created in 1959, at the Autonomous University of the State of Mexico (Novo, 2018). Likewise, Wallingre (2011) affirms that, in Argentina, tourism education at a higher level also began in 1959. The professionalization of tourism activity in Chile emerged at the end of the 1960s (Collipal, 2017). In the case of Brazil, Leal and Padilha (2005) report that higher education in tourism commenced until 1971; in Colombia, higher education in this field began in 1974 (Becerra & Becerra, 2008). In countries such as Ecuador, Costa Rica, and Peru, tourism education initiated until the 1990s, with a close link with ecotourism modalities. In the Caribbean, Lewis (2005) refers that higher education in tourism began in Barbados in 1966, in Jamaica in 1968, and in Trinidad and Tobago in 1970. In the first years of the new millennium, in this region, there were already 52 institutions that offered hotel and tourism programs at the tertiary level.

The offer of university studies in tourism continued to grow gradually, and at present, based on different pedagogical and tourism paradigms, most of the countries in Latin America and the Caribbean have this type of program. According to Celis-Sosa (2015), the offer for university training in tourism amounted, by the end of 2015, to a total of 1,370 programs at the bachelor level, in 906 educational institutions, with an average duration of 39 months.

Within the competitiveness of tourist destinations framework, trained and skilled human resources are considered a source of information and knowledge, which is translated into a competitive advantage in our days (Borzyszkowski, 2014; UNWTO, 2019a), in such a way that the various educational systems and destination managers are committed to the development of human capital in this field. Thus, it is promoted as an area of critical importance for the success in the management of the tourist destination (De Araújo, 2011; Zúñiga & Castillo, 2012).

### 3. Materials and Methods

To determine the extent to which HEIs have coped, adapted and overcome to the COVID-19 pandemic, a two-phase qualitative and quantitative research was activated. At the beginning, documentary research techniques were applied to review the concepts of resilience and resilience in HEIs. In addition, in the qualitative phase, an overview of tourism higher education in Latin America and the Caribbean was developed. Furthermore, an analysis of secondary official-technical sources was carried out to identify the main impacts reported by official organizations on the educational system in the study region, due to the closure of the HEIs' facilities.

In a second step, a 27-item questionnaire was developed according to the model proposed by Keck & Sakdapolrak (2013), which allows evaluating coping, adaptation, and transformation strategies. A first section includes five questions aimed at identifying the overall profile of HEIs. A second section inquiries about the strategies generated by the HEIs to face education system changes derived from the pandemic. Third section is aimed at acquiring data on the adaptability of HEIs, and the last section was focused on obtaining elements to identify transformation strategies. The research instrument was designed with multiple-choice closed-response questions, and, to complement the study, four open-response questions were included.



Before distributing the survey among potential participants and to ensure that the questionnaire included topics related to the current reality of the institutions and that it was written in clear language, a pilot test among experts in tourism education (n = 10) was applied.

The target population comprised heads and faculty members of HEIs, with knowledge of the strategies that were being implemented in the face of the changes demanded by the health crisis. To gather data, the questionnaire was hosted and distributed online, the respondents were recruited through email and WhatsApp<sup>®</sup>. Due to the geographic coverage intended in the study, a convenience sampling method was used in the data collection process, and the questionnaire was distributed digitally, with the support of online forms of Google<sup>®</sup>. To increase the response possibilities, the questionnaire was sent directly to the participants, sharing the link of the form through social networks such as WhatsApp, Messenger, and email. To achieve greater coverage in the questionnaire distribution, the “snowball” method was used, with the support of academics, associations of tourism HEIs, and accrediting bodies.

The 906 institutions that provide higher education in tourism, identified in the thesis of Celis-Sosa (2015) were used as the reference universe. Finally, a total of 260 questionnaires collected from 18 countries (Figure 1) and from 162 HEIs were validated. 70% of these institutions are public and 40% of the programs already had a dual teaching-learning model (face-to-face supported by digital technologies).

The questionnaire application period was between May 16 and June 30, 2020. At the end of this period, 260 questionnaires were validated out of a total of 290 received from 18 countries and 162 universities in Latin America and the Caribbean. All participants were informed about the details of the study and study participation was anonymous and voluntary.

Regarding information processing, first it was designed a database and subsequently, a descriptive statistical analysis was carried out, with the support of Microsoft's Excel. In addition, classification and regression trees (CRT) were carried out using the IBM SPSS Statistics 19 program for the segmentation, stratification, and generation of precise groups or subsets and as homogeneous as possible with respect to the dependent variable.

## **4. Key Findings and Observations**

### ***4.1. Overview of the Effects of the Pandemic on Higher Education in Latin America and the Caribbean***

The closure of campuses and the interruption of traditional learning processes, due to social distancing, brought high social and economic costs for the population throughout the world (Kayyali, 2020; Vidal et al., 2021), with immediate changes and more severe impacts for the most vulnerable and marginalized groups. One of the first effects among the HEIs was the suddenly need to shift from traditional learning to on-line learning, based on the mediation of digital technologies that favor academic continuity, so that students and teachers could stay at home. The disruption resulting from forced digitization exacerbated existing gaps within the education system and in multiple aspects of the daily life of academic communities.

According to Marinoni et al. (2020), most of HEIs were impacted by COVID-19, and 90% of them, fully or partially, stopped their campus activities. UNESCO’s International Institute for Higher Education in Latin America and the Caribbean (IESALC) estimated that the temporary closure of HEIs, since mid-March 2020, affected 23.4 million higher education students and 1.4 million teachers in Latin America and the Caribbean. These numbers represent 98% of the region’s higher education student and teacher population (UNESCO-IESALC, 2020). Based on these estimates, organizations such as the IESALC (2020) and the Inter-American Development Bank (IADB) (Puig, 2020) undertook the task of analyzing the immediate impacts of this crisis on the higher education system in Latin America. Both institutions recognize that the temporary cessation of face-to-face activities in HEIs has generated immediate and foreseeable impacts, with a greater impact on students and teachers’ lives.

In their reports IESALC and IDB stand out a set of challenges (Table 1) since most universities have had to digitize curricular content immediately, and in many cases, in a precarious way, in conditions of limited planning and poor communication.

Table 1. Main Challenges for HEIs in Latin America and the Caribbean in the Face of the Pandemic

<i>Challenges</i>	<i>Description</i>
Inequality in access to digital infrastructure	Great difficulties were identified in students and teachers to access computer equipment and connectivity. In the case of HEIs in which there was no prior experience in online education, there are difficulties in responding promptly in creating effective digital platforms.
Lack of instruments for evaluating or accrediting the student’s knowledge in virtual teaching contexts	The virtual and face-to-face assessment practice presented significant differences; thus, it was necessary to develop evaluation processes in accordance with virtual teaching. The outbreak of the pandemic causes a deficiency in the HEIs to solve these evaluation methods.
Few teachers trained for remote education and remote assessment/accreditation	The virtual pedagogical practice had wide differences from the face-to-face one. In many cases, educators were not trained for this modality. Moreover, the lack of knowledge of virtual pedagogy and the lack of time available to plan and incorporate new educational mechanisms led to an overload of activities for the students. In most cases, education was limited to repeating traditional pedagogical formats through videoconferences.
Digital divide and limited access to technologies	Both students and teachers have socioeconomic difficulties in accessing computers or they lack connectivity. This can lead to an increase in school dropouts. The digital divide is aggravated because the use of the Internet is limited to communication tools and social networks rather than on the use of apps with educational, health, or e-commerce purposes. In some regions, Internet provider companies have serious service deficiencies, both fixed and mobile broadband.
Psychological effects that impact the learning ability of students	On a global scale, the results suggest that students’ concerns are social lockdown, reorganization of their daily lives, financial issues, little or no internet connectivity, unfavorable housing conditions to attend virtual education, job prospects, and the uncertainty of the end of the pandemic.
Stoppage of laboratory research	Social distancing protocols compromise the capacity to research in HEIs, and in many cases, public and private agreements and subsidies for this purpose are put at risk.



<i>Challenges</i>	<i>Description</i>
Risk of maintaining finances and economic health of HEIs	The closure of the HEIs campuses has caused, in the case of the private ones, late payment of tuition fees and the abandonment of some students. In the case of public schools, the economic crisis in the countries has meant adjustments in university budgets. Some adjustments mean the loss of financial scholarship funding and subsequent abandonment. Some HEIs stopped hiring new staff.
Internationalization	Students and academics' mobility for participating in study or research abroad programs stopped, and those who were in other HEIs and countries, with the imposition of travel restrictions, could no return to their home countries.

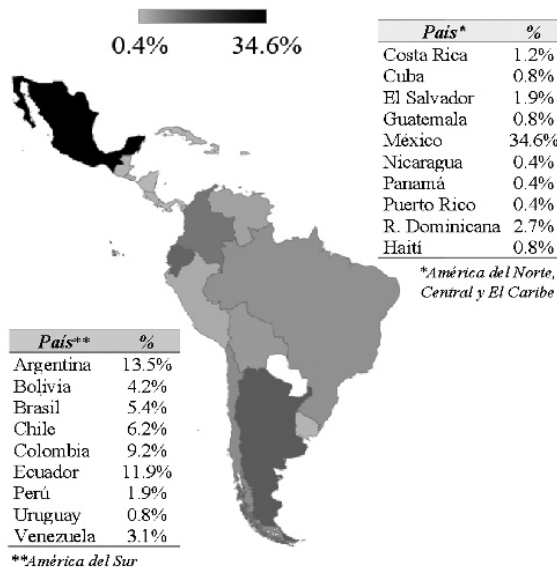
*Note.* Own elaboration, based on Altbach and Wit (2020), Banco Interamericano de Desarrollo (BID, 2020), Marinoni et al. (2020) and UNESCO-IIESALC (2020).

Dealing with these challenges, the majority of HEIs have reacted positively. Educational models have been adjusted and made more flexible to move to non-school and digital education as an alternative to mitigate the various effects of the pandemic on higher education. In the same way, resources have been invested for academic continuity and reduction of the digital divide. Teachers have assumed their role as co-adjuvants of emerging measures and participate in training processes to face the new demands.

#### **4.2. Profile of Respondents and HEIs that Attended the Study**

The study reached coverage in 18 countries of the analyzed region, in which the participation of Mexico, Argentina, and Ecuador stands out (Figure 1). The 260 responses that were received and validated came from heads and faculty members of 163 HEIs, who collaborate in academic programs in tourism and gastronomy at public and private institutions. The responses received from public HEIs represent 68% of the total.

Figure 1. Origin of Respondents



*Note.* Own elaboration based on the data obtained through the questionnaire.

Most academic programs last between 4 and 5 years. It is also identified that, until before the social lockdown derived from the pandemic, the predominant teaching modality was traditional face-to-face. However, more than 40% of HEIs carry out face-to-face sessions but partially rely on digital technologies.

### ***4.3. Coping Strategies and Skills***

Due to the imperative of closing campuses during the pandemic, the first challenge for HEIs and staff was to look for rebuilding strategies and address the minimum needs during the crisis. This scenario commanded to prepare contingency programs that would guarantee the right of education and continue the educational cycle that they were underway. Most HEIs had been operating, as previously stated, under a face-to-face education model until confinement. In order to face the closing and continue operating they made use of the digital technologies available in their environment to shifting into an emerging model of online-based education. The teaching-learning process mediated by digital technologies began to play a fundamental role as the teaching tools that various actors of the university system could use to continue their activities from their homes.

One of the most immediate impacts was reflected in the student's daily lives, as they faced the temporary cessation of face-to-face activities. The lockdown represented an unexpected situation, besides the lack of precision of how long it would last, conditions that, as Izumi et al. (2021) approaches and lessons of the higher educational institutions (HEIs, describe, led students to some forms of anxiety and panic. To face this scenario, more than 80% of the HEIs undertook actions to identify and serve students who presented a crisis situation. These students were attended, in most cases, by specialized personnel or by the teachers themselves.

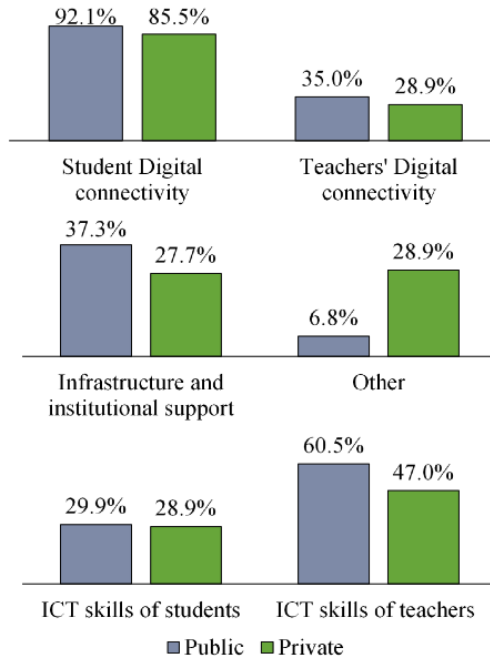
In the sudden transition towards distance education, factors that inhibit user's total participation are identified (Figure 2). In that sense, 90% of the HEIs recognize that the connectivity of students, understood here as the possibility of having the technological elements to be able to transmit data digitally through the Internet (Puig, 2020), ranks as the main obstacle, framed in economic shortcomings and deficiencies in the supply network of this service.

In a self-criticism practice, as the second factor that inhibits coping with the transition, respondents noted that both, the lack of teaching skills in the management of ICT and the lack of infrastructure and institutional support for ICT, were the main impediments that kept the team going. Participants also highlighted that, in a reverse direction, most teachers have connectivity and the students have skills to handle technologies, but they lack connectivity.

### ***4.4. Adaptation Strategies and Capacities***

In the process of resilience and after facing the disruption caused by lockdown, HEIs and staff began to draw up multiple strategies and short-term measures to adapt to the changes required by the pandemic. Faced with the obligation to adjust to remote teaching, HEIs had to opt for work modalities that would allow progress in the delivery of academic programs, massively and immediately, in accordance with the digital resources available at that time (Table 2).

Figure 2. Critical Factors Inhibiting Online Education



Note. Own elaboration based on data obtained through the questionnaire.

Table 2. Main Modality Used to Advance in the Courses

Subindicator	Freq	%
Online classes taught by the same educators and attached to the original programs	198	76.2%
Updating of contents and activities to adapt them flexibly to digital platforms	143	55.0%
Webinars on various topics, with flexible hours, related to the program and taught by invited experts	85	32.7%

Note. Own elaboration based on the data obtained through the questionnaire.

In order to continue with the teaching-learning process, a remote learning modality was adopted to a greater extent as it was adhered to the original programs and taught by the educators themselves. In some cases, the adaptability of other HEIs went further and made efforts to update content and academic activities and adapt them flexibly to digital platforms in synchronous and asynchronous formats. To diversify the options, Webinars were also deployed with flexible hours and taught by invited experts who presented topics related to the training area. This meant, in numerous cases, that many key workers were exhausted.

As it was seen during the pandemic, the transfer of face-to-face education to virtual environments was based mainly on digital learning platforms, applications, or learning

management systems (LMS) available on the Internet, both paid and free. As shown in Table 3, in higher education in tourism, the Zoom© videoconferencing software, social networks and instant messaging such as WhatsApp©, Facebook©, and Messenger©, as well as the Google© G Suite and email were in the most widely used digital media for communication and information exchange between teachers, students and other participants in the educational system, in times of the health crisis.

Table 3. Digital Media Used for Academic Continuity

<i>Digital Media</i>	<i>Freq</i>	<i>%</i>
Zoom	153	58.8
Social networks	148	56.9
Google G Suite	145	55.8
Email	145	55.8
Moodle	99	38.1
Institutional platforms	94	36.2
Microsoft 365	90	34.6
Skype	24	9.2
Others	52	20

*Note.* Own elaboration based on data obtained through the questionnaire.

The adaptation stage should have also considered some socioeconomic realities in the region, that affected the efficacy of the online learning, mainly the inequity in access to digital technologies (Alliance for Affordable Internet, 2019; Katz et al., 2020). In this context, and given the sudden conversion of traditional education, the gap in access to digital technologies has been widened.

In order to accelerate inclusion and to guarantee education for the majority of students, one of the first actions that HEIs undertook was to identify and support both students and teachers who did not have the necessary digital conditions for academic continuity. For this and in the case of students, more than 40% of HEIs have agreed to schedule a post-pandemic period in which learning can be recovered in person; 46% have provided resources in kind for Internet connection, such as prepaid data packages or chips, for cell phones; 32% of HEIs have provided, on loan, electronic devices, and 10% send study materials physically to the students' homes.

To support educators in this mutation, 61% of those who responded emphasize that HEIs implemented broad and sufficient actions to assist and update them in the acquisition of digital skills through courses and workshops, while 27% of HEIs were limited in supporting basic and insufficient update actions. To a lesser extent, in 7.4% of the HEIs, this type of support was unnecessary because the teachers already had these skills and experience. On the contrary, in 4.6% of the HEIs, no form of support has been implemented for teaching updating.

In the case of higher education in tourism, training through practice is recognized as an essential way to achieve graduates' specialization. In this case and given the need to

pause all field trips and practical activities, the HEIs implemented some actions to temporarily adapt this teaching-learning modality. Some of the actions that were established are preparation of case studies, academic essays, analysis of videos, tutorials, and other multimedia content; hotel simulators, gastronomy practices at home, tours in virtual museums, recording of practices developed by students at home.

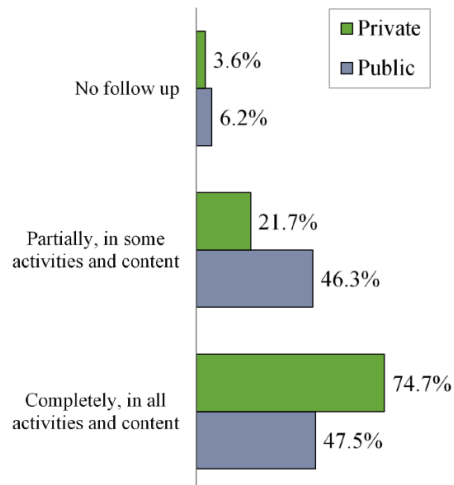
In sum, the main actors of the educational system, students, and teachers, developed, in this period, a set of capacities for the use of digital tools oriented to virtual education, to adapt contents and activities of academic programs, aimed at the flexibility of the evaluation, as well as empathy and solidarity to support each other for the successful completion of school cycles.

#### 4.5. Transformation Strategies and Capabilities

Although it may seem premature to speak of transformations in the educational system, in the process of overcoming the challenges of the health contingency and in the face of the uncertainty of its end, HEIs have had to quickly learn to manage the crisis and, consequently, to create transformation capacities that allow them to establish stable conditions of well-being for all participants in the educational system and strengthen themselves in the face of the prolongation of the current crisis or other similar situations. Based on this idea, this section analyzes the transformation strategies that were identified in this stage of the study.

One of the actions that can be identified at this stage is the implementation of control actions and systematized monitoring of the strategies implemented to guarantee compliance with content and activities. In this case, more than 74% of the private HEIs and more than 47% of the public ones indicate that they carry out a complete follow-up of such actions (Figure 3). In a partial way and in some contents, 46% of the public and 21% of the private ones indicate that they monitor these items.

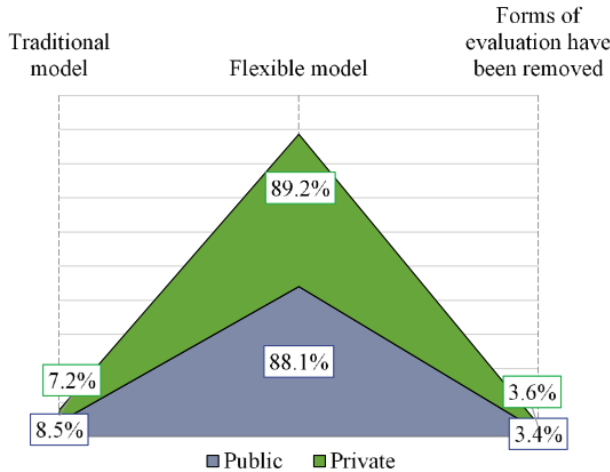
Figure 3. Systematized Monitoring of the Development of Activities and Contents



*Note.* Own elaboration based on data obtained through the questionnaire.

The evaluation of learning is another field in which transformations have been made. Given the impossibility of evaluating theoretical and practical learning, most of the HEIs that teach tourism programs have made the ways of examining their students more flexible (Figure 4), according to the tools provided by digital technologies. Some HEIs maintain the traditional model, and others have chosen to eliminate this procedure to a lesser extent completely.

Figure 4. Transformation of Evaluation Models



Note. Own elaboration based on data obtained through the questionnaire.

Finally, through the data collected in this work, a broad consensus is observed regarding the fact that HEIs that teach programs in the area of tourism must be attentive to the global changes that are taking place in tourism. Thus, HEIs should take this into account with the purpose of transforming the various elements that make up higher education in tourism, such as content and approaches to academic programs, practical training activities, as well as links with organizations in the public and private sectors.

### 5. Conclusions

Crisis brought some uncertainties but also a strong chance for learning and innovating. The disruptive impacts on teaching-learning styles, systems and mythologies in HEIs were seen both as an obstacle to continue with traditional schemes or as an opportunity for transformation and innovation in the teaching of disciplines in the field of tourism. In such context, HEIs should have paid more attention to resistance to change and the lack of infrastructure to support the change. Resilience in HEIs is, precisely, about coping, adapting and transforming the processes in the overall education system, but also, coping and adapting constantly emotional and mental fitness. In less developed countries this resilience becomes worthiest.

The study results allow us to infer that, despite the multiple obstacles, along the pandemic, Latin American and Caribbean HEIs overcame most of difficulties and transformed to



face the demands of the temporary interruption of tourism education at the university level. In other words, they were resilient, despite the shortages. In this sense, one of the first coping issues among HEIs was the pressing need to shift to emergency remote teaching practices, based on the mediation of digital technologies that favor academic continuity, so that students and teachers could stay at home.

However, the disruption resulting from forced digitization exacerbated existing gaps within the educational system and in multiple aspects of the daily life of academic communities. One of the lessons learned from this crisis includes the need of a new and innovative long-term educational system.

Under the scope of coping these challenges, the majority of HEIs have reacted positively. The pandemic has provided a window of opportunity to build stronger HEIs and key lessons for better preparedness for future threads. Despite the individual and institutional shortcomings, mechanisms were established to facilitate digital devices and Internet connection. The educational models were adjusted and made more flexible to transition to non-school and digital education as an alternative to mitigate the various effects of the pandemic in higher education. In the same way, resources have been invested for academic continuity and reduction of the digital divide. Teachers have assumed their role as co-adjuvants of emerging measures and participate in training processes to face the new demands.

The resilience of higher education in tourism, in the face of the health crisis caused by COVID-19, is considered vast, given the various edges that both the higher education system and tourism education present. For this reason, various future research opportunities are warned in this area, covering a more significant number of HEIs in the region, such as the analysis of strategies to guarantee the practical training of students and link with public and private tourism organizations, for the return to face-to-face, the impacts of isolation on students and teachers, among others.

The uncertainty of the immediate future was seen as unclear and was taken with caution in HEIs, and the return to the classroom was anticipated as an adapted semi-presence focused on learning, tolerant, with adoption of virtual media, due to the need to reduce the size of the groups. In addition, HEIs had the imperative to reestablish activities in a safe and equitable manner in order that all actors in the educational system in question have the necessary resources.

This study was helpful to better understand the numerous challenges faced, during and post-COVID scenarios, in the Latin America and The Caribbean context, and to prove the capacity of HEIs to face resistance created by diverse stakeholders with resilience. The study may help policy maker in HEIs for the creation of all-threats plans in order to have adversity-resilient HIEs.

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