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ORIGINAL

Closing Now to Reopen Better Tomorrow? Pedagogical Continuity in Latin American Universities During the Pandemic

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ABSTRACT

Latin American universities have struggled to ensure pedagogical continuity since the beginning of the pandemic. The objective of this research is to find out how Latin American universities responded to the many challenges posed by their commitment to pedagogical continuity, namely in the technological, pedagogical, financial, and socio-emotional domains, and the support received from their governments. Data was collected through a survey sampling 100 universities in the region covering 16 different countries. The results suggest that many of the challenges faced by universities were more related to the lack of pedagogical skills, from both students and teachers, than to the pitfalls of technological capacity. The survey results are also indicative that the forms of teaching and learning that have begun as emergency formulas to guarantee pedagogical continuity will evolve and consolidate from the time of the reopening, as part of the hybrid model with which we will have to coexist for the time being, and which may become the new pedagogical norm in higher education in the context of a foreseeable restructuring of its provision.

Keywords HIGHER EDUCATION, LATIN AMERICA, DISTANCE EDUCATION, EDUCATIONAL STRATEGIES, UNIVERSITIES

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1 INTRODUCTION

More than a year into the pandemic, most universities, and institutions of higher education in Latin America remain largely closed. As vaccinations become more widespread, it is expected that classrooms will reopen, but for the moment it seems difficult to establish a return date. In some countries, some degree programs already allow the return of small groups of students to minimize the impact of the lack of practical classes in laboratories, workshops and, above all, clinical practice. However, in most cases, teaching has fully embraced so-called emergency remote education, a euphemism for the need to use available capacities to guarantee pedagogical continuity using highly variable formulas for communication and transmission of content at a distance. Except in those countries and

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institutions that already had a tradition of distance higher education, in many cases there was no other solution than to improvise.

Following an initial emergency phase, which was overtaken by the calculation by governments and universities that the duration of the closure of classrooms would continue beyond one academic year, the system found itself progressively maturing in the face of greater accessibility to and/or consolidation of technological solutions, as well as with the level of pedagogical strategies used (Amemado, 2020). Although it is still too early to know what the effects of this progressive maturing process will be when classrooms reopen, one inevitably wonders what the impact will be of the technology-based solutions for pedagogical continuity being applied (Goedegebuure & Meek, 2021; Pedró, 2020a).

To date, there is little literature and even less empirical evidence regarding the transformation of the teaching and learning processes during the pandemic not only in Latin America but even in other more developed regions of the world. There are four notable exceptions: the UNESCO IESALC study that presents a global overview of the impact of the pandemic on higher education (UNESCO IESALC, 2020), the comparative study by (Crawford et al., 2020) that reviews the impacts of the pandemic on digital teaching in twenty different countries, the collection of evidence by Farnell, Matijević, and Schmidt (2021), and the results of the survey conducted by the International Association of Universities (Marinoni, Van't Land, & Jensen, 2020), unfortunately with a very small sample from Latin America and the Caribbean. In this region, essays and qualified opinions seem to be more frequent (Herrera, 2020; Salto, 2020). However, there are very few analyses based on survey results or interviews. Among thise that exist arethat of Morúa et al. (2020), which compares initiatives in five different countries and twenty-five universities, and Hershberg, Flinn-Palcic, and Kambhu (2020), which presents the results of fifty interviews with university managers in the region.

Undoubtedly, the difficulties inherent in the pandemic, together with the lack of a tradition of empirical studies focusing on the transparency of teaching and learning methods in higher education in the region, are burdensome. Nevertheless, it is interesting to highlight the strategies being pursued and the challenges faced by universities, their faculties, and students themselves in making the most of the solutions adopted, because these will be instrumental for further discussion about the future of university education in the region, along with its quality and equity.

2 METHODS

The main objective of this research is to find out how Latin American universities responded to the many challenges posed by their commitment to pedagogical continuity, namely in the technological, pedagogical, financial, and socio-emotional domains, and the support received from their governments.

To collect data on pedagogical continuity in the region, a survey was designed that contained questions about each of these different topics. The survey was administered via the web to a random sample of 100 universities in Latin America, processed between the end

of April and the end of June. The instrument was validated through a process of expert consultation. The sample is representative of the region (95% confidence level), but was not designed to be equally representative of each of the countries, so comparisons between them should be avoided or, at best, considered merely indicative.

Table 1 shows the distribution of the sample by country. A total of sixteen countries in the region were surveyed.

Table 1 Composition of the sample of universities surveyed by country.

Country	Percentage
Argentina	14%
Bolivia	3%
Brazil	12%
Chile	2%
Colombia	19%
Ecuador	4%
El Salvador	3%
Guatemala	1%
Mexico	18%
Nicaragua	2%
Panama	3%
Paraguay	2%
Peru	12%
Puerto Rico	1%
Dominican Republic	1%
Venezuela	5%

The distribution of the sample, according to the ownership of the universities surveyed, is presented below (Table 2).

Table 2 Composition of the sample of universities surveyed according to their ownership.

Ownership	Percentage
Private	28%
Private non-profit	12%
Public	59%

Additionally, but separate from the survey administration, an open call was made through the UNESCO International Institute for Higher Education in Latin America and the Caribbean website (www.iesalc.unesco.org) for students and faculty to share their experience during the pandemic. The website offered them the opportunity to post a short video or written story describing the challenges they face in teaching and learning remotely. These videos were analysed and the main findings were incorporated into this paper. In total, 37 testimonies were collected (33 videos and 4 written stories) and we found that the protagonists are from 4 countries in the region (Brazil, Colombia, El Salvador, and

Peru) and are students or professors from 11 universities, 67% of which are public and 33% private.

3 RESULTS

Most universities already had more than one e-learning platform in place before the pandemic. Universities are trying to ensure pedagogical continuity by adopting solutions that facilitate emergency remote teaching and, as the duration of the crisis lengthens, these evolve into more qualified virtual teaching, with stabilized tools and improvements in the skills of teachers. In the case of higher education, these solutions have been based, in the first place, on some sort of technological platform where virtual classes can be offered, teaching materials published and pedagogical communication guaranteed, both with the relevant teacher and with the rest of the students. In the region, most universities (80%) already had a technological platform suitable for distance education before the pandemic and an additional 8% created or implemented it as an immediate response to the crisis, as shown in Figure 1, which follows.

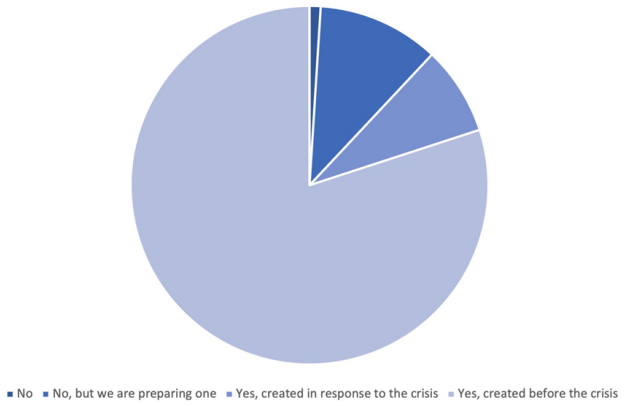

Figure 1 Previous existence of technological platforms for distance education

There are hardly any differences among universities according to their ownership, although private non-profit universities are those with the highest percentage of universities that already had a platform, while only 75% of public universities had one. The countries with the most challenging starting points in this regard are, in this order, Venezuela, Chile, Ecuador and Peru, with only 49% to a maximum of 70% of universities already equipped with a technological platform capable of supporting emergency remote education.

The most used platform is Moodle. In the region, the platform most widely utilized by universities is Moodle (60%), some distance apart from the others, such as Google Classroom (30%) and Blackboard (7%) and a multitude of other commercial platforms, on the one hand, and platforms designed and produced by the universities themselves (21%), on the other. What these figures show is a certain division of options between supporters of

open, commercial, or home-grown solutions; each of these options has its advantages and disadvantages, as well as being indicative of different organizational cultures.

But there is also a very common phenomenon: different platforms coexisting within the same institution, which occurs in 80% of cases. This is a complex issue involving several factors. On the one hand, some of the platforms are not redundant; this is the case of Microsoft Teams, which is used in 11% of institutions mainly for video lessons or synchronous seminars with video, complementing the capabilities of other platforms such as Moodle, in particular; in fact, in only 50% of these cases is Microsoft Teams the only platform available. The penetration of Zoom is even lower, reaching only 4% of universities, and it is an application that no university uses in isolation as the only means of communication. Moreover, although platforms that offer quality synchronous video can be very interesting and useful, they also require good equipment and bandwidth, which, as will be seen below, is not available in most cases. On the other hand, the proverbial autonomy of faculties and departments, particularly in public institutions, makes it possible for alternative solutions to be chosen within the same university, denoting a lack of coordination and worse, the loss of opportunities for economies of scale.

Radio and television are also being used for distance higher education. Decades ago, universities and, in some cases, entire countries had educational television and radio broadcasts that, with the advent of the Internet, have progressively disappeared or remain in a relatively marginal position. The decline of these teaching media in higher education has prevented them from emerging during the crisis as a major alternative for the transmission of content. Nevertheless, they are still being used in about a third of the cases; specifically, 18% of universities have both media, 8% only radio and 3% only television. But these media are always used simultaneously with digital platforms which, ultimately, have become the fundamental support for emergency higher education.

Actual use of the platforms is far from universal: only in 25% of universities do 100% of faculty and students use them regularly. Beyond the technological option used, the fundamental question is the actual use of the platforms by both teachers and students and, therefore, their scope. In this regard, it seems clear that there is great variability in the region and that only for a few exceptions can we speak of a practically universal reach. The figures, on average, illustrate a level of use that could be described as majority, as shown in Figure 2: 68% of teachers regularly connect to their corresponding platform, and in the case of students this percentage rises to 80%. The countries where usage rates are highest are Colombia, Mexico, Argentina, and Peru, in that order, and where they are lowest are Brazil, the Dominican Republic and Bolivia.

In almost half of the universities, more than 50% of the teaching staff use the platform regularly, and in barely a quarter of the universities, the percentage rises to 100% of the teaching staff using the platform regularly. Only 14% of universities reported that the percentage of teachers using the platform was zero. When we look at the results concerning the extent to which students use the platforms, the picture that emerges is somewhat better, given that in 66% of the universities more than half of the students connect regularly and in 23% of them the percentage is up to 100%. On the other hand, in only 7% of cases do stu-

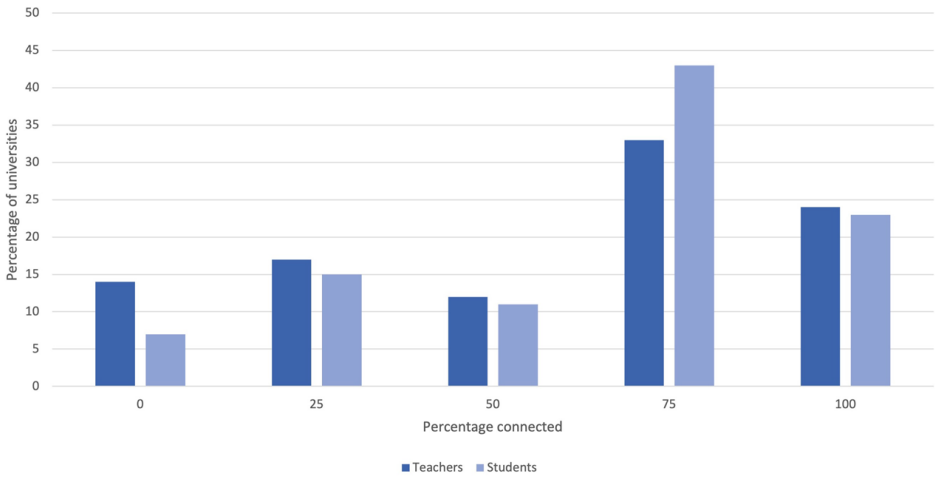

Figure 2 Percentage of universities according to the volume of teachers and students connected, in 25-point steps

dents never connect. In short, it seems that the reach of the platforms is somewhat greater in the case of students than in the case of faculties.

The main difficulties in taking advantage of the platforms are the lack of digital skills of teachers, more so than the lack of appropriate connectivity at home. The universities mention different types of difficulties to explain the lack of universal coverage. First, reference is made to the lack of digital skills of teachers (65%) and even of students (49%), and a significant percentage mention both at the same time (39%). This is therefore a problem that universities are finding difficult to solve because, in the current circumstances, they have no choice but to use the same platform to develop these skills. Second, there is the issue of limited access to the Internet at home (58%), but this is perceived not to be as great a difficulty as those generated by the lack of skills. Third, there is the question of the capacity of the university servers to support the traffic generated during the emergency (32%), which clearly seems to have led to usage which exceeds the existing capabilities. Finally, the universities recognize that the very design of the platforms and their configuration can generate problems (22%) that make their use difficult and that, ultimately, can lead to situations of disaffection and, unfortunately, even abandonment (22%).

Universities do not propose a single methodology for pedagogical continuity. The majority recommend the use of their corresponding virtual classroom, but they also encourage the use of video classes. As important, if not more important, than the existence of the platforms is the way in which they are used to guarantee pedagogical continuity. It is obvious that not all teachers have had prior experience in the use of the platforms before the pandemic, nor, even more importantly, specific training for distance higher education. In fact, in many countries around the world, pedagogical training is far from being the norm in higher education. The confrontation of the teacher with the reality of the platform or any other support with which he/she must now guarantee pedagogical continuity, has occurred in a context of emergency that has not allowed this initial deficit of training

and experience to be remedied in time. Courses have been restarted, or initiated, with the best will, but not always with the desirable skills. In addition, respect for the principle of academic freedom or, more generally, for the autonomy of each teacher, has slowed down the progress of proposals for methodological standardization or the creation of common protocols, with all the necessary variations, in view of the diverse nature of the students and the objectives pursued. In many cases, this limitation has resulted in significant pedagogical deficits; in others, the characteristics of the technological solution adopted have ended up imposing the conditions for teaching, limiting them, for example, to the possibility of video-conferencing.

The availability of platforms explains why in most universities the methodological proposal recommended to teachers is the use of the corresponding virtual classroom, through which they can publish content, propose didactic activities, evaluate and, of course, communicate with students. Around 78% of universities promote this approach. The second option preferred by universities is the use of lectures broadcast as videos, either synchronously or asynchronously, which is the case in 41% of universities, as shown in Figure 3.

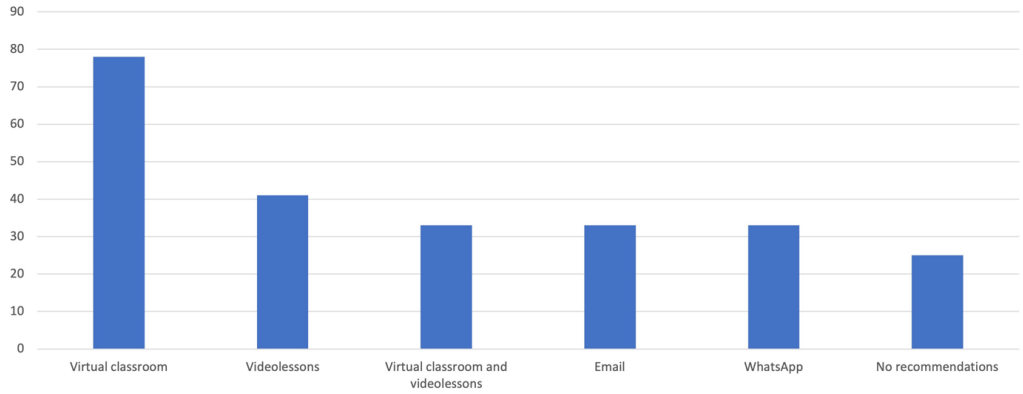

Figure 3 Recommended methodological options. The options are not exclusive.

One third of the universities choose to promote both virtual classrooms and videoconferences simultaneously. In approximately another third of the universities, where platforms are non-existent or of limited scope, they promote the use of e-mail or WhatsApp as a mechanism for communication and student follow-up, or they suggest resorting to methodologies that minimize the need for constant connectivity. Finally, one fifth of the universities opt to leave the methodological approach to be applied, with or without the use of technology, to the discretion of each teacher, with total freedom.

Students share the same problematic situations. The analysis of student testimonies reveals that there are basically four causes of concern, in the following order: technological access, economic difficulties, social isolation, and pedagogical inconvenience. In general, students who have had to leave the large cities where their universities are located, to return to the interior of their countries, are the most likely to document problems of access, whether due to lack of technology or connectivity. In some cases, they also refer to the lack of digital competencies, but these are more so when they refer to the use of platforms by fac-

ulty. Secondly, the financial problems arising from the low level of economic activity that students can carry out in the context of total or partial confinement, are also frequently cited. It also seems clear from the outset that students miss the social relationship dimensions of the university experience; many already anticipate the impact that social isolation could have on their emotional state. Finally, the pedagogical elements that students cite relate to the lack of pedagogical skills of the teaching staff, which prevents them from adjusting their teaching activity to the limitations, demands, and opportunities offered by remote education, particularly with technological support. In some cases, students also mention the need to generate habits and routines that allow them to properly manage their own learning process autonomously, something to which they are apparently not sufficiently accustomed, in the context of a pedagogical system that does not give them sufficient autonomy.

Universities have deployed support strategies, mainly for students, on the technological, pedagogical, and socioemotional fronts, but not on the financial front. The efforts that universities have been making to offer support to the university community, with the objective of guaranteeing pedagogical continuity in the best conditions, are very notable. This support generally covers three fronts: technological, with the objective of providing connectivity or equipment to those who lack it; pedagogical, aimed at developing basic skills to facilitate the use of the possibilities of distance education; and finally, socioemotional, which seeks to reduce the anxiety and stress that isolation and social disconnection can generate. It is important to note that universities consider these initiatives to be true innovations. In fact, when asked about the innovations developed to address the pandemic, there is enormous agreement in these three areas. In fact, these are not innovations, i.e., new ways of acting to resolve situations or change processes; rather, these are initiatives that were previously lacking in the universities, which is why they themselves consider them to be innovations: they had no previous references.

Although these three fronts could equally cover all members of the university community, the fact is that the priority remains, for understandable reasons, to benefit students, particularly the most vulnerable ones. Of course, there is a fourth front, that of financial aid, which has proven to be practically non-existent because only a few universities in the region have the financial capacity to offer extraordinary financial aid during the pandemic.

The results obtained, as shown in , clearly reflect that a significant percentage of the universities (44%) offer technological, pedagogical, and socioemotional support simultaneously to all their students, the latter two being the most frequent (62% in both cases).

Only a relatively low percentage do not offer any of these types of support (7%), but even fewer (1%) have the capacity to offer some type of direct financial support to their students, a capacity that in most countries is only available to public administrations or public or private educational credit institutions.

Half of the universities have been consulted by their respective governments to formulate their strategies during the crisis. However, the universities' assessment of the policies designed is not very positive, and even less so when it comes to post-crisis plans. The pedagogical continuity that universities are guaranteeing takes place in a particular environment in which governments (national, state, municipal) can generate better oper-

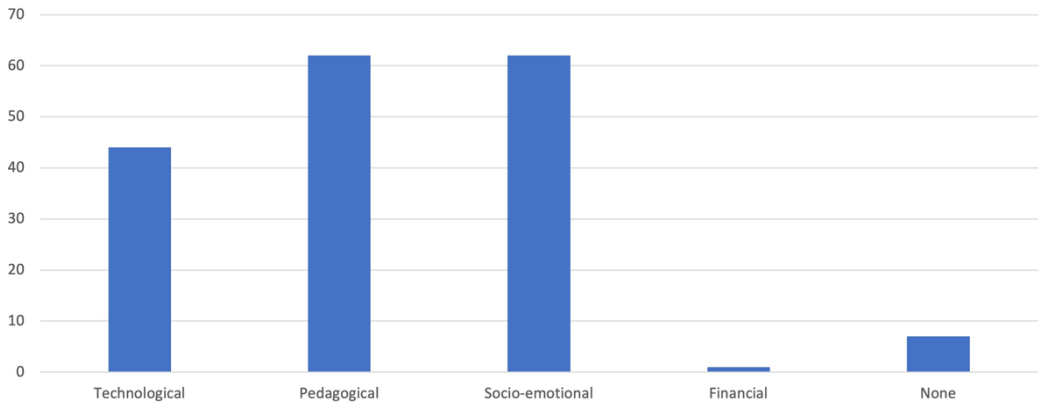

Figure 4 Types of support offered to students. The options are not exclusive.

ating conditions. A clear example of this is the regulatory changes that, in many countries, have given a charter to distance higher education for undergraduate degrees or have made it possible that, even if these had not been previously accredited in the virtual modality, they can be provisionally imparted under it until the pandemic allows the classrooms to be reopened. From this perspective, it is important that universities are consulted, that they take part in the conversation about how to generate the most conducive environment to pedagogical continuity, and that they are aware of the health plans that are being designed for the return to the classroom and participate in their design. Obviously, many of these consultations are carried out indirectly through the University Councils, and their equivalents, and the University Networks but, in this emergency, consultation, and direct knowledge of the reality of each institution, seem more necessary than ever.

Approximately half of the universities (52%) state that they have been directly consulted by their respective governments regarding the measures to be taken to guarantee pedagogical continuity, which is a very high figure and is probably explained by the unique and unprecedented nature of the crisis experienced, and by the need to forge far-reaching national consensus. Given the number of institutions in the region, the fact that half of them have been consulted in some way on how to deal with the crisis can only be interpreted in an extremely positive way, and says a lot about how most governments in the region formulate their higher education policies and sectoral strategies to forge consensus. Only in Bolivia and Guatemala does this type of consultation not seem to have taken place.

It is quite another matter whether or not the proposals eventually launched by the respective governments to safeguard quality and equity in higher education during the emergency have been well received by the universities. In terms of strategies to preserve quality, the governments of the region receive an average grade of 2.5 out of 5; that is, a fair pass. In terms of equity, the grade is lower, only 2.3 out of 5, which, without being a disastrous result, is obviously even less satisfactory. Slightly more worrying is how universities judge their respective governments' plans for post-pandemic higher education, with a score of only 2.2 out of 5. In some ways, this is not surprising because uncertainties about when

and how universities will reopen, and even more so about the priority given to the sector in future government budgets, help to explain why these government plans are given low ratings.

The order of countries where future plans are most highly rated by universities is as follows: Peru, Chile, Colombia and the Dominican Republic, while those with the lowest scores are Guatemala, Bolivia and El Salvador. It is also interesting to note that in Nicaragua and Venezuela, the opinions of the universities are strongly polarized between those who give high and low grades to these plans.

4 DISCUSSION

The results are, broadly speaking, in line with prior research and studies, particularly with Morúa et al. (2020) and Hershberg et al. (2020), especially in finding that the most problematic issue is not technology availability but pedagogical capacities, both on the side of teachers and of students. Yet, our results are unique because this is the first time that data about how governments have been supporting universities, and what their future plans are, is brought into consideration.

All in all, a complex picture emerges. On the one hand, it seems clear that higher education institutions have reacted relatively quickly to the fundamental challenges linked to pedagogical continuity: technological disconnection and teacher capacity development. It is interesting to note that, although universities already had learning platforms in place before the pandemic, their use has been limited by connectivity problems, certainly, but, above all, by end-users' lack of technological and pedagogical capabilities. In other words, the technological requirements to guarantee pedagogical continuity preexisted the pandemic, but not the actual capabilities to use them, as prior research by UNESCO IESALC (2020) had already highlighted. The results also show that the universities have work ahead of them on the pedagogical front, where, probably because of respect for academic freedom, they do not seem to be able to face the challenges that will presumably come with reopening, particularly if they decide to promote hybridization.

Also clearly emerging is the concern for the socio-emotional balance of students and, in general, of all members of the educational community in a context in which the reopening of institutions is fraught with uncertainties. This concern is much more difficult to manage while the institutions remain closed and should be targeted for the reopening agenda.

The fundamental question is whether, when reopened, institutions will revert to pre-pandemic forms of instruction or whether they will be able to capitalize on lessons learned to make improvements. All indications are that reopening will not be as abrupt as closures were (Blofield, Hoffmann, & Llanos, 2020). The maintenance of sanitary measures, paradoxically, will continue to favor hybridization since it will impose strict management of student flows and their density in the available spaces; in short, smaller groups with fewer hours of frontal instruction for a long time (Pedró, 2020b). That these conditions will be exploited for a reformulation of teaching in the long term seems more plausible in the case of graduate programs than with undergraduate programs, particularly in view of the boom

that distance higher education is already experiencing worldwide because of the pandemic.

5 CONCLUSIONS

In Latin America, it can be affirmed that higher education institutions have taken important steps to guarantee pedagogical continuity during the pandemic. These efforts have increased technological and pedagogical capacity and, in doing so, have generated expectations of innovation. However, for these expectations to materialize, university leaders must propose exit strategies for the crisis that contain a reforming vision of university education. The most important determinant will be to know what public support the institutions will be able to count on to undertake reforms that optimize the use of technology and develop the pedagogical skills of teachers, which are indispensable conditions for the success of hybridization. Although many governments have done their best to support the higher education system to ensure pedagogical continuity during the pandemic, how they design exit strategies will depend on the availability of public resources, policy options and the confidence they have in the role higher education can play in a recovery context.

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