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International Institute for Higher Education in Latin America and the Caribbean

Closing now to reopen better tomorrow?
Pedagogical continuity in Latin American Universities during the pandemic

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Introduction

With more than a year into the pandemic, most universities and institutions of higher education in Latin America still 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. But, in most cases, teaching has fully entered into 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 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 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 are reopened, one inevitably wonders what will be the impact of the technology-based solutions for pedagogical continuity being applied. (Goedegebuure & Meek, 2021; Pedró, 2020b).

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. (Crawford et al., 2020) that reviews the impacts of the pandemic on digital teaching in twenty different countries, the collection of evidence by Farnell et al. (2021), and the results of the Survey conducted by the International Association of Universities (Marinoni et al., 2020), unfortunately with a very small sample from Latin America and the Caribbean. In the region, essays and qualified opinions seem to be more

frequent (Gazca Herrera, 2020; Salto, 2020). However, there are very few analyses based on survey results or interviews. Among them, that of Camaño Morúa et al. (2020), which compares initiatives in five different countries and twenty-five universities, and Hershberg et al. (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 faculty and students themselves in making the most of the solutions adopted, because these would be instrumental for further discussion about the future of university education in the region, its quality and equity.

Objectives

The main objective of this research is to highlight the strategies developed by higher education institutions in the region to ensure pedagogical continuity. It also seeks to understand the context in which pedagogical continuity strategies operate, both from a technological and pedagogical point of view, and also to provide an overview of the policy environments in which these pedagogical continuity initiatives are to be developed.

First, we inquired about digital and non-digital technological solutions that were making pedagogical continuity possible. Second, beyond the technology and reaction to it, we sought to shed light on the different pedagogical strategies proposed and developed and the support offered by the institutions to teaching staff for the development of the necessary skills to optimize the teaching work in remote education contexts. Thirdly, it became clear from the outset that one of the main concerns would be how to ensure support for students, particularly those who, for socioeconomic or technological reasons, might be more vulnerable and therefore at risk of dropping out or academic failure. Fourthly, we also wanted to delve deeper into the political environment and the conditions created for universities to operate better in the remote distance education

phase, aware of the regulatory difficulties that distance education encounters in many countries in the region. And, finally, we seek to identify those processes and initiatives that could be indicative of processes of pedagogical or technological innovation that could be projected into the future.

Methodology

In order to collect data on pedagogical continuity in the region, a survey was designed that basically 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 sample is representative of the region, 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.

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

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

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

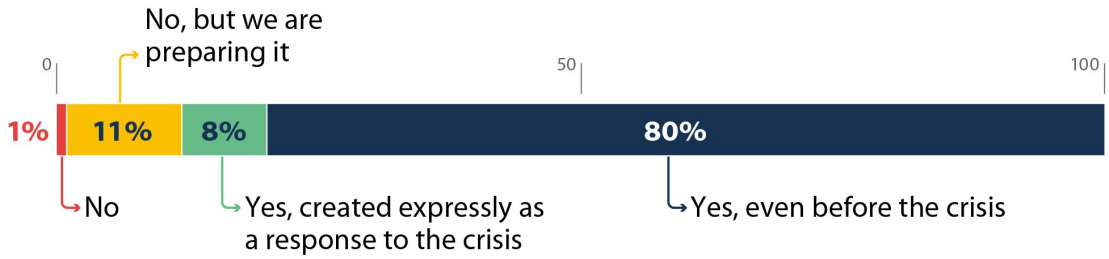
Ownership	Percentage
Private	28%
Private non-profit	12%
Public	59%

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

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 improving the skills of teachers. In the case of higher education, these solutions have been based, in the first place, on some kind of technological platform where virtual classes can be offered, teaching materials published and pedagogical communication guaranteed, both with the respective teacher and with the rest of the students. In the region, the vast majority of 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 the following Graph 1.

Graph 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 difficult starting points in this regard are, in that 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. In reality, 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.

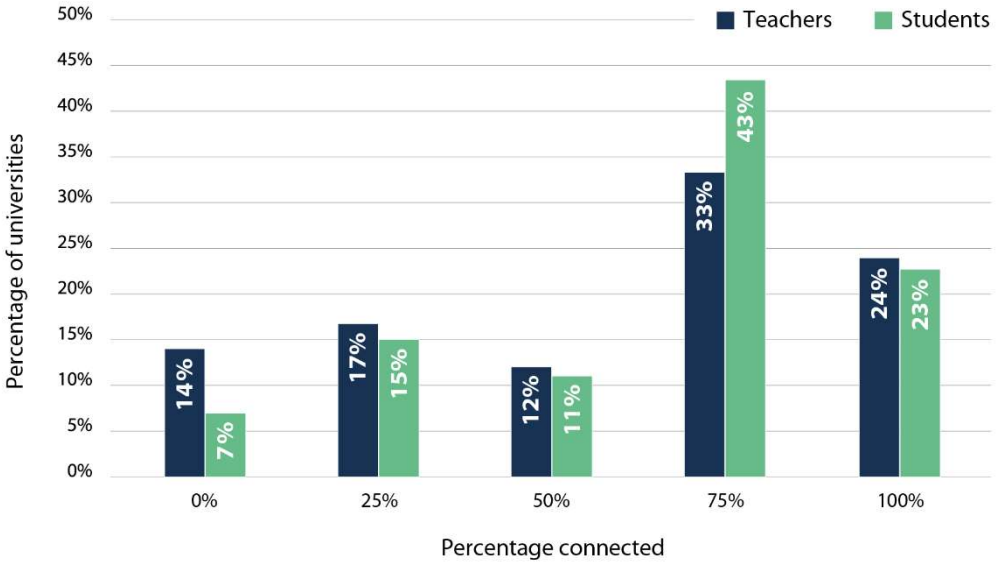
But there is also a very common phenomenon: different platforms coexist within the same institution, which occurs in 80% of cases. This is a complex issue involving several factors. On the one hand, some of the platforms are not really redundant; this is the case of Microsoft Teams, which is used in 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 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 so in the majority of 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 Graph 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.

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



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 who use the platform regularly. Only 14% of universities reported that the percentage of teachers using the platform was zero. When we look at the results of 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 students 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 faculty.

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 of 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

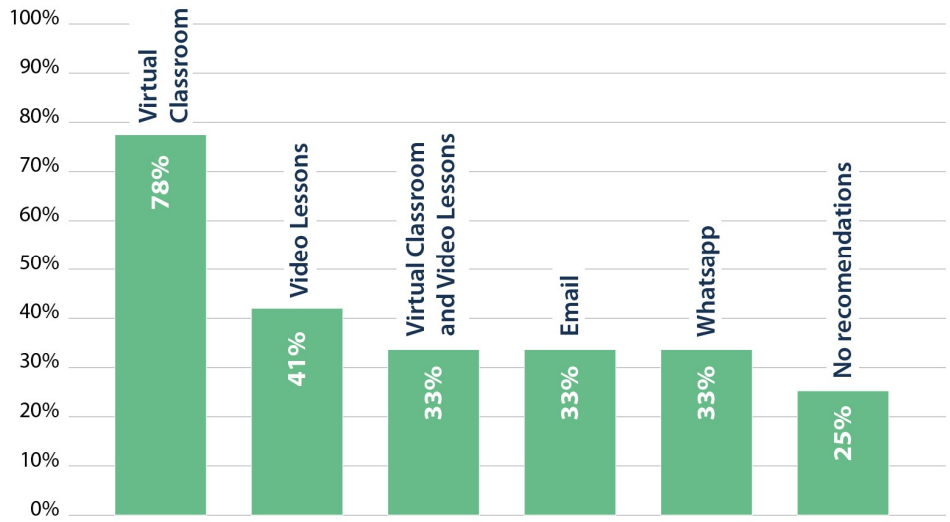
the capacity of the university servers to support the traffic generated during the emergency (32%), which clearly seems to have exceeded the existing possibilities. Finally, the universities recognize that the very design of the platforms and their configuration can generate problems (22%) that make 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, what is even more important, 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 videoconferencing.

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 Graph 3.

Graph 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, definitely, 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 problem 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 faculty. Secondly, the financial problems arising from the low economic activity that students can carry out in the context of torzal 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 prevent them from adjusting their teaching activity to the limitations, demands, and also 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.

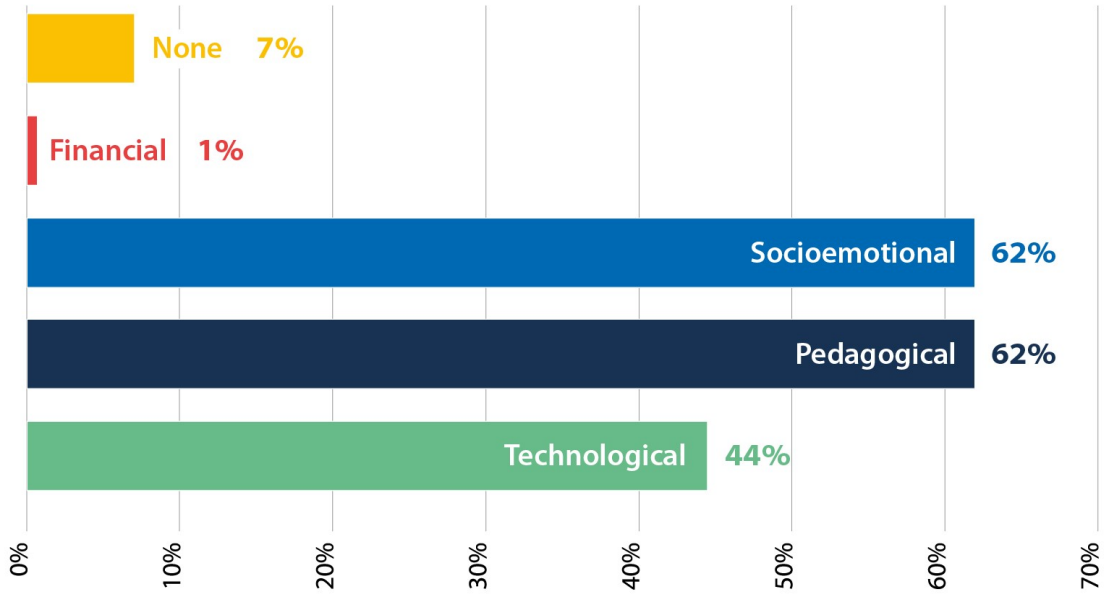
Universities have deployed support strategies, mainly for students, on the technological, pedagogical and socioemotional fronts, but not on the financial front. The efforts that universities have been making to offer support to the university community with the objective of guaranteeing pedagogical continuity 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, in reality, 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 Graph 4, 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).

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



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 operating 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 for 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 situation, 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 in an attempt 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 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 or not. 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 rated low.

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.

Discussion and conclusions: facing the day after

Although uncertainty still hovers on the horizon, it seems clear that the reopening will not mean a return to normal teaching and research as we knew it, nor will it be as abrupt as the closure was (Blofield et al., 2020). Based on the example of what is already happening with the reopening of schools and institutions of higher education in different countries, both in Asia and Europe, it seems plausible that the reopening will be done with strict sanitary measures that will result in: a) smaller groups of students in classrooms, with volume depending on the spatial conditions of the classrooms and institutions; and b) a smaller number of face-to-face classes per group, due to the imperative of the availability of space. In short, it is most likely 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.

There are two fundamental strategies to face this foreseeable, and desirable, restructuring. The first is to recover and the second is to redesign. In fact, it would not be necessary to wait for the reopening to begin to deploy these strategies; rather, institutions should take them on now as part of their commitment to the future.

Recovering implies designing pedagogical measures for formative assessment and generating compensatory mechanisms to support learning, particularly for disadvantaged students. Technology can be used as a support tool for the personalization of remedial activities. Although very robust technological assessment tools exist, it seems more advisable, and easier to manage, to modify the instruments to favor a more open and asynchronous assessment.

In this sense, there are some strategies that, despite being infrequent in higher education, can bear good results, such as, for example:

- Individualized tutoring;
- Small learning groups for remedial learning in critical instrumental subjects; and

- Summer (or winter) schools offering compensatory seminars. Inevitably, the implementation of initiatives such as these entails a non-negligible associated cost, but the benefits in terms of quality of learning and equity far outweigh the costs.

At the same time, there is the need to plan how training provision should be restructured, and this requires a redesign strategy that should focus on three main lines of action (Pedró, 2020a):

1. Document the pedagogical changes introduced during the crisis and their impacts; particular attention should be paid to the negative effects of emergency distance education and, specifically, to the Coronateaching syndrome. The critical question is whether the experience gained can be capitalized for a redesign of these processes, maximizing the advantages of face-to-face classes, while taking greater advantage of technologies, and, secondly, how far each institution wishes to or can go.
2. Promote internal reflection on the renewal of the teaching and learning model. This reflection can best be carried out if HEIs have pedagogical innovation and support offices whose role, in addition to developing the pedagogical competencies of the teaching staff, is to promote pedagogical innovation and to accumulate and disseminate the findings resulting from its evaluation.
3. Learning from mistakes and scaling up digitization, hybridization and ubiquitous learning. Thinking about the future, we must start from the principle of realism and generate strategies that do not rely only on a single technology, but combine several to ensure that all students are accessed or, more importantly, that technological solutions do not prejudice those who are already at a disadvantage. Each institution, and probably each discipline, must find the most appropriate combination of technologies and resources to improve pedagogical impact, without sacrificing equity and inclusion.

It is commonly said that in every crisis there is always an opportunity. Perhaps, in this case, it is that of the pedagogical review and the restructuring of the training offer in

higher education. It is to be hoped, in this regard, that many institutions will embark on the path of a necessary pedagogical renewal that favors both quality and equity.

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