

# Trend study of the process of access to Higher Education in Latin America and the Caribbean post Covid-19

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## Abstract

The aim of this paper is to determine regularities of the process of access to Higher Education in Latin America and the Caribbean in the post-COVID-19 period, based on a trend study from 2000 to 2020, which allow universities to adopt endogenous strategies focused towards increasing students' enrollment with the required personalological and academic preparation. The determination of the noted irregularities constitutes a prospective scientific result which was achieved, from the application of the historical-logical empirical methods and the documentary review, from two general indicators of the studied period: variation in the number of enrolled students and the health situation effects on the individual, academic, institutional, economic and cultural factors related to the university context, of the future effective demanding population. Impact results will be verified when applying concrete actions within the comprehensive management system for access, permanence, graduation and employability quoted by Barrios and others (2018). These actions will contribute to the fulfillment of Sustainable Development Goal 4 of the United Nations 2030 Agenda, an essential reference for the socio-economic development of the region.

**Keywords:** Access process, Higher education, trend regularities, COVID 19.

## INTRODUCTION

The process of access to Higher Education is a strategic response that is offered to the admissions admission of university students, in accordance with the perspectives of human, professional, scientific and technological development foreseen in a specific historical period. Through this process, the public and private university system prepares, together with the rest of the different actors in society, the institutional, academic and contextual conditions required to fulfill the mission of preserving, developing and disseminating the culture of humanity.

When universities design and establish strategic plans for their educational management based on the "trends" of the historical evolution of

their academic and administrative processes, enables them to scientifically support the execution of management actions with a certain objectivity within the certainties and uncertainties present in the future of any society. In relation to the above, the access of university students in the Latin American and Caribbean region has not had in recent years the procedural conception to support this (Barrios et al., 2018), nor the trending scientific information, which contributes to the achievement of universal access to Higher Education UNESCO International Institute for Higher Education in Latin America and the Caribbean (IESALC, 2020), which is an indicator of social justice and one of the main drivers of development in each country.

This reality allowed the authors of this work to identify as a problem that must be addressed by scientific means: "The need to adopt endogenous strategies in university institutions, directed towards the future increase in the income of their students, to obtain the personological and academic preparation required, a need which will increase in the coming years due to the health situation caused by COVID-19".

This problem will acquire a singular relevance in the near future, based on the importance that the increase in students in Higher Education has for the Latin American and Caribbean region.

Endogenous strategies are based on the idea that universities are in a privileged position to study their problems, according to certain criteria and according to the needs of the context, through epistemological, methodological and design positions related to their own educational models, interests and needs. Universities can contribute to the adoption of endogenous strategies in their institutions directed towards the future increase in the income of their students, from the determination of regularities in the process of access to Higher Education.

The present work contributes to determine the regularities of the process of access to Higher Education in Latin America and the Caribbean that denote the tendencies of this process in the post-COVID-19 period, which can be achieved through a trend study of this process from 2000 to 2020.

The foregoing is an alternative for universities to specify in their plans for strategic development the possibility of applying concrete actions within the comprehensive management system for access, permanence, graduation and employability described by Barrios and others (2018), and in this way contribute to the fulfillment of Sustainable Development Goal 4, of the United Nations 2030 Agenda, which is an essential reference for the socioeconomic development of the region.

COVID-19 has marked an essential milestone in all the social processes of humanity. Milestones establish changes in the stages that structure and show the development of a given process. Applied to the process of access to Higher Education, the changes are reflected in the quantitative and qualitative results of the admission plans. For science, this constitutes a support that facilitates evaluating the quality of the educational system in its relationship with the impact that it generates in the training of university professionals.

The process of student access to Higher Education in Latin America and the Caribbean has been affected during the COVID -19 period in its numerical growth and process capacity. This tends to jeopardize the availability of the predicted and demanded number of professionals in the region in the coming years. It is the essential argument to determine regularities and act accordingly.

## Methodology

The research process leads to divulging essential relationships of the objects studied in the form of trends, regularities and laws, which permit discovering the essence of these processes and enriching the system of knowledge of humanity, everything that contributes to transform reality ( Sources, 2009).

The determination of the regularities of the process of access to Higher Education is based on the interpretation by the authors of this work on the concept of "regularity". Regularity is understood as "regular quality". On the other hand, regular is "adjusted to a rule and in accordance with it", which can explain the behavior of said process. (Royal Spanish Academy, sf, definition 1).

The construction and elaboration of regularities of a process require, as stated (Fuentes, 2010), the understanding and interpretation of the same, for their contribution to the characterization of the transformations. Likewise, they demand the application of methods and approaches that respect the

structures of the relationships that emerge from them, recognizing their diversity and complexity.

The submitted work was developed with a methodology using a qualitative approach and a descriptive scope. The foregoing made it possible to specify the characteristics of the process of access to Higher Education and to submit it to evaluation. Empirical methods of documentary review and logical history were applied, the data of which facilitated, from the analysis of the different positions, synthesizing the most relevant elements to find the regularities of said process.

The method of documentary review privileged consulting sources on the process of access, permanence, graduation and employability in Latin America and the Caribbean, taking into consideration the dialectical relationships between each of these dimensions. A poor access process before students enter, compromises the indicators of net gross enrollment rates, permanence, graduation and employability in the university system.

The historical-logical method facilitated, from the historical point of view, the global study of the trajectory of the process of access to Higher Education, based on the phenomena and the development of the most significant phenomena in the course of the 2000 - 2020 stage. Logically, it revealed that access to Higher Education is still considered a fragmented activity, dependent on its parts and non-systemic, both issues that do not allow a procedural, systemic, structural and functional interpretation. The use of the logical and the historical are complementary and are linked to each other and are a scientific support in the application of any trend study.

The trend, according to Álvarez (2016), "...expresses a certain behavior of an object of study in a certain direction, but does not necessarily indicate a mandatory criterion. The trend reveals some behavior over time, by stages of said object of study, and although it does not express its essence, it insinuates it. The trend, as it is a phenomenal manifestation, it points in some way towards a regularity".

The application of the trend study must be based, first, on the characterization of the object of study. This characterization constitutes a cultural expression of that part of reality that requires and generates an investigative need. The process of access to Higher Education represents an integration of events, especially educational and administrative, which, given the cultural diversity of the world, is assumed from innumerable epistemological positions, although in most cases, it has a common objective: to guarantee the new entrants to university studies.

For its part, the trend study, according to Álvarez (2016), can be carried out by applying the historical-logical method as follows:

- a) Determine the milestone (event or event that serves as a point of reference) of the initial stage of evolution of the object of study.
- b) Determine the final milestone of each stage and the final milestone of the study of the evolution of the object of study. Each stage can have one or several intermediate periods with their corresponding initial and final milestones.
- c) Determine and evaluate the indicators that must be measured equally between each of the stages and periods, so that their results can be systematized throughout the evolution of the object of study.
- d) Express the trend of the object of study in the form of a regularity that is the essential result of the work presented.

The above procedure is described below.

## Results

Characterization of the process of access to Higher Education.

Since the beginning of the 21st century, there have been many efforts carried out by different actors in society to contribute to the improvement of the process of access to Higher Education. One of the most relevant is the call for the Latin American Congress on Dropout in Higher Education (CLABES), which has been

held annually since 2011 and has provided innumerable experiences on the factors associated with dropouts, its individual and social effects, as well as defining the possible policies that can be adopted -at all levels of responsibility- to contribute to the permanence and graduation of students.

In the present work the conception and the methodological and practical experiences of the system of access, permanence, graduation and university employability (SAPEE) are systematized, as described by Barrios and collaborators (2005), a conception that facilitated the modeling of a comprehensive management system for access, permanence, graduation and employability (SGIAPEE), elaborated and applied by Barrios and others (2018).

This systematization also assumes the theoretical and experiential support of Tinto, V. (1975) and (1988), Gonzáles (1994), (1999) and (2001), Himmel, E. (2002), Orellana, V. (2011); among others, who have scientifically described and explained the effects of university access when it does not correspond to the needs of society, the relevance of the training offer and the personological development of the individual who accesses universities.

The complexity of the socioeconomic and educational situation that characterizes the context of Higher Education in the world, and specifically in Latin America and the Caribbean, regardless of the good practices that have been or are being applied and that promote global, regional or local holistic solutions, in the opinion of the authors of this work, should not restrict each University from achieving, from its responsible autonomy, creative, critical and innovative management, as well as providing endogenous and indigenous solutions.

This integration between what is predominant in a region such as Latin America and the Caribbean, together with what is unique in each of its member countries and the singularity of each University, can favor the preservation, development and dissemination of

the culture of humanity, which is its mission, based on actions tailored to the specific needs demanded by society. In this institutional strategic conception, the process of access to the educational offer of each university must be taken as the beginning of the institutional improvement plans.

We start from the idea that each University provides endogenous and indigenous solutions. This idea is based, according to Sotolongo (2006), on the fact that the excessive primacy of the whole in relation to the parts can lead to waiting for solutions from the margins, from the outside, an issue that he calls "bad holistics". The Universities that hope to solve the results of the access process, with only favorable public policies, can fall into a disastrous immobility and conformity with the undesired phenomena in their institutional management.

On the other hand, Sotolongo points out, the excessive primacy of the parts in relation to the whole can also lead to the reductionism of solutions that do not consider the whole. Then what is needed is to apply a comprehensive management system for the access process, creatively correlating the general with the particular and with the singular.

The university access process, according to Barrios and collaborators (2005), constitutes a process that at the present time Pedagogy of Higher Education considers begins from an early age of the individual and culminates approximately during the first year of the university career, that is, it implies a time of 14 years. This process has been structured according to Sampedro and others (2006) in four major stages. (Figure 1).

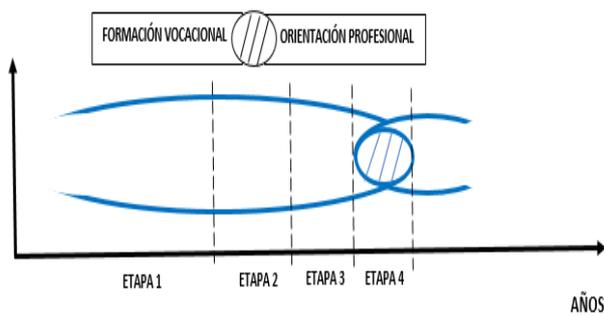


Figura 1.- Etapas del proceso de acceso universitario. Procesos de formación vocacional y de orientación profesional. Elaboración propia.

Stage 1 of general vocational training. It takes place from kindergarten until the end of Primary Education with the formation of interests and general knowledge (vocational training). The important thing at this stage is to direct the educational influences of the family and teachers towards certain professions in children, using wide and varied interests related to the different spheres of culture, science, sports, aspects that allow them "discover" their inclinations and aptitudes.

Vocational training is a process that is carried out under the influence of the conditions of the family, school and social environment, all of which determine the development of interests in some of the professions or trades present in society. The vocation is formed, develops in an intentional and planned way. From the role play, to the practical and experiential approach to the professions or trades, they develop positive and negative sensitivity towards them.

The value of work as a great pedagogue for the development of individuals is well known. Children and adolescents need adequate information about their personal and contextual possibilities and potentialities. It will depend on the preparation that he or she has received throughout the first years of life that later the young person consciously inclines or not to higher studies.

Stage 2 of preparation for professional selection. It occurs in Secondary Education, and is aimed at the development of cognitive interests, knowledge and specific skills, which emerge from those subjects or spheres of

knowledge and social activity towards which the adolescent has been showing inclinations or preferences.

Stage 3 of the formation and development of professional interests and skills. It coincides with the entrance of the adolescent or the young person to the baccalaureate and its essential objective is the training and development of interests, knowledge and professional skills that make them suitable for the successful performance of a certain profession. Professional orientation acquires at this stage special particularities that are expressed in the "professional approach" of the educational teaching process.

Vocational guidance is a support process that is established through a system of psychological, social and professional influences that aim to equip adolescents and young people with the necessary knowledge so that, once the time comes, they can choose and select with full conviction and professional identity the university career according to their social needs and personal interests (Barrios et al., 2005).

This type of orientation develops the motivational sphere, expressed in the professional interests and intention of the individual. Likewise, it develops the cognitive sphere in relation to the content and work of the professions, as well as the particularities of the personality necessary for professional practice.

Stage 4 of consolidation of professional interests, knowledge and skills. It begins in the last year of high school and ends during the first year of the university career in a way that overlaps, influences, and compensates, to ensure that students reach a higher level of personal independence, adaptation and integration to the Higher education, higher mastery of the selected profession

There is a period of overlap between vocational training and career guidance. Likewise, between each of the stages of the university access process. All this depends on the degree of academic and personal development of the students. Between stage 3 and 4, a complex system of influences takes place on the student, who begins to assume new responsibilities for

his studies in an academic environment very different from the one he experienced before.

Knowledge of the characterization of the process of access to Higher Education ensures that university institutions promote a set of influences on the preceding educational system and society in general, so that they can become leading institutions and not uncritical recipients of the limited results of vocational training and professional orientation in each of the stages of the access process of its students.

Milestone of the initial and final stage of evolution of the process of access to Higher Education in Latin America and the Caribbean.

In the case at hand, the year 2000, due to its significance as the threshold of the 21st century, meant a transcendental milestone in the results of the process of access to Higher Education in Latin America and the Caribbean.

This need for change had its genesis in the Regional Conference on Policies and Strategies for the Transformation of Higher Education in Latin America and the Caribbean (Havana, 1996), where it approved, looking to the 21st century, that work should be carried out to achieve new forms of organization, government and management of universities. Proposing a Guide for the elaboration of a plan of action that would ensure said transformation.

For its part, the final benchmark of the period of study of the evolution of the process of access to Higher Education in Latin America and the Caribbean coincides with the year 2020, taking as a significant fact the health situation caused by COVID-19.

The process of access to Higher Education in the indicated stage, responds to educational factors that depend on the conception of the process itself and the systemic connection that exists between each and every one of the annual periods from 2000 to 2020. Its evaluation It can be expressed, from manifestations such as the quality of the results of diagnostic exams in previous education, entrance or selectivity exams in each country, percentage of enrollment with respect to quotas or places granted to the effective applicant

population, gender, age, origin, selected careers, among others.

In a very limited way, the evaluation of this process can be established on the basis of indicators that are directly related to the level of motivational development of the subjects involved (Fonseca, 2016; Munizaga et al., 2018).

Various studies carried out in universities in Latin America and the Caribbean show that the problem of the process of access to Higher Education is associated with different conditions in each country, as well as with the specific characteristics of the Higher Education institutions, this problem not being the same in these contexts (Rama, 2005; Araujo, 2017; Stella, 2017).

One of the most generalized determinants is related to the elements inherent to personality development linked to professional motivation (Fernández et al., 2013; Suárez et al., 2015), taking into account that professional motivation is the essential core of professional guidance.

Munizaga and collaborators (2018), identify five essential factors structured in 111 variables that affect the problem treated regarding the results of access to Higher Education, achieved from the systematic review in 10 countries of Latin America and the Caribbean. From this finding, the authors of the present work identified, up to 2018, the indicators that were directly related to the level of motivational development of the subjects involved (Fonseca, 2016; Munizaga et al., 2018). Are they:

- Personal Factor. Personal traits, aspirations and expectations of students and their families: motivation, adaptation, individual, school education, career choice, expectation, self-perception, self-determination, satisfaction.

- Academic Factor. It considers the student's academic trajectory, both before and during the student's training at the university: academic performance, approved credits, academic autonomy, suspended subjects, commitment to the course, academic performance, academic dissatisfaction,

permanence in class, school average and semester average.

- Institutional Factor. Professional orientation, teaching models, teacher training, academic-social networks and university life.

- Economic-Occupational Factor. Related to family and personal economic income, as well as forms of financing university studies and employment opportunities: socioeconomic, financing, employment status, labor field and career-market relationship.

- Cultural factor. Beliefs and practices that are part of the student's cultural context and that affect his or her decision-making: sociocultural.

Although the indicated factors are results of a multicausal nature, it is possible to associate them, according to González Rey (1982; 1993), to the motivation of the students which converts them, from barriers, into opportunities for the individual.

Trend study of the process of access to Higher Education in Latin America and the Caribbean .

Two fundamental indicators have been selected for the trend study:

- 1) The variation in the number of students who have entered Higher Education.
- 2) General evaluations of the individual, academic, institutional, economic and cultural factors of the students who access university studies.

The trend study of the work presented is illustrated in Graph 1.

A report prepared by a group of authors from (IESALC, 2020) details that universal access to Higher Education between 2000 and 2018 increased in general in all regions of the world, going from a gross enrollment rate (GRT) of 19% to 38%. This report limits itself to pointing out that the aspects that have most affected the aforementioned increase include: the economic development of nations, the increase in the aspirations of the middle classes to access tertiary education, the growth of

private institutions and the expansion of remote institutions.

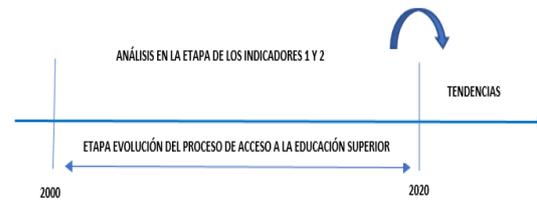
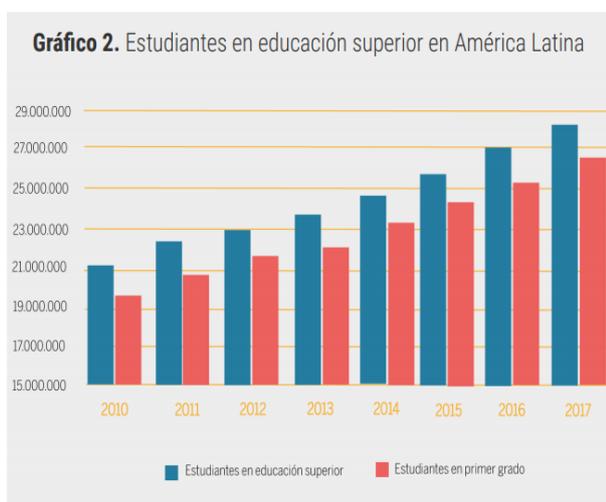


Gráfico 1.- Concepción del estudio tendencial del proceso de acceso a la Educación Superior en Latinoamérica y el Caribe post COVID - 19. Elaboración propia.

Analysis of the indicator: "Variation in the number of students who have entered Higher Education in the 2000-2020 stage"

According to the Diagnosis of Higher Education in Ibero-America (OEI, 2019), which has served to shape concrete proposals that allow progress in meeting Sustainable Development Goal 4 of the United Nations 2030 Agenda (2015), a significant increase in the access of students enrolled (TBM) in this region has been verified up to 2019 that permits it to maintain the third place after Central and Eastern Europe, North America and Western Europe and only 12 - 13 percentage points on the rate at world level . This study also focuses its attention on the fact that this growth during the 21st century has been possible due to the growth of universities in Latin America and the Caribbean.

Graph 2 of the aforementioned Diagnostic Study shows that there has been an annual growth of the total number of students enrolled in Higher Education and of those enrolled at the undergraduate level. This growth would seem satisfactory if we did not compare it with the number of undergraduate and postgraduate applicants who during that period demanded access to this type of institution in each country. That is, for every thousand inhabitants, 4.3 managed to access university studies in 2017. This means that about 43 thousand new incomes per million inhabitants have access, in a region of approximately 400 million inhabitants that require for its development needs an income higher than 31%, so it is not possible to satisfy the demand.



Fuente: elaboración propia a partir de datos de la Red IndicES.

Graph 2.- Evolution of enrollment growth in Higher Education in Latin America. Taken from the Diagnosis of Higher Education in Ibero-America (OEI, 2019),

The existence of this unsatisfied demand (numerical), due to the deficit of quotas or places throughout Latin America and the Caribbean, is also characterized by:

- Limitations in the relevance of the offer for future employability, which produces a high percentage of graduates who do not or cannot practice their profession and consequently rejection of the applicant for selecting certain careers. ( Smink, 2017; Ayala & Atencio s. f.).
- Lack of motivation of the applicants for the assigned or achieved quota due to the lack of vocational preparation and professional orientation. (Barrios and others , 2018).
- Impossibility of some of the applicants to access the assigned quota modality due to connectivity and socioeconomic reasons. ( Francesc , P. 2021).

It can be inferred that, if there were a sufficient number of quotas or vacancies, a high unsatisfied demand would be verified anyway, and with it, limited access to Higher Education.

The authors of this study also consider that polarizing access to the number of existing quotas or places is an erroneous interpretation.

Not considering access as a process is simply assuming that it is an increase in enrollment. This leads to creating false expectations for future generations, because what is being done is to widen the “mouth of the funnel”, fill the universities with students and after a year or so, 70% fail due to individual, academic, institutional, economic or cultural factors (Barrios and others, 2018).

Another access limitation has been identified, based on the "emerging adjustment" of the training modalities in all the universities of the region due to the health situation due to Covid-19.

During the beginning of the year 2020, most Latin American and Caribbean universities found themselves in the historical – concrete need to partially close some of their training offers, and incorporate the use of Information and Communication Technologies (ICT) to face the entry of its new students, which limited the number of students who could access.

To this phenomenon it is necessary to add that access to the Internet, which should be considered a universal right of the entire population, demonstrated during the start of the pandemic the existence of countless situations of limitations in connectivity and the quality of its operation; the presence of obvious digital inequalities in households, to which we must add social inequalities, which have been verified by the inability of accompaniment and support by families, both affective and towards teaching. All this demonstrates and explains that some students, even though motivated by showing off their ability to access public and private universities, could not take advantage to do so.

The extraordinary session of the World Meeting on Education called "Education after COVID-19" in its Declaration of the World Meeting on Education 2020, expresses the need to assess the repercussions of the health crisis related to advances in education. achievement of SDG4 and other goals related to education. From this perspective, it is essential that the scientific community of Higher Education examine the trend in access to this education

since the COVID-19 milestone, which overestimates the number of students who will not be able to enroll in university studies.

The trend assessment of the indicator "variation in the number of students who have entered Higher Education in the 2000-2020 stage", allows the authors of this work to express the following regularities in Latin America and the Caribbean:

Regularity #1.- There is no generalized scientific conception that considers and applies access to Higher Education from a process whose systemic and complex nature allows establishing endogenous strategies for its comprehensive management in universities.

Regularity #2.- During the 2000 – 2020 stage, the access of students enrolled (TBM) was characterized by an uneven numerical growth. In none of the contexts did it manage to satisfy the number of quotas or places necessary for the effective applicant population and many of them remained unoccupied due to the lack of acceptance of applicants. The TBM was significantly affected at the beginning of 2020 by the health situation caused by COVID-19.

Regularity #3.- Student access to Higher Education is difficult to fully assess. Its evaluation is polarized, based on statistics with emphasis on the number of universities, quotas or places granted, results of entrance exams or selectivity, percentage of enrolled, their gender, age, origin, careers selected by the applicants, among others. This is to the detriment of valuing more essential aspects such as the results of vocational training and professional guidance and the relevance of the offer, which ultimately are the basis for growth adjusted to the needs of the region.

Analysis of the indicator: General evaluation of the individual, academic, institutional, economic and cultural factors of the students who access university studies.

The 2000-2020 stage for Higher Education had a functional impact caused by COVID-19. This meant that the training process went from a face-to-face or semi-face-to-face modality to hybrid, discontinuous or intermittent modalities

(Collective of authors, 2020). In fact, in a short time, a significant offer of degrees and postgraduate degrees in the online modality was introduced from 2020 itself.

The need to apply these modalities in Latin America and the Caribbean initially provoked two scientific questions: The first, how prepared were students and teachers to receive/teach virtual classes? The second, what technological resources were available to the universities and students to guarantee the application of these modalities in the new admission? The answers were definitely coming to light in each context, in each country, and none of them was exactly satisfactory.

According to Sagrá, (Collective of authors 2020), in his article "Teaching and learning online: overcoming social distance, "... At the beginning of the pandemic, some North American universities in China — they were the first affected — decided to migrate, in a hurry, to an online solution. They did it without practical knowledge of what online education was, but they certainly did it with the necessary technology and with a great will on the part of all those affected. Regardless of these potentialities, Sagrá states that the report that gave an account of this added that the teaching team had felt comfortable, despite highlighting that 88% of the teaching staff had no relevant previous experience in online teaching.

When this problem was transferred to Latin America and the Caribbean, a study by the Tecnológico de Monterrey and the IDB (2020), was able to verify that three out of four teachers did not feel prepared to incorporate new technologies in the classroom in the face of the COVID-19 emergency. Combined with the foregoing, the administrative and technological conditions made it impossible to comply with the entire aperture of planned degrees and postgraduate degrees. This limited many students from accessing their university studies for the first time.

This same study showed that the pandemic affected more than 26 million students and 1.4

million university teachers, who switched abruptly to an emergency remote teaching environment to continue educational processes. Take into consideration that before the pandemic, only 19% of university programs focused on distance education and 16% used hybrid modalities (blended) in virtual-focused universities. This means that 75% of the student body belonged to the face-to-face or semi-face-to-face training modalities.

We have pointed out that inequalities in access to Higher Education persisted during the last two decades in Latin America and the Caribbean. Obstacles such as poverty, crisis situations, low enrollment rates, the effect of entrance exams, geographic mobility and discrimination, were even more affected by COVID-19, exacerbating the challenges of different contexts to guarantee access to university.

According to the report (IESALC, 2020), only 51% of households in Latin America and the Caribbean are properly equipped to receive classes. It adds that the teaching received showed a lack of preparation of the teachers in the virtual modality.

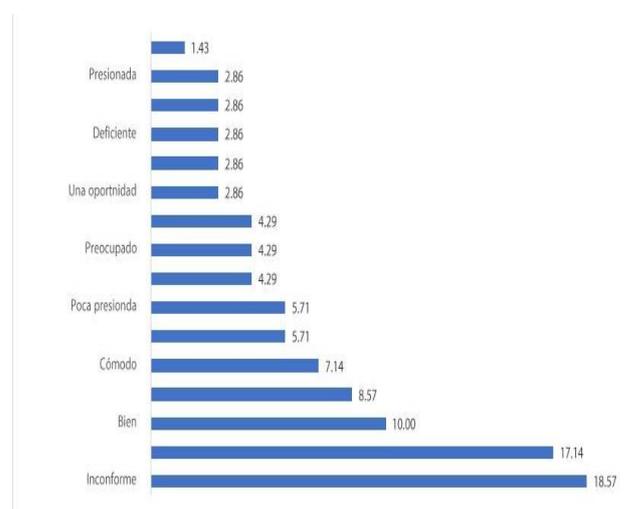
In his article "Higher Education in Times of Pandemic: A View from Within the Training Process", Miguel Román (2020), demonstrates with irrefutable data and with a high degree of generalization in the region, that there were manifestations of discomfort and nonconformity that produced limitations in student learning.

As graphs 3 and 4 presented by Miguel Román in his article show, the effects on teaching caused by the pandemic and the limitations of teaching-learning during this period are going to generate a great academic effort from the institutions so that the future and very limited effective applicant population, can achieve access to Higher Education and achieve permanence in the selected studies.

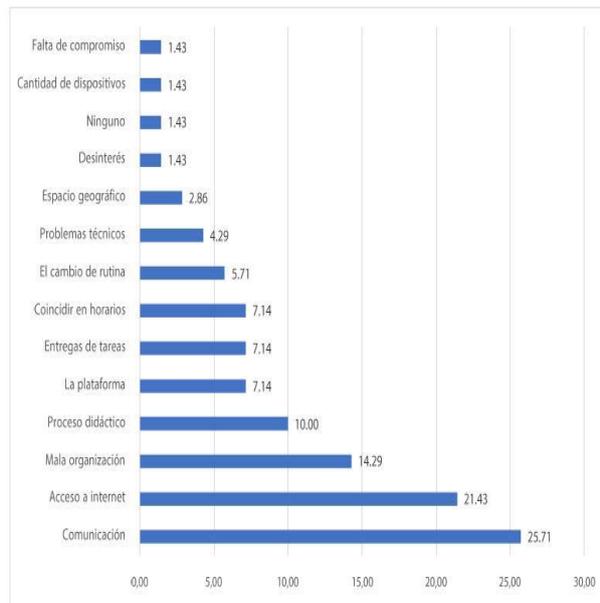
In addition to the foregoing is the fact that, in the coming years, the effective applicant population will be lower than the forecasts of each country. The statement is justified based on the following: the effects of the digital

transformation during the COVID-19 pandemic implied a smaller number of primary, secondary and high school students who were able to receive the planned teaching in their study plans.

The report presented through the White Paper of Save Our Future: "Avoiding an Educational Catastrophe for the World's Children" (2020), informed that "... COVID-19 has interrupted educational systems around the world, which has forced school closures that have affected 90 percent of the world's students. These closures have had devastating effects on children and their ability to exercise their human right to education. Education systems were already in crisis even before the pandemic and are now facing the possibility of drastic budget cuts. If governments and development partners do not act immediately, this crisis could turn into a catastrophe from which millions of children may never recover." The report continues to highlight that children in school are not learning according to the study plans and expectations of curricular learning. More than half of 10-year-olds in low- and middle-income countries were not learning to read simple text.



Graph 3.- Results of the survey. "How do you feel about the adjustment of face-to-face classes to virtual classes due to the Covid-19 health contingency?" Most recurring answers.



Graph 4.- Results of the survey “Most significant obstacles of the students in the face of the changes that the adjustment of face-to-face classes to virtual implies.” Most recurring answers.

A report called “Education During and After COVID-19 (2020), notes that “...The crisis is exacerbating pre-existing educational disparities by reducing the opportunities that many of the most vulnerable children, youth and adults have... to continue with their learning. Learning losses also threaten to extend beyond the current generation and undo the progress made in recent decades, particularly in supporting girl’s and young women’s access to education and retention in the system of education”.

Based on this reality, the devastating effects on today’s boys and girls will be accounted for when they become part of the effective population demanding access to Higher Education.

On its part, the extraordinary session of the 2020 World Meeting on Education, organized by UNESCO, analyzed that the COVID-19 crisis cannot be reduced to a public health emergency, since it has endangered fundamental human rights, including the right to education. It pointed out that the progress made in achieving the Sustainable Development Goals (SDGs) is at risk. At the

same time, pre-existing inequalities are exacerbated, disproportionately affecting vulnerable communities and learners, especially those living in poverty, women and girls, populations affected by crisis and conflict, and people with disabilities.

The interruptions that have occurred in the training programs of education preceding Higher Education have affected 90% of students around the world (1,570 million), to which it is necessary to add the limitations of equipment and connectivity so that students could access the programs through media convergence.

The trend evaluation of the indicator “general evaluation of the individual, academic, institutional, economic and cultural factors of the students who access university studies” enables the authors of this work to express the following regularities in Latin America and the Caribbean:

Regularity #4.- Post COVID-19, the process of access to Higher Education will be affected by five essential aspects that, if endogenous comprehensive management strategies are not established in universities, will limit the fulfillment of Sustainable Development Goal 4 of the Agenda 2030 of the United Nations with its particularity in each of the universities:

Aspect 1.- Individually, the aspirations and expectations of the limited effective applicant population lack coordinated actions between universities and previous educations, which will continue to limit concrete action that favors the purposes of vocational training and professional guidance. towards the degrees that are offered.

Aspect 2.- Academically, the academic career of future applicants may be affected and this will compromise the level of knowledge, skills and values required to access university studies. Universities must strengthen their leveling plans and improve their training curricula based on the academic diagnosis of new entrants.

Aspect 3.- Institutionally, it is essential to technologically prepare and transform a high percentage of the training offer of each

university towards hybrid, discontinuous or intermittent and online modalities. This change in educational paradigm in development since the last century, will lead to the application of faculty training systems in a continuous and constant manner in the pedagogical, didactic and technological dimensions. Similarly, induction courses must be prepared for applicants before and after admission.

Aspect 4.- Family and personal economic income will for the most part be limited. The efforts of the universities to reduce this situation should focus on strengthening the quality of their training offer from didactic and technological mechanisms that allow the application of flexible virtual learning objects, which are adapted to the new learning rhythms and possibilities, and above all, to the personal characteristics of the applicants. This will give confidence and security in the enrollment.

Aspect 5.- From the cultural point of view, it is necessary to make sure that the succession of changes that are producing transformations in Higher Education respond to a change in the educational paradigm that overlaps with thousands of years of student presence in universities. It will take time to adapt and integrate into the new paradigm. The speed of the transformation is in how constant and continuous that the pedagogical, didactic and technological changes are in the institutions.

## CONCLUSIONS

The determination of the four regularities of the process of access of students to Higher Education in Latin America and the Caribbean in the post-COVID-19 period, based on the application of a trend study from 2000 to 2020, is a scientific contribution to enable universities, in their institutional singularity, to adopt endogenous strategies aimed at improving the access process of their students with the required personal and academic preparation. One of the routes that Latin American and Caribbean universities can take as an alternative to this historical-concrete need, is to specify actions derived from the regularities described by applying a

comprehensive management system for access, permanence, graduation and employability described by Barrios and others (2018).

The regularities determined for the adoption of the indicated strategies are based on two essential indicators present throughout the region: The variation in the number of students who have entered Higher Education in the 2000-2020 stage with a negative trend; and the general evaluation of the individual, academic, institutional, economic and cultural factors of the students who access university studies, having as a fundamental milestone the health situation of Covid\_19.

Adopting endogenous strategies aimed at improving the access process of students with the required personal and academic preparation will take place in the midst of a complex current and prospective global socioeconomic situation, with its particularities in each of the countries that make up the Latin American region and caribbean This reality will limit the aid that public and private universities will be able to receive in the coming years, both from governments and from the production and services sector. Faced with this situation, it is essential that, far from expecting only external solutions, endogenous solutions must be privileged, creativity acted upon and innovation permanent. Otherwise, fulfillment of Sustainable Development Goal 4 of the United Nations 2030 Agenda will be an unattainable goal.

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