



## The pandemic and its effects on higher education

*The pandemic and its effects on higher education*

**Frederico da Silva Cesario<sup>1</sup>**

**José Ricardo Martins Machado<sup>2</sup>**

### Summary

This paper aims to present the pandemic and its effects on higher education. The situation the country experienced made it impossible to continue in-person teaching, forcing educational institutions, both primary and secondary, to seek other forms of instruction, opting for virtual remote learning. Through research, it was possible to verify that, although education and society have undergone numerous changes, formal education and the interactions facilitated by academia are fundamental to the foundation of knowledge that will guide these students' future professional activities, regardless of race, gender, sexual orientation, social class, or religion. The paper concludes by discussing the importance of continuing education for these professionals, aiming to renew and fill the gaps left by postgraduate education. There is importance not only in the knowledge gained through experience, but also in theoretical development to develop better teaching methods.

**Keywords:** Higher education. Pandemic. Challenges.

### Abstract

This work aims to present the pandemic and its effects on higher education. The situation experienced by the country has made it impossible to continue face-to-face education, with educational institutions, both basic and higher education, looking for other forms of education, opting for remote teaching in a virtual way. Through research carried out, it was possible to verify that although education and society have undergone several changes, formal education and interactions made possible by the academic academic space are fundamental for the foundation of the knowledge that will guide the professional activities of this student in his future without distinction of any kind, such as race, gender, sexual orientation, social class or religion. It concludes by discussing the importance of continuing education for these professionals, aiming at the renewal and filling of the gaps left by graduate education.

There is an importance not only of the knowledge produced by the experience, but also the theoretical deepening for the production of better teaching methods.

**Keywords:** Higher education. Pandemic. Challenges.

<sup>1</sup> PhD student at the Integrated Research Center Integralize CIPI e-mail: fredericocesario@yahoo.com.br

<sup>2</sup> Doctoral Supervisor at the Integrated Research Center Integralize CIPI e-mail: prof.ricardo@hotmail.com

## 1 Introduction

Education in Brazil, from its foundations to higher education, continues to face a major crisis. This is because a country's education depends on several internal factors of economic, political and social. Assuming that the country continues to go through a crisis in all these areas, it is completely natural that education is also affected.

The new coronavirus pandemic has been causing changes in people's behavior society, in many senses and in different forms, depending on the segment or area of performance, or even in the simple habits and gestures of everyday life.

At first it brought fear, but little by little, this different, "extraordinary" moment was being assimilated, better understood and brought about changes in the ways of operating with certain human activities. One of them that suffered a strong impact was education, because the Jesuit model of rectangular classrooms, uniform desks, placed one behind the other on the other hand, the blackboard still prevails in contemporary society.

On the other hand, the consolidation of the internet and the use of technological devices brought a new perspective for education in Brazil. The virtual environment provides access to various types of information that can be used as a basis for the exercise of various professional activities, however, it is necessary to understand the use of these information, preparing for the practice of these means.

Online distance learning (EAD) is increasingly present in society because make it easier for the population to achieve knowledge and higher education, the busy life contemporary demands a modality like this. In the 2005 decree number 5,622, this educational model is defined as "didactic-pedagogical mediation in teaching processes and learning occurs through the use of information and communication means and technologies, involving students and teachers in the development of educational activities in places or different times".

Even though the use of these new technologies has favored the development educational and the democratization of knowledge, highlighting the study of didactics, teacher training in the context of distance learning is a term with little emphasis on training in undergraduate courses focused on teaching. Thus, the teaching practice of distance learning is discussed and who the practice, relationship between teacher and student, since by definition both are not in the same space.



Recognizing the characteristics and needs of an education of this model, it is possible to define it to recognize its practice, the present work seeks in a brief text understand these issues. Thus, finally, one can study teaching practice, understanding who is the EAD teacher and their duties in light of the student's needs in producing knowledge.

Thus, firstly, we seek to understand the historical context related to the reality of higher education in Brazil, bringing characteristics that involve the current reality. So that it is understood, after a presentation on the formation of the teacher, the profile that involves him, discussing whether they are necessary qualifications for the practice of teaching. Bringing the issue of continuing education as an alternative for redefining of teaching practices in higher education.

## 2 Development

Distance learning units are able to offer technical, professional, and undergraduate, postgraduate and other courses through the media, allowing the difference in location between the student and the teacher. The individual interested in learning does not need to seek or present themselves in a formal educational environment, being free to produce your knowledge in any space and time.

Distance learning has been relevant in the technical preparation of citizens, capable of achieving various locations qualifying different groups for the national market, which is why it is in expansion. It is capable of improving the qualified employee scenario in Brazil, have as their main means of work the use of information and communication technologies, also providing students with flexible hours to finally achieve their goals. According to Inep (2018), the census showed an increase of more than 586% in enrollments in higher education in the distance learning modality between 2007 and 2017 in a technological degree. It also states that undergraduate students predominate in the distance learning modality.

The definition of EAD has been studied over the years, presenting in its conception some points in common. We will quote Guarezi and Matos (2012, p. 18), "Most of the definitions found for EAD is descriptive in nature, based on teaching conventional, highlighting, to differentiate them, the distance (space) between teacher and student and the

use of media”. Bringing another perspective, we have the definition of the Ministry of Education and Culture (MEC) which on its official page explains:

Distance learning is an educational modality in which students and teachers are physically or temporally separated, requiring the use of information and communication technologies. This modality is regulated by specific legislation and can be implemented in basic education (youth and adult education, secondary vocational technical education) and higher education. (MEC)

Hack (2011) highlights a view of a group of Canadian researchers who believes that the EAD method would be a model capable of facilitating access to knowledge for a greater number of people, highlighting, for this purpose, learning paths that bring the knowledge of students. Bringing its definition:

Distance learning is a form of teaching and learning that provides students who are unable to attend school daily with the opportunity to acquire the content taught to in-person students. It is a modality that eliminates geographic and temporal distances by allowing students to organize their own time and place of study. (HACK, 2011).

The offering of distance learning courses by HEIs has become increasingly common. Defined as an educational modality mediated by technologies in which teachers and students are physically separated, teaching activities in distance learning can take place in synchronously, when the teacher and the student are in class at the same time, and/or asynchronous, when both carry out their educational activities at different times. Although distance learning can be carried out in different media (print, TV, radio), since the 1990s since 1980, the main form has been online. Among the possibilities of offering education via online environment, both fully online and hybrid courses are common, in which a part of the teaching is carried out in the virtual environment and the rest in person.

The development of distance learning involves planning and using strategies specific management, which cover aspects such as offering a structure adequate information, technical support for teachers and students, careful preparation and delivery of teaching materials to be used in classes, and their allocation in the environment virtual, as well as pedagogical support for students and continuous technology training for teachers.

Teacher training involves, for example, preparing them to: adapt teaching conditions and strategies for the online environment; promoting student participation online; properly manage the online system and course software; and identify what to do and who to turn to when certain technology problems occur. This modality teaching therefore requires careful planning of the course/subject, together with

management systems and work processes developed by a multidisciplinary team (teachers, IT technicians, pedagogues, managers, etc.) who can provide the guidance and support appropriate for this type of work.

Contrary to the experiences planned to offer distance learning, in the context of the pandemic of Covid-19, the improvised way in which curricular subjects were offered by HEIs were designated as Emergency Remote Teaching. Many HEIs have made adaptations for teaching using online resources in an unplanned way, disregarding important aspects of reality of students and teachers, as well as pedagogical and technological aspects involved. In addition to the risks of this practice excluding many students who do not had access to the Internet, computers and other technologies required for this means of communication teaching, such institutions may also have failed to provide technological resources to students and training for teachers so that they could plan and make conditions viable minimum requirements for the development and implementation of a quality online course.

You can't just put traditional classes online and think that's it. will continue as before. Quality distance learning requires well-prepared classes, students who can participate and systems for monitoring and evaluating results different from traditional ones. Technologies for this exist, but few Brazilian institutions are prepared to use them. The vast majority of teachers, especially those in institutions public schools, never learned to do this. Private education, in recent years, has greatly expanded the distance education, in an effort to reduce costs, after the educational credit became more difficult, and today about half of its students are on this regime.

But the proportion of students who drop out before finishing is large and many question the quality of distance learning, although the quality of in-person education is also uncertain. Younger students are likely to have an easier time dealing with new technologies than their teachers, but many may not have equipment adapting, fast internet access and a place at home to participate in classes. There is the concern that with the adoption of distance learning, inequality in higher education will increase accentuate.

Bringing the discussion about teaching practice in distance learning includes reflecting on the role of teacher in the teaching processes, discussing their training. Pedagogical practice uses information and communication technologies, requiring teachers to have skills in manipulation of these items as collaborative teaching methods. Gilberto (2014) present the following perspective:



From this perspective, the reflective and contextualized use of technology in activities classroom is an important resource for teachers to be able to better understand your practice, which presupposes that you are open to the process continuous distance teaching and learning, in addition to commitment and maturity, since it depends on how each person assimilates technologies and incorporates these knowledge to the daily practice. (GILBERTO, 2014)

It is possible to consider a relevant variable the fact of using the virtual environment as classroom, requiring skills capable of promoting receptivity, response, valorization and organization of student and teacher values. This characteristic brings a new meaning to the time and space of education, breaking the idea of traditional education that requires the presence of the student.

A view on EAD shows the teacher losing his place as the main author of learning process, Alonso (2010 apud Quartiero and Silva, 2014) already brings "It seems consensus on the fact that the teacher seems to disappear and/or is hidden in distance learning models where pedagogical actions are attributed to materials and, almost exclusively, to technological apparatus". Following this model, the question arises as to who would be the teacher in this educational model?

Mill (2010) answers this question by bringing the model of "polyteaching" that would consist of a group of individuals who would work in the teaching and learning process, Belloni (2009) treats this vision of a collective teacher as the person responsible for distance learning. So if understands that the authors say that everyone who contributed to the study is a teacher at EAD, that is, teaching is linked to everyone who participates in the teaching process and learning. Alonso (2010) brings the figure of tutor in EAD procedures understanding its function as teaching, for being present in the final link of the process's implementation, having direct contact with the student.

No matter how great the difficulties, closing the doors seems like the worst option. The cost of the strike is not only the delay in the school calendar, but the interruption of learning process and the bonds between students and their teachers and peers, which can be difficult to resume, increasing dropouts. In Brazil, with few exceptions, highlighting the University of Campinas, public universities closed their doors or only hospitals remained active, but private institutions continued to operate, whether because they were already in the distance learning regime, or because they managed to adapt quickly to this modality, pressured by the need to keep their students studying and paying the monthly fees.



Face-to-face, face-to-face education is irreplaceable when the teacher can work with a small number of students, but in mass higher education, with large classes, technology-mediated education can be superior to traditional education. The problem of inequality in higher education already existed, the costs of providing a computer, tablet and internet access for those who need it are small, and the flexibility and access to quality pedagogical resources can help reduce the disadvantages of those who lives far away, needs to work and was unable to get into a prestigious university. technologies also allow universities to collaborate by sharing courses, teachers and teaching materials, reducing costs and improving quality.

Before the pandemic, Brazilian higher education was already facing increasing difficulties. Public universities had serious funding problems, which are expected to become more serious, and many of the private institutions were becoming insolvent. And 30% to 40% of students, in public and private universities, dropped out of courses before finishing; half of the graduates worked in activities that did not require higher education. scientific research and postgraduate studies had grown a lot, but high-level courses and high-quality scientific publications were concentrated in about ten institutions public, with the others having the costs, but not the results of maintaining the entire teaching staff full-time. The evaluation system, expensive and obsolete, did not inform society which were the good courses, nor the destination of their graduates, nor are they acquiring the skills required by the 21st century digital economy.

To understand any meaning of institutions today it is necessary to observance in its historical environment. And, in the Brazilian context, the university arises from need for training elites with the implementation of isolated teaching environments higher education, already presenting segregation in education.

These challenges, both related to universalization and quality, affect especially the most needy segment of society: the poorest, black and indigenous people, rural populations, and children with disabilities. It is essential that the pursuit of improvement of education takes into account the principle of equity, as educational inequality is a historical legacy and still a trademark of the country. Thus, inclusion and quality must go hand in hand together in the field of education.

The challenges facing Brazilian education are immense. They are linked to attractiveness of the teaching career, the quality of human capital present in the policy educational, to the construction of a successful school and network management model, to cooperation between federative entities, to the invention of a different school adapted to the





21st century, to the greater interest and mobilization of society and, primarily, to the option for education as the main mechanism for reducing the country's historical inequalities and produce a more just society. Placed in a longer temporal perspective, completed here in 2032, the centennial of the Pioneers' Manifesto, all these challenges go beyond the specific issues of education. It is necessary to understand the possible scenarios social and political to be able to foresee at least the difficulties and potential that the future may bring.

However, there are different views on educational policy in Brazilian society, something that tends to continue, and the big challenge is how to create basic consensus not only about the goals, but above all, about the means that should be used to improve the education. In view of this, the decisive element in the future will be the building of capabilities social and institutional means of finding consensual solutions in situations of dissent.

We must find ways for teachers to have access to reflections pertinent to the nature of their function which, because they are subject to ideologies that distance themselves from reflection of the educational act itself, hinder its best performance. Thus, we see the constant fragmentation of teaching, the increasingly present technical character – not only with the growth of technical courses and that have their validity, but in basic education and superior, and the alienation that makes it impossible to seek effective changes in resizing of decadent social structures.

While these means of searching for changes, opportunities for reflection, are made necessary, and not only in the teacher's training, but in the readings he/she carries out and in debates organized in various social spheres, such as changes in the educational act, not occur, we will still suffer from our own smallness. We will be reduced in reproduction of the manuals, as there is substantially no justification for changes to he who does not know where he is going.

Everyday technology is also present in higher education, but in a different way. still not very comprehensive, as it should be. The growth in demand and enrollments in distance learning colleges prove that students look for institutions with more rules soft, and comfort in teaching, combined with the lack of financial resources to cover a conventional private college. However, even though there are more and more professional opportunities that do not require a degree, it is up to the student to understand the its importance for your qualification as a person and professional.

Although the internet has a multitude of content, the quality of that content can be questioned. The academic educational environment is still the place where students





can find the knowledge they need to evolve personally, academics, and with regard to their careers, since they can count on the assistance of qualified educational professionals and a solid education system.

With the duty to mediate and facilitate the teaching and learning processes in the face of EAD requires training before starting. Therefore, the teacher plays the role of a tutor, capable of following the student's path in the construction of knowledge, Schwartz and White (2000 apud Gomes and Villani) state that the teacher's feedback on the student actions are considered effective when they are immediate, timely, evaluative, constructive and complete. To do this, the teacher must be familiar with the use of technologies that institution enters into the system.

Therefore, it is possible to conclude that higher education is very important for the professional to qualify in the sector in which he works, especially if he is committed to the studies and complete the entire course fully and thoughtfully. It is up to the student to make the most of their graduation to the maximum possible and enjoy all the possibilities of this course, such as the exchange experiences with teachers and help from fellow students.

### 3. Conclusion

The pandemic caused everyone to distance themselves and isolate themselves in their own environments. family and the only form of communication with the outside world was through the new digital technologies. Given these aspects, we can see distance learning as an alternative education capable of reaching an entire population, and may be able to raise the level of teaching a people. Thus, through a method, one can see the flexibility and scope of specialized education serving groups with different schedules or in difficult locations locomotion, reaching the construction of new knowledge. The democratization of education is extremely important for the development of a citizen's education and helps in their insertion into the job market.

To achieve effective education it is possible to understand that teaching must be well prepared under all the tools that the institution promotes, highlighting the use of information and communication technologies, internet access was extremely important for expansion of such a model. Teacher preparation for such activities increases the dynamics taken by him, involving motivation, teaching, tutoring among other characteristics of his



work, there is a need for continued training, based on experience and theory to dynamic educational models that encourage self-learning.

The teaching of these institutions may also present the characteristics of polydocência, where a group of people are agents to assist and mediate content around of an online course, facilitating discussions and reflections on the practice of teaching, seeking objectives of a motivating education.

From this new reality, many Higher Education Institutions (HEIs), mainly public institutions, were left in the discussion about whether or not to use “teaching remote” and which unfortunately ended up being overcome by the resistance of some teachers, who continued waiting for the isolation to pass, harming education. Therefore, now there is no more out of common sense and more out of custom, either teachers adapt to our reality or become targets and are caught in the crossfire of many social and political hopes, in crisis in present day. Criticism of the educational system demands more and more work from teachers, as if education alone had to solve all social problems.

## References

- CARVALHO, Cristina Helena Almeida de. Higher education policy in Brazil (1995-2006): rupture and continuity in public-private relations. University reform: dimensions and perspectives. Campinas: Alínea, p. 125-139, 2006.
- CATANI, Afrânio Mendes; HEY, Ana Paula. Higher education in Brazil and trends in policies to expand access. Proceedings of research in education, v. 2, n. 3, p. 414-429, 2007.
- COLOSSI, Nelson; CONSENTINO, Aldo; DE QUEIROZ, Etty Guerra. Changes in context of higher education in Brazil: a trend towards collaborative teaching. Revista da FAE, v. 4, n. 1, 2001.
- CUNHA, Luiz Antônio. Higher education and university in Brazil. Lopes, EMT et al, v. 1, n. 2, p. 500, p. 151-204, 2000.
- DEUSDARÁ, Bruno; DA ROCHA, Marisa Lopes. Premises surrounding the devaluation of teaching under analysis: what are we fighting for? School and Educational Psychology, v. 17, n. 2, p. 215-222, 2013.
- FERREIRA, Eliza Bartolozzi, OLIVEIRA, Dalila Andrade. School crisis and educational policies (Orgs). Belo Horizonte: Autêntica, 2009.



GAGNEBIN, Jeanne Marie. Childhood and Thought. In: GHIRALDELLI JR., Paulo. (org.) . Childhood, school and modernity. São Paulo: Cortez; Curitiba: UFPR Press, 1997, p. 83 – 100.

GILBERTO, IJL **Professional training and teaching practice in distance education.** Education & Language, v. 17, n. 2, 91-104, Jul.-Dec. 2014

HACK, JR **Introduction to Distance Education.** Edition. Florianópolis: LLV/CCE/UFSC, 2011. 126 p. Single volume.

HEYWOOD, Colin. A story of childhood. Porto Alegre: Artmed, 2004. p. 21-47.

INEP/MEC. Encyclopedia of university pedagogy: glossary vol. 2 / Editor-in-chief: Marília Costa Morosoni. – Brasília: National Institute of Studies and Educational Research Anísio Teixeira, 2006.

KUROSE, James F.; Keith W. ROSS. Computer Networks and the Internet: A New Approach; Translation by Arlete Simille Marques; technical review by Wagner Luiz Zucchi – 1st Edition – São Paulo: Addison Wesley, 2003.

LUCYK, Viviana Patricia Kozlowski; GRAUPMANN, Edilene Hatschbach. The devaluation of Brazilian teaching work: a reflection on its historical aspects. Social & Applied Humanities, v. 7, n. 20, 2017.

MILL, D. OLIVEIRA, MRG RIBEIRO, LRC **Multiple approaches to polyteaching in virtual Distance Education.** In: MILL, Daniel; RIBEIRO, Luis Roberto de Camargo; OLIVEIRA, Márcia Rosenfeld Gomes de. Polyteaching in distance education: multiple approaches. São Carlos, SP: EdUFSCar, 2010. p. 13-22.

MORTARI, Magda Inês Moreira. Adult education and technology. In: DANYLUK, Ocsana Sônia (Org.). Adult Education: expanding horizons of knowledge. Porto Alegre: Sulina, 2001.

NEVES, Clarissa Eckert Baeta. Higher Education in Brazil: Expansion, Diversification, and Inclusion. In: Paper presented at the LASA (Latin American Studies Association) Congress, San Francisco, California. 2012.

STALLIVIERI, Luciane. The Brazilian higher education system: characteristics, trends, and perspectives. UCS Interinstitutional and International Relations Office – University of Caxias do Sul. Rio Grande do Sul, 2017. p. 1-22.