

# Remote Teaching and Learning: Gaps in the Management Field in the COVID-19 Pandemic Context

## *Ensino e Aprendizagem Remotos: Lacunas no Campo da Administração no Contexto da Pandemia de COVID-19*

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### ABSTRACT

As a result of the COVID-19 pandemic, it was necessary *online* tools for the emergency implementation of alternative forms of remote teaching and learning by Brazilian educational institutions, without prior preparation. In this challenging context in higher education in a pandemic context, this article aimed to analyze how education was impacted by the pandemic, based on the perception and conditions of Management students. The objective was to analyze the scenario, identifying how to improve remote teaching and learning, both at undergraduate and graduate level. With regard it, a study with quali-quantitative strategies was developed, involving documentary research, participant observation and application of questionnaires with Management students from two Brazilian educational institutions, considering not only technological factors, but also social, economic and emotional. The result demonstrated to a difference in the impact on undergraduate and graduate students. Furthermore, the research pointed to how the COVID-19 pandemic may have operated as an enhancer of social problems and, inevitably, impaired the teaching-learning processes. Finally, initiatives are proposed and implemented to mitigate the problems encountered and offer paths to Management education.

**Keywords:** Teaching-Learning; Remote Learning; E-learning; COVID-19; Management

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## RESUMO

Em decorrência da pandemia de COVID-19, a utilização de recursos *online* fez-se necessária para implantação emergencial de formas alternativas de ensino e aprendizagem remotos pelas instituições de ensino brasileiras, sem preparo prévio. Diante dos enfrentamentos cruciais no ensino superior em contexto pandêmico, pretendeu-se analisar, neste artigo, como o ensino foi impactado pela pandemia, tendo como base a percepção e condições dos alunos de Administração. O intuito foi analisar o cenário, identificando como aprimorar o ensino e aprendizagem remotos, tanto na graduação quanto na pós-graduação. Para isso, desenvolveu-se um estudo com estratégias quali-quantitativas, envolvendo pesquisa documental, observação participante e aplicação de questionários com estudantes de Administração de duas instituições brasileiras, levando em consideração não apenas fatores tecnológicos, mas também sociais, econômicos e emocionais. O resultado apontou uma diferença no impacto sobre alunos de graduação e pós-graduação. Ainda, a pesquisa apontou para como a pandemia de COVID-19 pode ter agido como um potencializador de mazelas sociais e, inevitavelmente, prejudicado os processos de ensino-aprendizagem. Por fim, ações são propostas e implementadas para mitigar os problemas encontrados e oferecer caminhos ao ensino de Administração acompanhado.

**Palavras-Chave:** Ensino-aprendizagem; Ensino Remoto; *E-learning*; COVID-19; Administração.

## Introduction

COVID-19, caused by SARS-CoV-2 or popularly called coronavirus, was detected in China in December 2019. Due to its rapid spread, it gained international attention as a public health emergency (PAHO, 2020; WHO, 2019). The effort to fight the pandemic led countries to adopt preventive actions, such as Brazilian law 13.979/2020, which provides isolation and quarantine as measures to control the disease (BRASIL, 2020).

These actions led to the suspension of school activities, imposing immediate remote teaching-learning solutions in order to offer continuity to the program already defined by the educational institutions. In this context, it is noteworthy that the educational sector was the only one completely transferred to online mode in most

countries of the world (MAHYOOB, 2020). The use of technology, digital tools and online resources were necessary for the emergency implementation of alternative forms of teaching and learning. This need revealed emerging vulnerabilities in education systems around the world, which made it clear that society needs flexible and resilient education systems as it faces unpredictable futures (ALI, 2020).

In higher education, Brazilian institutions were divided between those promptly adopted remote learning since March 2020 – when the lockdown was enacted – and those that paralyzed activities seeking to map the best path to meet the demands of access to systems technologies that enable remote teaching. The last one case focused especially on public higher education institutions.

The faculty and those responsible for the management of Brazilian institutions began to develop strategies to face the pandemic context. Emergency remote teaching started to be used as an educational platform characterized as a method of migration in response to the crisis of universities in the context of the pandemic (ADEDYOIN; SOYKAN, 2020). Often with their own resources, and using individual learning efforts or emergency courses provided by some institutions, teachers had to respond to the challenges of remote teaching. On the other hand, students, mostly digital natives, began to use technology frequently in their educational process, but many of them faced technical challenges in accessing the means that provided the necessary quality, such as high-speed internet and computers that supported synchronous transmissions. In this context, in addition to technological resources, the readiness of education professionals, confidence, student accessibility and motivation have come to play important roles in remote learning (ALI, 2020).

Within the Brazilian reality, the challenge is herculean, especially in a context of significant vulnerabilities and social inequalities, as shown by the Gini index, which demonstrate the concentration of income in the country has been increasing since 2016, according to IBGE data, and that in 2020 the index maintained the highest level in the series, at 0.509 (IBGE, 2020). The closer to zero, the lower the income inequality. In addition, Brazil is among the countries most affected by the COVID-19 pandemic.

The shift to online education during the COVID-19 pandemic has led many studies to focus on perceived learning outcomes and student satisfaction in this

new learning environment (BABER, 2021). These studies make it possible to identify factors that can improve student learning and satisfaction in remote classes. Faced with the confrontations necessary for the development of teaching and learning in higher education in a pandemic context, this article intends to analyze: how teaching was impacted by the COVID-19 pandemic, based on the perception and conditions of undergraduate students and postgraduate studies in Management.

E-learning had its use expanded during the COVID-19 pandemic, but there are gaps to analyze the impact of this change on students (RAHM et al., 2021). In this context, it becomes relevant to pay attention to students' learning habits, considering that recent literature on how to address the learning preferences of management students is scarce (HARGITAI; PINZARU; VERES, 2021).

For this, it was developed a study that, for eight months, followed 120 students of undergraduate and graduate management courses (master's and doctorate), from two Brazilian educational institutions: one from Minas Gerais state - which in the study is named "IES/MG" - and another one from Paraíba state - named "IES/PB". During the eight months, using participant observation and application of questionnaires, we sought to understand how the teaching of these classes was impacted by the COVID-19 pandemic, taking into account not only technological factors, but also social, economic and emotional ones: a combination of elements from the Brazilian scenario with those emerged by COVID-19.

## Theoretical Background

The theoretical background of this research was built on the basis of bibliographic documentary research. The strategy was to enter the national and international fields of education, seeking more adequate and coherent theoretical paths to be followed based on the research objective. Thus, the analyzes showed convergence between the terms: "e-learning and Management Education", "Remote Learning" and "Remote Teaching", internationally; "Online learning and teaching in Management", "Learning and education", "Online learning", "Remote teaching" and "Remote learning", in the national approach. The following topics were built from the dialogue between the terms.

## REMOTE TEACHING AND LEARNING: E-LEARNING IN HIGHER EDUCATION

The widespread use of digital technologies in different spheres of contemporary society has generated reflections about their application in the educational field. The evolution of communication technologies and the resulting favoring of the exchange of knowledge that they offer, cause transformations in the teaching-learning process as vectors that enhance content and education (CAMPOS et. al., 2021; FREITAS et. al., 2017; GIMENEZ et. al., 2020; LIMA et. al., 2020; LOSEKANN; MOURÃO, 2020; MACHADO, 2020; MORENO-CORREA, 2020), especially in higher education, given the already established digital fluency of students.

In the last two decades, since the expansion of digital enterprises, university programs have encouraged the use of digital methodologies as an academic environment, often disarticulating the role of the teacher in the mediation of the teaching-learning system. Multiple alternatives based on Information and Communication Technology (ICT) have generated a lot of pedagogical and didactic bets involving e-learning (MEJIA; LOPEZ, 2016). Higher education institutions, both undergraduate and graduate, have started different strategies and productions of materials to support online education, in experiments that invariably continue to transpose pedagogical practices characteristic of physical environments to cyberspace, often without planning or pioneering research (MOREIRA; HENRIQUES; BARROS, 2020; MOREIRA; MONTEIRO, 2015; MOREIRA, 2018). Among the modalities offered, there are five types of e-learning: asynchronous online teaching; online teaching with asynchronous moments; blended online teaching; online teaching; and computer-based teaching (TEJEDOR et. al., 2012).

While e-learning environments are configured in practices or teaching models mediated by information and communication technologies, offering study in a non-presential way (SILVA et. al., 2021; TEJEDOR et. al., 2012; MOREIRA; MONTEIRO, 2012), there is currently a teaching modality that has taken up rapid space in university systems, called remote teaching. Unlike distance education, whose proposal is structured for the category that distances teachers and students, being planned for this purpose (KAPLAN; HAENLEIN, 2016; SUN; CHEN, 2016), remote teaching, especially emergency remote teaching (HODGES et al. , 2020) implemented due to the COVID-19 pandemic in higher education institutions, has been improvised, with time limitations, planning, training and technical support for the configuration of the

teaching-learning process, with possibilities of compromising the quality of education (HODGES, et al., 2020; SILVA et. al., 2021).

In remote teaching, there is the synchronous modality, when teachers and students share the same classroom environment live; and asynchronous, when both access pedagogical activities at separate times (KAPLAN; HAENLEIN, 2016). In both proposals, it is possible to identify problems regarding access to quality technology that supports online systems. Teachers had to assume the risks and costs of structures in their homes by recording video classes, using – and learning to operate – videoconferencing systems such as Skype, Google Meet and Zoom and learning platforms such as Moodle, Microsoft Teams and Google Classroom. While students had little or no support from institutions for access, in a system that basically disregarded many realities of students (MOREIRA; HENRIQUES; BARROS, 2020).

In a context of “poor” pedagogical structure and low training for practices, required by the imposition and unstructured emergency migration to remote teaching, there are consequences such as increased hours worked and teacher weariness (DIAS; PINTO, 2020). In addition, it is possible to perceive emotional and psychological consequences, reflecting the students’ low academic performance, demotivation of the academic community, increased dropout and psychic wear (SANTOS JUNIOR; MONTEIRO, 2020), plus the impacts of the economic situation experienced in the country and the difficulties in Brazilian homes in the face of the national health crisis.

It would be important to avoid merely instrumental applications of these technologies in a basically transmissive perspective that permeates remote teaching, for a more significant networked digital education that promotes environments for collaboration and knowledge construction. It is essential that remote teaching, even if implemented on an emergency basis, advance towards the construction of quality teaching-learning models, understanding the teacher’s role as a constructor, mediator and promoter of teaching-learning, in constitution and joint collaboration with the students, regardless of the platforms that permeate it. Teachers assume a strategic and decisive role in teaching-learning, demanding the need for reflection and evaluation of the efforts undertaken, to build a discussion focused on the paradigms of education and the elaboration of their practices (ALANO, et. al., 2019; LIMA et al., 2020).

Transformations caused by contingencies, as occurred with COVID-19, stimulate reflections around e-learning proposals and remote teaching. There are la-

tent issues such as time management, feelings, uncertainties and apprehensions involved in teaching and learning, decreased interaction/contact with colleagues, groups and the academic community, frustration due to the lack of an adequate environment for study and technical and technological problems (SANTOS et al., 2021), in addition to financial ones.

The reality has demanded changes in the educational paradigm that can possibly be perpetuated in the long term, in view of the growth of the digital market and the expansion of adherence of digital natives to the proposal, and even of people who saw advantages in the remote system, which presents paths innovation, flexibility, geographic reach and a certain use of time. It is essential to understand the experience of students in the face of this scenario of uncertainties in remote teaching, in order to find possibilities to better favor teaching-learning and the formation of citizens and professionals capable of reflection, criticism and transformation of realities.

## **E-LEARNING, LEARNING IN MANAGEMENT AND COVID-19**

As previously highlighted, the pandemic caused by COVID-19 around the world significantly impacted educational systems and the teaching-learning process of educational institutions, since they were faced with a scenario in which they were forced to cancel the face-to-face teaching (ALQAHTANI; RAJKHAN, 2020), including laboratory activities and other learning experiences, meeting the social isolation protocols determined by the World Health Organization (WHO). Consequently, online and remote teaching emerged as a strategic possibility to meet social isolation measures, which led to a rapid curricular transformation. In this context, it is considered that the Internet has gained an important role in supporting remote work and e-learning (FAVALE et al., 2020).

The universities, specifically, have entered “emergency mode”, shifting their structures to online education and e-learning. Almaiah, Al-Khasawneh and Althunibat (2020) highlight that remote teaching is more convenient as it can provide a dynamic teaching and learning environment. However, as a result of the emergence of its practice, it can be predicted that the transformation of the curriculum in these educational institutions has occurred quickly, without sufficient preparation (ALMAIAH; AL-KHASAWNEH; ALTHUNIBAT, 2020; KHAN et al., 2021), which may have had a negative impact on learning.

In this context, many teachers who did not want to use e-learning or who did not have the appropriate skills were suddenly forced to teach through electronic devices and the Internet (KULIKOWSKI; PRZYTULA; SULKOWSKI, 2021). This may have unintended consequences on motivational characteristics of academic work, namely: task identity, task meaning, skill variety, feedback, autonomy, social dimensions of work (KULIKOWSKI; PRZYTULA; SULKOWSKI, 2021) and, above all, reflecting in the quality of teaching/learning. On the other hand, students reported that they faced problems in e-learning experiences, most related to technical issues, such as the lack of a viable internet network, not having laptops (MAHYOOB, 2020; OBEIDAT; OBEIDAT; AL-SHALABI, 2020), in addition to academic and communication challenges (MAHYOOB, 2020). Thus, maintaining the motivation to learn when you are socially isolated during a pandemic can be challenging (RAHM et al., 2021), both for institutions, teachers and students.

On the other hand, it is considered that e-learning solutions offer multiple ways to recreate the teaching environment from a remote location, contemplating the sharing of didactic material, audio and video - written, verbal and visual communication, in a process of delivering knowledge to a physically distant location, which can make the teaching experience immersive for both students and teachers (RAHM et al., 2021). The interaction process, as already discussed, synchronously or asynchronously or a combination of both, has the advantage of learning, the possibility for students to access educational content anywhere and anytime, saving effort, time and costs (OBEIDAT; OBEIDAT; AL-SHALABI, 2020).

In the Management courses context, specifically, it is necessary to explore the strategies and practices related to e-learning systems from the perspective of the various stakeholders, among which are the students, so that preferences and learning habits must be understood and integrated. In e-learning systems provided by universities (HARGITAI; PINZARU; VERES, 2021). Yousef (2016) points to a research gap in addressing business students' learning preferences in the use of educational materials in the current digitized context: gender perspectives and education levels. Exploring such aspects would be useful in the context of a knowledge management framework that could be used to support strategies of higher education institutions in the field of business studies (HARGITAI; PINZARU; VERES, 2021).



The document “A Framework to Guide an Education Response to the COVID-19 Pandemic of 2020” prepared by the OECD (2020), highlights the changes educational institutions must promote to face the challenges imposed by the pandemic. The main changes involve structural aspects in terms of curriculum and infrastructure, such as: re-prioritizing curriculum objectives; identify options for recovering what was lost; identify teaching means/resources; and, in case online teaching is unfeasible, identify alternatives; and, on the other hand, adopt strategies that can seek to understand the expectations and needs of both teachers and students, namely: defining teachers’ roles and expectations; create means of communication with teachers and students; define appropriate mechanisms for evaluating students during the emergency; define adequate mechanisms for the approval and completion of courses; develop a form of daily checking with each student; develop a form of checking with teachers; and provide guidance to students on the safe use of online tools. Thus, the first challenge to plan the remote teaching process during the pandemic is to consider the conditions of the people involved in the teaching-learning process (OECD, 2020).

The Research by Alqahtani and Rajkhan (2020) revealed that managing technology, supporting the administration of educational institutions, raising students’ awareness of the use of e-learning systems, and requiring a high level of skill in the use of technology from Information by teachers, students and universities are the most influential factors for the effectiveness of e-learning in the teaching-learning process during COVID-19. It is therefore considered that the variables that influence the quality of e-learning involve issues related to administrative support, course content and design, teacher characteristics, student characteristics, social support and technological support (ELUMALAI et al., 2020). In this study, these questions were evaluated from the perspective of undergraduate and graduate Management students.

## Methodology

The objective of this study was to analyze how teaching was impacted by the COVID-19 pandemic, based on the perception and conditions of students in undergraduate and graduate Management courses. Therefore, a mixed method approach

was adopted, which consists of combining quantitative and qualitative techniques in the same research design, assuming that the interaction between them provides better analytical possibilities (CRESWELL; CRESWELL, 2010), of a descriptive and exploratory nature.

To do so, we sought to map previously, via bibliographic documentary research, terms and approaches related to remote teaching, especially to conduct the structuring of the theoretical framework and, later, the design of empirical research. Thus, the methodological path carried out by the theoretical path and empirical research is described below.

Before starting the construction of the theoretical framework, it was decided to preliminarily analyze the field of education, identifying which would be the coherent paths based on the objectives of this research. For this, this strategy was divided into two investigations: an investigation on the international literature and another on the Brazilian literature.

Given the focus, the international investigation was carried out by searching the database of the Web of Science platform for the themes “e-learning and Management Education”, “Learning and Education”, “Online Learning”, “Remote Education”, “Remote Learning” and “Remote Teaching”. From this search, it was possible to extract 256 articles, from which their respective authors, abstract, publication date, scientific journal data, number of citations, among other information were segmented. The next step was to read all the abstracts, identifying which articles were similar to the context of the referring research. With the selected articles, the next phase was carried out with the help of the Iramuteq software, which allows the analysis of textual content using methods such as descending hierarchical classification, similitude, word clouds, dendrograms, among others. These resources were used to analyze the abstracts of the selected articles, analyzes that showed relevance and coherence to the terms “e-learning and Management Education”, “Remote Learning” and “Remote Teaching”, for the context of the research.

In the investigation of the Brazilian literature, a manual work of literature review was carried out, in which from research in the Brazilian databases SPELL (Scientific Periodicals Electronic Library) and CAPES Periodicals, in addition to research in the main journals in the field of Management, education and research, works were selected with themes close to what is researched here. We sought to maintain the simi-

larity between the search terms used in the international and national databases, so the search terms used were: “Online learning and teaching in Management”, “Learning and education”, “Online learning”, “ Remote teaching” and “Remote learning”.

From the identification of coherent theoretical paths for the study, the methodological path of empirical research was started, which used qualitative and quantitative strategies. The qualitative approach contributed to the understanding of phenomena and situations within the socio-educational context. According to Yilmaz (2013), this approach supports the investigation of the meanings attributed to certain experiences in the world and, due to these characteristics, it was possible to interpret the plural lenses of understanding of the field. The illustration of the researched field was in charge of the quantitative approach, pointing out descriptive statistics about elements of the field, such as the data of the researched courses, the profile of the students and their feelings, the adequacy of the study environment, preferences and more.

The method used was participatory research, which favors communicative interaction (DENZIN; LINCOLN, 2006) with the people and collectivities investigated, facilitating the work of researchers in the context. Here, we sought to evaluate the “new educational environment” that impacted academic life. The aim was to analyze how teaching was impacted by the pandemic, based on the perception and conditions of students in undergraduate and graduate Management courses. It was possible, as a result of the research, to identify points of improvement in remote teaching and learning in Management. These improvement actions were disseminated in two educational institutions: in Minas Gerais and in Paraíba. These institutions were chosen due to the access of the researchers and because they are in different regions, which could present a different view of the study. By associating social and scientific interests, a type of knowledge can be created that, at the same time, seeks to satisfy the needs of social groups and guarantees the evolution of academic research (SANTOS, 2010; THIOLENT; COLETTE, 2013).

Data collection took place on two fronts: participant observation and application of questionnaires. Participant observation took place for five months in an undergraduate class and for three months in two graduate classes (master’s and doctorate). These classes are from two higher education institutions in Brazil – Minas Gerais (IES/MG) and Paraíba (IES/PB). The collection started with remote clas-

ses, in March 2021. The participant observations took place through the actions of teachers in the remote classroom and through activities such as the coordination of courses, meetings with students, dialogue between students and employees of the institutions of teaching, lectures and performances in the Structuring Teaching Nucleus (NDE) and Collegiate of the courses involved in the research. It is important to say that due to this practice, notes were taken and transcribed into a database organized in the cloud.

The institution in Minas Gerais, called IES/MG, is private. Today, it is present in eight cities in the state and has more than 70,000 students. IES/MG is present in academic excellence rankings in Latin America – QS World University Rankings – and worldwide – Times Higher Education. The institution of Paraíba, here called IES/PB, is public. It has seven campuses, is a pioneer for being the first federal university in the North-Northeast, has more than 17 thousand undergraduate students and 2.5 thousand graduate students. It is a reference in scientific and technological development for the state and the Northeast Region, having centers of excellence in technology, education, arts and culture.

In these institutions, three classes of Management were followed: five months in an undergraduate class with 72 students (IES/MG) and three months in two other graduate classes (master's and doctorate), with 24 students each (IES/MG and IES/PB). During this time interval, data were collected through participant observation and through the application of questionnaires. The three groups had a total of 120 students, which is also the total number of respondents to the questionnaires (100% response rate). Thus, the investigated sample was non-probabilistic of the intentional type.

In the questionnaires, the aim was to collect perceptions about elements of the educational field considering the problems brought about by the COVID-19 pandemic, with twelve structured questions and two open questions. The dimensions measured were: sentimental (what the student was feeling in relation to the entire social context), social (housing, conditions and the impact of the pandemic on financial income) and socio-educational (adequacy, quality of elements and environment of studies, preferences and difficulties regarding the consumption of content remotely). The questionnaires were sent electronically by e-mail and WhatsApp and Telegram groups of the classes, with spontaneous responses by the students.

Data analysis took place, firstly, through the organization, treatment and visualization of descriptive statistics using Microsoft Excel and Microsoft Power BI. From this first stage, it was possible to identify profiles, students' perceptions and, consequently, their main differences. To go beyond the coldness of the quantitative data and enrich the understanding of the field, the analysis of the qualitative data was carried out with the support of the Iramuteq software (Version 0.7), which based on the data collected during the participant observation and the open questions of the questionnaire, made it possible to identify categories of analysis, argumentative structures, among other aspects that helped to decipher the textual contents. The use of multiple data collection instruments also provided data triangulation, aiming at greater reliability in the general analysis.

## Data Analysis

### **AN ANALYSIS OF THE FIELD: "TIGHTROPE WALKERS" TEACHERS AND STUDENTS**

At the beginning of 2020, also close to the beginning of the academic semester, COVID-19, still at an early stage in Brazil, was spreading around the world, causing many Brazilian educational institutions, such as the two researched institutions, to decree that undergraduate classes, specialization and graduate studies were carried out remotely. Shortly thereafter, on March 11, 2020, COVID-19 was elevated to the level of a pandemic by the World Health Organization (WHO). The regime adopted by these institutions, from the beginning, was a regime with synchronous classes. Thus, as pointed out by Kaplan and Haenlein (2016): real-time classes, with teachers and students taking part in an online class, simulating characteristics of face-to-face classes, with well-defined schedules, dynamics, live interaction and breaks. Subsequently, these classes are recorded so that those students who were unable to participate synchronously can attend when they can.

Such a sudden change in the teaching paradigm put great pressure on the faculty to adapt their classes, which, as in the case studied, were not held in digital or remote formats. The methodology of the classes had to be changed: the Microsoft Teams, Canvas and Google Meet platforms took the place of the physical

classroom; camera and microphone have become the place of “pure” speech and vision; the use of WhatsApp and Telegram groups were boosted to facilitate and bring communication between teachers and students closer; as well as the constant collection of information and feedback for ad aeternum adaptation of the class dynamics. Now, if the context is indeed new, it is to be expected that the teachers’ learning about the best ways to stimulate learning would come “along the way”, by walking, by trial and error. It is important to say that such issues do not seem exclusive to the practice researched here and focused on Management courses. Researchers such as Moreira, Henriques and Barros (2020) and Dias and Pinto (2020) reflect on how teachers needed to reinvent themselves and invest a lot in study, time, energy and even their own resources to build pedagogical models suitable for learning in times of pandemic.

The complexity of the fact lies in the following question: if this procedure is given as a standard, it is necessary to highlight a great overload of information for the students, an indigestible amount of information, conversations, works, “WhatsApp and Telegram groups”, and more. If, in these institutions, an undergraduate student has, on average, six subjects per semester, there are six processes such as those mentioned appearing per semester. And such issues, such overload, are not exclusive to the academic and training life of these students. Let’s think about: what about the students’ personal and professional lives? How to manage so many issues, news and concerns in an effective and, above all, healthy way? It’s possible? How was the learning process impacted by this change? In this “uncertainty blender” where students and teachers are, it is pertinent to consider the difficulty to “balance these many plural lives to keep moving”, points out an undergraduate student. Teaching is one of those elements of the “blender”. And it is pertinent to understand how it was impacted by the pandemic and what COVID-19, directly or indirectly, may have caused.

## **A PERSONA ANALYSIS: WHO ARE THE STUDENTS?**

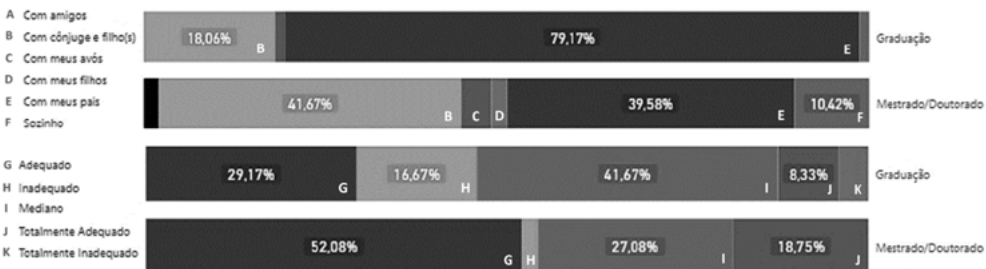
In this scenario, three classes of Management were monitored for eight months: five months in an undergraduate class with 72 students (IES/MG) and three months in another two graduate classes (master’s and doctoral), with 24 students each (IES/MG and IES/PB). During this time interval, data were collected through

participant observation and through the application of questionnaires. The three groups had a total of 120 students, which is also the total number of respondents to the questionnaires (100% response rate).

It is important to highlight that it was known that the mapped context indicated that the educational experience would not be the same as in the face-to-face regime. Not only because of the model itself, but because of possible other variables: the appropriate environment to study; the quality of the internet, the infrastructure and equipment needed to follow the classes; the social and economic context of students and their families; the feeling and emotional state of the students in the face of that moment of uncertainty; and adaptation to the new teaching-learning process, by both students and teachers. Unfortunately, a combination of social problems in the Brazilian scenario with the problems brought about by COVID-19.

Starting with the analysis of the profile of the respondents, it is valid to address the conditions of the students, housing and the impact of the pandemic on their financial income. According to data collected, it was noticed that most of them live with their parents – mainly undergraduate students –, or with their spouse and children. In these houses, students report contrary situations in relation to the suitability of the environment for studies in a remote regime. About 70% of graduate students have a suitable or totally suitable environment at home for their studies. On the other hand, most undergraduate students claim to have an average environment for studying. Still, more than 20% of students say that they have an inappropriate or totally inappropriate environment in their homes for studies, as shown in Graph 1.

**Graph 1. Housing and Suitable Environment to Study**



**Source:** Elaborated by the authors.

Corroborating with the studies by Obeidat, Obeidat and Al-Shalabi (2020) and Mahyoob (2020), issues related to the internet network also exerted an influence on the educational experience. In general, most students reported having good or regular internet quality. However, when analyzed separately, undergraduate students mostly report having regular internet quality, while approximately 20% report having poor or very poor internet quality. The value corresponding to this group in graduate studies is 4%.

The same disparities appear when analyzing how much the pandemic has impacted on students' financial income. About 84% of undergraduate students suffered impacts on their financial income. Of this amount, 57% report having had a significant reduction in their income, mainly generated by the loss of a job/internship or by closing their own business. In graduate school, most students had no impact on their financial income, as shown in Graph 2:

**Graph 2. Impact of the COVID-19 Pandemic on Financial Income**



Source: Elaborated by the authors.

Research studies and reports by the Economic Commission for Latin America and the Caribbean (ECLAC, 2020) and the United Nations (UN, 2020), mainly the works “Panorama Social da América Latina” and “Policy Brief: COVID-19 in an Urban World”, indicate that problems related to the loss of jobs and reduction in income by families as a result of the COVID-19 pandemic particularly affect the lower income groups. According to ECLAC (2020), the projections made to estimate the impact of the pandemic on income in 2020 showed that the crisis would lead to a sharp increase in poverty and extreme poverty in these countries. Such projections are strongly related to the notes made by the Brazilian Institute of Geography and Statistics (IBGE, 2021) on analyzes of the living conditions of the Brazilian population, focusing on basic aspects of housing conditions. Once again, the impact that the pandemic would have on the poorest and most vulnerable sections of the population became evident.



Still on this subject, ECLAC (2020) states that one of the most important aspects of these analyzes is the massive “exit” of the productive force of the population of Latin America and the Caribbean that is of working age. In addition to affecting young people, the pandemic has greatly impacted the loss of financial income and jobs, especially women, informal workers, Afro-descendants, migrants, people with low education or people who are in the process of professional or educational training.

When we cut out these researches to focus only on the social and financial impacts, we see convergence between part of the results presented here, mainly on undergraduate students. Both audiences indicate difficulties due to the inadequacy of the home environment to work, study and even socialize - since a large part of the family had to settle at home -, due to the poor quality of infrastructure conditions (telephone, computer, internet, wifi, furniture, space, acoustics and more), for the significant loss of financial income and, unfortunately, for the loss of close people affected by COVID-19. Both audiences are still those who, in the midst of a pandemic, have jobs, usually “simpler”, who maintain a face-to-face regime. Of the undergraduate students who claim to be working, 65% of them remain on a face-to-face basis. This percentage in graduate students is only 0.09%. All these unfortunate convergences may occur due to the presence, in greater numbers, of hierarchically poorer strata of the population being present in part of the profile of undergraduate students at higher education institutions. It is known that the access of people from lower economic classes to graduate studies is still a Herculean task in Brazil.

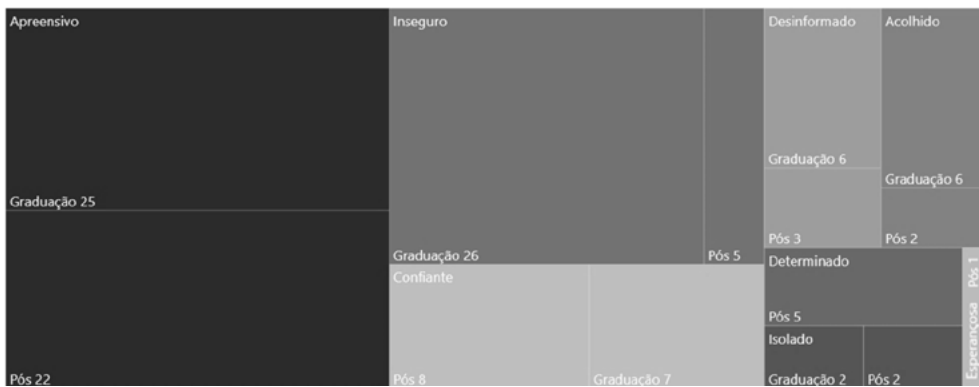
## LEARNING AND SOCIAL AND EMOTIONAL CONDITIONS OF STUDENTS

Anxiety, uncertainty and isolation were common terms that emerged during the monitoring of the Management classes. As Santos, Junior and Monteiro (2020) point out, such emotional and psychological issues reflected in general academic performance, motivation, high number of absences and evasions, and weariness, especially mental – and yes, teachers were also affected by these and other issues. Added to this panorama, as observed so far, we have the complex Brazilian conjuncture that acts as a potentiator of inequalities and social ills, causing that member of society that is more fragile, to suffer even more from the consequences, as highlighted here, from COVID-19. The pandemic arrives in Brazil and adds

to the economic, social, political and health crises that mainly plague the most vulnerable population.

As a sociable being, the human does not live in an autopoietic system, that is, to borrow a term in biology, the human being is not an end in itself. It makes exchanges with the environment and, therefore, impacts and is impacted by it. The pandemic, in this case, adds to this environment and shapes such exchanges. Overall, the arrival of the pandemic caused students to be taken by certain feelings that, in one way or another, impacted different aspects of their lives. And of course, it also impacted teaching. Graph 3 below highlights such feelings:

**Graph 3. Feelings and Profiles**



**Source:** Elaborated by the authors.

Apprehensive (“*Apreensivo*”), insecure (“*inseguro*”), uninformed (“*desinformado*”): these were the most common types of profiles and feelings present in this journey of experiencing a pandemic. The three groups converged to the extent that: all had suffered some type of reduction in their financial income; have the highest rates of face-to-face work; at the same time, it contains the highest rates of unemployment. In addition, the students’ lack of knowledge about how the teaching-learning process would take place in the remote environment potentiated such feelings. In this sense, one can infer a possible difficulty in the teaching-learning process, in such an uncertain context. It is plausible to denote, from the research, that learning does not remain in focus, being necessary, first, to calm feelings and emotional issues of an uncertain and frightening reality.

Santos (2020) states that during the pandemic, even though generalization was unfeasible, the Brazilian university deepened its centralizing and bureaucratic logics even further, keeping abreast of professors, many on their own and in the spirit of mission, the task of “taking care” of students: both learning and emotional factors. Following a trend already pointed out in the pre-pandemic era, the university invested little attention in students and learning processes. There was more focus on keeping its operations going than generating access and quality learning or even dealing with actions to overcome the pandemic. Santos (2020; 2010) completes, saying that the commodification of the university became even more explicit: “the pandemic has worsened the trends of degradation of the university that had already been noticed for a long time” (2020, p.1). The author also points to processes of exclusion that the so-called digital citizenship fostered during the pandemic.

Nevertheless, on the other hand, we notice positive profiles, such as “confident” (“*confiante*”) “determined” (“*determinado*”), “hopeful” (“*esperançoso*”) and “welcomed” (“*acolhido*”). The first three profiles are almost exclusive to postgraduate Management students. These profiles converge in some characteristics: the majority (respectively, 29%, 60%, 100% and 50% – weighted cumulative of 43%) had no impact on their financial income (few of them even increased their income); live with their parents, or spouse and children; most are working remotely; most have an adequate or totally adequate environment. As indicated by ECLAC (2020) and UN (2020) research, the population with better economic and social conditions would feel less impact from the COVID-19 pandemic. Here, unfortunately, the impact of social inequality on personal, professional, health, education and living conditions is wide open.

In interventions with the groups in order to understand how the dynamics of e-learning could adapt to the current scenario, there were several responses. From their organization, it was possible to analyze the basic structure of the elements present in their arguments through the generation of word clouds and similarity analyzes made with the help of the Iramuteq software. The generated word clouds present an important difference between the perceptions and afflictions of the groups of students in Graph 4. Once again, the main difference is between undergraduate and graduate students in the Management field.



The importance of meeting the most basic, primary needs is visible, so that a high or sufficient performance is expected from undergraduate students in their learning process. It is noticed that most of these students, in addition to bringing with them family and professional concerns, are affected by the complex Brazilian situation that potentiates social ills. Still, it is important to ask whether such issues highlighted here can be generalized to other contexts. Would undergraduate students, regardless of location and course, be more likely to suffer impacts on teaching caused by the COVID-19 pandemic?

It is impossible, better, it would be unethical, to blame the student, especially in the case of an undergraduate degree in Management, for not being able to adequately deal with their education process at the university. It is clear that his concerns revolve around, in his words: “I don’t know if I can continue doing my degree. I lost my job and I can’t pay”; “Everyone in my house is working remotely. I am out of place”; “At home there is only one computer”; “My Internet connection is too bad”. And in addition to technical and financial issues, there are family members: “I have children to take care of. It is too difficult to work, take care of my children and continue to study”. It was evident that, on the one hand, that of undergraduate students, is more likely to be impacted by the pandemic, while graduate students seem to have greater capacity, including economic ones, to adapt to such changes forced by the scenario.

The similarity analysis reinforces the observations made so far. It allows the relationships and degree of connectivity between the elements to be observed. In addition to proximity, it is also possible to identify the forces between the links and the degree of centrality of the elements. Thus, the following structure was obtained in Graph 5:

Graph 5. “How can we help?” - Similarity



Source: Elaborated by the authors.

An evident finding from the analyzes was the incidence of a critical factor present in all profiles of Management students, whether undergraduate or graduate: the excess of information - or, in the words of an undergraduate student, “an overdose of information”:

*I even understand that you from IES/MG create groups [WhatsApp and Telegram] to talk to us more directly and quickly. I know you want to help, but think with me: today, on*

*average, each student in the class takes six subjects. Let's assume that each teacher creates a group for each subject. Now, let's imagine that each teacher asks for a group work. As we need to get organized, other groups are created (WhatsApp and Telegram) to talk about. Professor, so far 12 new groups have been created! And that is exactly what is happening to us. I know it's to help, but it doesn't. It's almost an overdose of information! And we still have our personal lives, our family, our friends and work. How about that?*

Other aspects reported by students, almost entirely, were the excesses of activities demanded by teachers, demonstrating, as pointed out by Kulikowski, Przytula, and Sulkowski (2021), as unintended consequences on motivational characteristics of academic work that can interfere with the process of teaching and learning. The lack of teacher training for remote teaching and the lack of time for adaptation can be considered relevant factors for this situation. The field researched here pointed to an excess of lives, online courses and videos, excessive use of texts and “constant attention demand”, which led to exhaustion. Insofar as it was intended to make up for the absence of face-to-face teaching, what was revealed was a situation of extreme explosion of content, which added to the tension experienced by the students, resulted in emotional and even psychological suffering for the students.

## URGENT BUT PALLIATIVE ACTIONS

The work carried out during these eight months brought important information that supported decision-making on e-learning, on teaching-learning dynamics and relationships with students. One of the first actions, after a recurrence of complaints about information overload, was the creation of weekly reports: only one message was sent weekly in the groups of the disciplines. They contained summarized and important information for the course of the discipline. In addition to the weekly message, rules governed the group dynamics, such as not sending audios and messages that are inconsistent with the course objectives. The limitation of messages was an important way to control the excess of information. Strategically, the work of sending guidelines was designed to promote greater direction, focus and assertiveness, resulting in greater attention and adherence of students to the reports sent.

In a curatorship work, the Management professors also polished the content, using articles, books and visual resources that were exclusively necessary. The idea was to seek the “middle way”: not too little, not too much, but a balance. Another

relevant factor was an alignment between professors from the same period/module of the course, so that the progress of the semester was more adequate and fairer, again balancing expectations and demands.

There was also flexibility in the attendance conference of students. This action was due, in part, to the technological difficulty of access for students, who often could not be present for access reasons, and ended up being harmed. On the other hand, the educational institutions themselves oriented towards this flexibility, in view of the pandemic scenario, many students accompanying sick relatives and emotional difficulties to follow all classes.

Another relevant point was the modification of evaluation mechanisms in remote teaching in Management. In the face-to-face system, there is direct control of the professor in front of the students, when an individual assessment is applied without consultation, such as a test, for example. On the remote system, this control is gone. Although it is not the central objective of the school relationship to have this absolute control over the assessment system, that is, this teaching-learning relationship is not limited to the factor “the student is cheating”, it should be noted that, in the remote system, the student has access to various consultation tools and assessments are therefore adapted. The analytical aspect was explored much more than the content aspect.

On the one hand, it can be seen that there has been a loosening of the rigidities of the usual evaluation system, as evaluations have become more descriptive. On the other hand, there was an increase in the students’ ability to explore, as the tests sought to cross more data and analysis - due to the student’s own access to research during the exams. It is therefore considered that the challenges experienced during the pandemic, if well explored, could be transformed into opportunities for the development of a more sustainable online learning design (ADEDYOIN; SOYKAN, 2020).

Added to this expansion of research and consultations of students, the factor of exchange between students. In the evaluations, and also in the activities and daily demands of the disciplines, many students played roles of discussion among peers, exchanging ideas and attributing greater empathy in the learning relationship.



## Considerations

New models, teaching-learning processes and significant changes took place after the implementation of the remote system in Brazil, as a result of the COVID-19 pandemic. Even people already used to the digital environment felt the change of having their lives centered exclusively on digital platforms, in an almost mandatory way. Educational institutions, teachers and students were compelled to adopt remote practices, while learning to fluently operate these same platforms, as well as all the transformation of life and conception of education that they could never foresee in a long time so meager.

The e-learning strategies in Management provide students with access to online content, in an environment different from traditional face-to-face classes. The lack of preparation and urgency in the operation of technological resources resulted in anxiety, additional costs for the immediate preparation of residences for classes and frustration of expectations regarding the course. Therefore, it was relevant to understand the students' experiences, notably in Management, within the novelties of the remote teaching format.

On the institutional side, many schools saw in this forced experience the opportunity to test the format exclusively online, which would reduce costs for the allocation of students in classrooms, as well as the values for maintaining the infrastructure of large educational buildings. The cultural barrier of the digital mode, so complicated to overcome, was forced to redeem itself in the face of the isolation requirement imposed by the pandemic, subjecting the academic community to migration to the online environment.

However, a discussion also began about the value of the face-to-face teaching experience, the potential encounter of the interaction that the classroom provides. Access to the professor, exclusive attention in an environment prepared for the study, exchanges between peers and the joint realization of activities and events in the same environment, which provide the collective construction of knowledge.

Although the Management area does not require the use of laboratories or experiments as occurs in the areas of Health or Engineering - which would reinforce the need for face-to-face teaching - it is in the interaction that many strategies, dynamics and proposals take place. Social distancing, added to a context of isolation

as a prophylactic measure against COVID-19, has become a challenge due to the adaptations required in the very short term. The repercussions of this experience of remote teaching in the Management will still be fully understood when this historical period is overcome.

It is clear that these changes to the digital environment must be perpetuated, but it is essential to enable meaningful educational experiences that overcome the digital monologues originated by continuously closed cameras, creating a vacuum in teacher-student reciprocity. The lack of looks and expressions – of approval or refusal – generate an impoverishment of communication, sharing of emotions, knowledge and experiences. The distance from the cameras and microphones turned off reinforces the unidirectional logic of teaching and learning, even causing a certain accommodation on the part of the students, who reported in the surveys following the classes as much as possible, that is, as mere spectators.

The changes have generated critical, reflective and motivational debates in the field of Management that can only be fully understood when we discover what can be valiantly constructed from new remote technologies in the educational field. Although we see a pedagogical potential and a profusion of knowledge in digital environments, it is necessary to appreciate the role of the teacher, in his great capacity to contribute, to build meaning, to be a conductor of knowledge, in partnership with students. This would mean overcoming the current models of transferring classes from face-to-face to digital (MOREIRA; HENRIQUES; BARROS, 2020) and starting to understand the real needs of students, finding didactic alternatives that stimulate and promote inclusion and participation, educating citizens for life.

The research findings showed that students suffered impacts on their learning process, however, undergraduate students, because they have a socioeconomic profile considered “simpler” than postgraduate students, were the most affected. Here, housing conditions matter; the appropriate environment for studies; the quality of the internet; the infrastructure and equipment needed to accompany the classes; the social and economic context of students and their families; and the students’ own feeling and emotional state in the face of uncertainty. Unfortunately, a combination of socioeconomic problems in the Brazilian scenario with the problems brought about by COVID-19. In this sense, the balance has always tended to be unequal for undergraduate Management students. On the other hand, as they are more fi-

nancially established and have a more individual student trajectory – characteristic of the *Scrito Sensu* – graduate students were less impacted. The illustration of this analysis was made by the formation of clouds of words generated from the perceptions and afflictions of the groups of students. The cloud formed by the arguments of undergraduate students brought “no” to the center, highlighting statements such as: “I can’t pay the monthly fee”; “I don’t know what to answer [how it can be helped]. My parents are from the risk group, I’m busy all day”; “I have a lot of difficulty in participating in videoconferencing because of wifi connection, because I don’t have it at home”; “How many students do not have an adequate internet? Not to mention the students who do not have adequate access and often only have their cell phones to carry out these activities”.

The most anxious, apprehensive, insecure and uninformed profiles were also more present among undergraduate students. The profiles converged to the extent that: all had suffered some type of reduction in their financial income; have the highest rates of face-to-face work; at the same time, it contains the highest rates of unemployment. Such emotional and psychological issues reflected in general academic performance, motivation, high number of absences and evasions, and weariness, especially mental.

Finally, acting as an emergency to create a minimally adequate learning environment, some decisions were taken: creation of clean weekly reports; establishment of communication rules; alignment between teachers for content polishing, with the use of articles, books and visual resources that are exclusively necessary; making the attendance conference of students more flexible; and modification of evaluation mechanisms in remote teaching in Management.

As limitations of this study, we point out the scope of the sample, as well as the limited time in the field. New research, covering more Brazilian states and cities, may point to other approaches and scenarios for remote teaching in Management. In addition to expanding the geographical and temporal scope of the research, it is suggested to investigate the management of higher education institutions, in order to understand the new pedagogical paths established. More in-depth research can also be carried out focusing on teachers, with discussion groups, for example, in order to understand the challenges and potential that they experience with the transformations in teaching caused by the COVID-19 pandemic. Still, it is impor-

tant to ask whether such issues highlighted in this research can be generalized to other contexts. Would undergraduate students, regardless of location and course, be more likely to suffer impacts on teaching caused by the COVID-19 pandemic? This and other questions reinforce the importance of the topic today, aiming at the improvement of higher education in Management.

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