Chapter 11

Remote learning and its perspectives in higher education in the Brazilian context

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11.1. Introductory remarks

The year 2020 has changed how Universities work; the pandemic of Covid-19 transformed the lives of students and all professionals involved in their academic lives. In March 2020, the pandemic outbreak brought a new challenge; a new illness was disseminated, no treatment was known, and every kind of social contact had to be avoided; it was the first period of health crisis caused by Covid-19 (Organização Pan-Americana da Saúde [OPAS], 2020). At that moment, the hospitals were full, and without the perspective of getting better, there was neither vaccine nor treatments for this illness.

The only way not to disseminate the virus was a lockdown and the use of masks (Ministério da Saúde, 2020); the population believed that it would be all over after a short period. Initially, the Universities suspended their classes for 15 days. This period was not enough to resolve the sanitary crises. The 15 days (Avila, 2020) became eight months, and there was no perspective to have presential classes again not to compromise students' physical integrity.

As the return to presential activities was uncertain and the fear of a lengthy suspension could affect the students learning, the Universities returned the academic activities online in December 2020 (ABMES, 2020). However, it was not without many discussions. The questions about the quality of online teaching were raised, how long the students would be exposed to computer screens, the effectiveness of tests and the lack of software infrastructure to change from presential to online classes. On the other hand, some students needed support to get a proper device and to have the proper internet at the place they attended classes.

In October 2021, the Regional Federal Court of Rio de Janeiro – TRF-2, considering a request from the Federal Prosecution Service, decided that the academic activities should return to presential immediately. However, that decision did not prove prudent for most educational institutions. Despite many vaccinated students, professors and employees, spreading other variants of Covid-19, such as the Omicron, continued to be a health risk. In this sense, the Federal University of the State of Rio de Janeiro issued an Instruction determining the suspension of presential activities at the University until February 15, 2022 (Federal University of the State of Rio de Janeiro [UNIRIO], 2022).

This chapter aims to answer the following questions: what we have learned as teachers from this online learning experiment; what the students have learned from this learning experiment; what could be improved from the teacher's and student's perspectives, and last, if there is any solution that could be introduced to develop the effectiveness of virtual learning. These questions are being considered from the context of the Federal University of the State of Rio de Janeiro, especially the law school.

The present research methodology is based on the data collected by the e-learning system and how it was possible to continue the education of students, despite the pandemic conditions, especially the restrictions of movement (lockdown). The research is based on mixed methods: qualitative research to explore the situation and develop a potential model of understanding and a conceptual framework, and then quantitative methods to test the model empirically. The actual case should be an important example of the transformation of education. Data collection and results analysis were possible due to the methodology used. because an internet platform already supported online education.

11.2. What have we learned as teachers
from the online learning experiment?

Traditionally education was held in schools and universities. Students went to classes, met their colleagues, and had personal contact with their teachers. The material was discussed, and the professors knew precisely with whom they spoke. There was personal contact. It could also be considered that classes were a social space for meeting people from different backgrounds. In this way, each one got a richer experience, which is not only based on the formal aspects of education but also includes the informal ones. The educational process is not only centred on the way the material is taught but also on the debate it causes. The teachers discuss what is calling the students' attention at that moment according to the lesson's subject. This synchronism is very dynamic and valuable for learning.

The Covid-19 pandemic challenged all involved actors. During this period, the task was to keep the students in their activities. Would online classes be a proper replacement? This was the major question.

This topic was analysed in many publications. According to Basilaia & Kvavadze (2020, p. 2), the situation in the USA, in the state of Georgia, was as follows:

> For the year of 2020 the country has 592 900 students in 2313 schools countrywide. There are 2086 public schools with 530 100 and 227 private schools with 62 800 students […]. In a situation where the students are not allowed to go to school, the alternative is to move from traditional to online education. In this case the essential parts are the internet coverage, availability of computers or smartphones in the population. By the information of the National statistics office of Georgia for July of 2019 a total of 79.3% of the Georgian homes are connected to the internet, where the city population of 86.1 has access and the villages have 69.9%. […] As for the computer access the country's 62.0% has the computer at home where the urban percentage is 74.6 and the rural is only 44.7% […]. The number of the computers owned by families, especially in the rural areas of the country are lower than a 50%, that can have a negative influence on the whole online education, but in some cases, the modern smartphones can be used as a substitute, if the platform of education is mobile friendly or have the mobile application available. As the Georgian National statistics office of Georgia gives information on the share of the population age 6 and older who use the mobile phone is 91.4 countrywide with 93.7% in urban and 88.0% in rural areas […]. The Ministry of Education, Science, Culture and Sport of Georgia has made the Microsoft teams platform available for all 2086 public schools in the country. The Education Management Information System has created the accounts for all teachers 55 000 teachers and 530 100 students) and have built-in the virtual classrooms for all classes and relevant subjects by default. Additional online instructions were published for teachers and students to use the system.

For the teachers, the main task was to develop educational materials and adapt their classes to online methods, which required different approaches. It is different to teach at a school and to do it *via* computer whether the classes are synchronous or asynchronous. Remote online learning is not an integrally active process. When it occurs asynchronously, it requires active student engagement, which is central to learning many subjects, and if it occurs online, it becomes increasingly complicated and out-of-reach.

In addition to this material logistics, the professors had to innovate didactically, finding a way to hold students' attention and giving all the content they would teach in person, even when they were kilometres away. However, in many universities, it was agreed that synchronous lessons would take only half of the total time, with the other half available for asynchronous activities. To fill the time intended for asynchronous activities, professors made many texts available for students to read and report on the subject. In practice, students had to spend much more than the time allotted for asynchronous activities to be able to read and understand the entire amount of texts provided by the professors.

There were several aspects to consider. One of them was the psychological: how the involved actors reacted to the transformation; how the students would continue to achieve their goals in an unexpected way of being taught. Research made in Germany concluded:

> We used the German translation of the Maslach Burnout Inventory for Educators […]. It encompasses (a) emotional exhaustion (e.g., 'I feel emotionally exhausted by my work'; 9 items; $\omega = .90$), (b) cynicism (e.g., 'I just want to do my job and be left alone'; 5 items; $\omega = .74$), and (c) reduced personal accomplishment (e.g., 'I feel good when I have achieved something at work'; 8 items; $\omega = .78$). The last eight items reflect positive engagement and were reverse coded for the analyses; therefore, high values represent a strongly perceived lack of personal accomplishment. Overall, high scores indicate burnout, and low scores reflect engagement. (Daumiller, 2021, p. 6)

The same results may be expected to be found in Brazil. It is to be considered that there are more cell phones with internet connections in the country than inhabitants. It means that most of the population has access to mobile internet, but it does not mean that the service is of good quality. The average income of professors, considering their colleagues in Europe and the USA, is meagre, and the University infrastructure is not well equipped. On the other hand, the educational personnel were committed to transforming the situation because education is considered to be a way of improving the social conditions of the population.

The professors started to transform the way they worked. It was not easy; psychological consequences were observed. The home became their working place; there was no

difference in the privacy of their domicile and the place to work. Everything should be considered, but a real revolution was the transformation of the ways education was taught; this transformation reflected the new challenges and how to improve and transform social isolation into virtual social contact.

Innovative solutions were to be considered. Society always finds a way out of a crisis through new technologies. It is something that can be observed in the history of all countries. According to Daumiller (2021, p. 11):

> Our findings emphasise the role of personal prerequisites for resilience, innovation, and change. These personal factors can in turn be fostered through an according organisational climate […]. Against this background, COVID-19 should additionally be considered as a catalyst for university systems to better prepare faculty members not only for online teaching, but also for unexpected challenges in general, and to this end, invest further in proactive resilience initiatives […].

The pandemic transformed the way of teaching. Universities had not changed the way of educating students for centuries. A transformation in education methodology is one of the consequences of the Covid-19 pandemic. It obliged the teachers to analyse how to prepare classes and how to relate with the students. The pandemic may be coming to an end, but the transformations left should be considered. Technological innovation also influenced universities, and it was reflected in the way their activities were undertaken.

11.3. What have the students learned from the learning experiment?

The main impacts brought about by the pandemic of Covid-19 are the reflections of the big changes we have undergone in the academic environment. As well as the teachers, the students also missed the campus – physical college space which is essential for the student's education. The students do not go to college to learn the program content taught by the professor. The university academic environment, which brings together people from all places, social classes, different ideals, and convictions, is fundamental for not only the professional but also socio-cultural construction of the student.

The distance from the campus is also a severe blow against the many social movements that start at the university with professors and students and leave the campus walls to reach the community. Without this concentration of volunteers trying to solve the different social problems experienced by a primarily poor population as in Brazil, the movements lose strength, and many end up being left aside, aggravating the situation of many Brazilian people.

Another shocking change is related to the hastily modified class model without prior notice for adaptation. The face-to-face model of classes has always been practised in public universities, and when suddenly professors and students needed to adapt to a new, remote model, this caused a lot of difficulty. The absence of face-to-face interaction between students and professors is very much felt in this new teaching model, making it difficult for students to concentrate and learn.

The remote teaching model also reveals a significant lack of infrastructure for students and professors. Students and professors had to suddenly adapt to a new reality where, instead of chalk, blackboard, pen and notebook, the essential for teaching and learning becomes a computer and a good internet connection, which is not a strong point in Brazil.

The emergence of these new infrastructural needs increased the difficulties faced by poor students to stay in the course. As previously mentioned, the primary learning tools in remote teaching are the computer and a good internet connection. For the reality experienced by most Brazilians, a computer is an unthinkable object inside a house where even food is a luxury item. Internet connection is even something unknown since those who do not have a computer do not even know what the internet is. In order to alleviate the situation, the university tried to make available, through aid, the necessary tools for the maintenance of education in the homes of low-income families. Despite the university's goodwill, it turned out that making such instruments available to many students in need was an almost impossible mission. Particularly at a time when the country as a whole is going through a health and economic crisis and with a government that sees science, and education, as something superfluous since information can be easily accessed in WhatsApp groups, where tireless robots throw the 'truth' in our face, even though it is quite different from that told by science. As a result, the country's education sector, especially public universities, suffers from constant budget cuts, making it impossible to provide the necessary assistance for underprivileged students to have the minimum tools for learning.

Another significant change occurred due to the subject that appeared in real-time, making the students, who experienced the change, need to study them. Throughout the pandemic, many changes took place in social relationships. The interaction between the people and public services changed. The healthcare had to act quickly, without the time typically spent on research. The legislative bodies had to create new mechanisms faster and less bureaucratic so that state authorities could act in order to solve of the problem without infringing the established legal system

To make the situation even worse, the problems faced by families in this pandemic period, such as unemployment, hunger, fear, hospitalisations and deaths, significantly affected the psychological health of professors and students.

It is also essential to analyse the situation of the foreign students, far away from their hometowns. Several difficulties may arise, including the nonexistence of a proper place to keep social distance. This was a conclusion of research taken by The Guild of European Research-Intensive Universities (2021):

> For students living in university accommodation, physical distancing might be difficult to respect. In that regard, universities have different policies depending on the type of student residence. At Ghent University, for instance, dormitories where social distancing was impossible to keep were closed for the safety of their dwellers. Universities have also quickly adapted and enhanced their welfare support. At King's College London, the Sport Team has decided to offer free online classes for students. And as the current situation might also impact the wellbeing of students, the University of Ljubljana has developed a project aimed at providing support to students.

The concept of enabling students to learn in another place had to be discussed. Most returned to their homes during the pandemic because of online studying. The dormitories at their universities did not fulfil the minimum requirements of social distancing, and they could not have a proper place to study using their devices – notebooks, cell phones or tablets. The turning point is how to return to regular academic life after the pandemic, considering that the social distance also meant a reduction in living costs and enabled students to work and study simultaneously.

The other point is how the student feels related to the studied object. Several questions may arise, such as the possibility of gaining the same result as before the lockdown caused by the Covid-19 pandemic. According to Dorn, Hancock, Sarakatsannis, and Viruleg (2020), the following result should be considered:

> Although students at the best full-time virtual schools can do as well as or better than those at traditional ones, most studies have found that full-time online learning does not deliver the academic results of in-class instruction. Moreover, in 28 states, with around 48 percent of K-12 students, distance learning has not been mandated. As a result, many students may not receive any instruction until schools reopen. Even in places where distance learning is compulsory, significant numbers of students appear to be unaccounted for. In short, the hastily assembled online education currently available is likely to be both less effective, in general, than traditional schooling and to reach fewer students as well.

The analysed point is how the students achieved the same results in an online environment, considering the presential learning. Social aspects and backgrounds should also be considered. The results proved that, although technology enabled the return of a certain level of education, it was not the same outcome as it would have been at a presential activity. It has several causes, and one of them, perhaps the most important, is the social environment of the place where the students live.

Even though they get access to tools for teaching and learning, the power of concentration of these actors in the academic environment is drastically reduced due to the concerns and fears that have settled in the families' homes. As a consequence of this nebulous period, we have gone through, society's attention turned to the pandemic. The university could not escape this either, and courses related to the health area, such as medicine, pharmacy, and public administration, among many others, had to change their focus to try to solve the current problems caused by Covid-19, to the detriment of old issues that they have not found a solution so far.

11.4. What could be improved from the teacher's or student's perspectives?

The Covid-19 pandemic was severe and has taken more than any previous epidemic. For this reason, we did not have any previous experience, and we were not sure whether the switch to e-learning was feasible. The pandemic requires a well--integrated trained team to detect students' and teachers' needs and provide prompt answers and support with digital tools. We are all surfing the virtual environment with greater or less difficulty, and we firmly believe education must not stop.

To improve how teachers give lessons, it would be advisable to train them to use digital tools and platforms. The university could also promote meetings to discuss students' expectations and the emotional impact of quarantine and e-learning. Meanwhile, the clerkship should be responsible for recording the lectures with professional support when needed. The university could implement an online education schedule with synchronous and asynchronous interaction.

Computers and internet access must be offered for students with difficulties in connecting. Many students have gotten anxious about what they could be missing out on social distancing measures, while others have seen this time as an opportunity to develop new competencies.

The experience with the pandemic has made it clear that learning should not be tied to the walls of a classroom or the limits of a computer screen. In order to engage students, the teachers need to invite them to take action, recognising that their own experiences matter, and this assignment encourages them to be introspective and active in learning. It was not easy for professors and students to teach and learn in conditions that happened instantly. If, on the one hand, we were surrounded by practical examples of what was studied, on the other hand, nothing was certain; nobody knew exactly how big the problem and its consequences for humanity were on account of the variety of spaces, both academic and personal.

Although the problems brought about by the pandemic have severely impacted the way of teaching in Brazilian public universities, the fact is that, in one way or another, teaching has not stopped. Overcoming all adversities and the entire policy of combating quality higher education spread wide open by the government; public universities taught how to overcome a crisis. We are going through this challenging period, faced by all humanity, with the certainty that, no matter how big the crisis, teaching must never stop because it is with education and science that we can overcome the crisis. Neither a denialist government nor the 'truths' of WhatsApp groups can get us out of the pit, into which the adversities of life sometimes throw us, but science, education, and the university show us the way to success. Ultimately, we can say that we have grown with yet another crisis.

It is crucial to think that the pandemic has brought new educational challenges. The way it has been done will have to change based on the simple fact that teaching has not undergone an impressive change for centuries. It is essential to consider that many publications bear in mind new pandemics and that the educational system cannot stop as a vital element of social justice. Therefore, the challenge is improving the educational methodology by implementing new technology mechanisms without missing the necessary human contact, which allows the development of cultural interchange.

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