

Adaptation And Application Of The Servqual Scale For The Analysis Of The Quality Of Remote Emergency Teaching In Administration: A Study In A Brazilian Public University

Lucas Alves de Oliveira Lima¹, Willian Pimentel Junior², Francisco Antonio Nascimento³, Anselmo Ferreira dos Santos⁴, Luiz Carlos Michilis de Carvalho⁵, Jefferson Davi Ferreira dos Santos⁶, Flávia Adriana Santos Rebello⁷, Renato Silva de Almeida⁸

¹(Federal Rural University of Rio de Janeiro, Brazil)

²(Federal Fluminense University, Brazil)

³(Federal University of Ceará, Brazil)

⁴(Federal Institute of Amazonas, Brazil)

⁵(Federal Institute of Amazonas, Brazil)

⁶(FUCAPE Business School, Brazil)

⁷(Federal University of Western Pará, Brazil)

⁸(North University Center)

Abstract: The Present Research Aimed To Evaluate The Quality Of Remote Emergency Teaching In The Administration Course Of A Brazilian Federal University During The Pandemic Period. To This End, An Exploratory Survey Of Quantitative Approach Was Applied To A Sample Consisting Of 174 Students. The Data Collection Instrument Was Based On The Servqual Model Of Parasuraman, Zeithaml And Berry (1988), Which Contributed To Measure The Expectations (E) And Perception (P) Of The Respondents Through A Five-Point Likert Scale. From The Tabulated Data, It Was Found That All Dimensions Present In The Scale (Tangibility, Reliability, Security, Responsiveness And Empathy) Gave Negative Indexes And, Among The Five Dimensions Analyzed, Empathy Was The One With The Highest Gap. This Result Shows That The Students' Expectations Regarding The Aforementioned Dimensions Were Not Met, Thus Demonstrating That The Covid-19 Pandemic Contributed To Worsening Access To Quality Public Education.

Key Word: Quality; Servqual Scale; Educational Services; Pandemic; Covid-19.

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I. Introduction

In late 2019, the World Health Organization signaled the emergence of a new virus in the Hubei province of Wuhan, China. Shortly thereafter, the new coronavirus (Sars-Cov-2) spread rapidly throughout the world, causing implications in the education sector in several countries, especially for those characterized as underdeveloped or developing, as is the case of Brazil, which is an emerging country (FROES, 2020).

With the severity of the disease nationwide, social isolation became a preventive measure adopted and, consequently, the educational units were affected due to the partial or total suspension of activities. In this sense, face-to-face teaching was interrupted and, with that, a new remote period characterized by the use of technological resources began (ARRUDA; 2020; CORDEIRO, 2020).

The remote emergency education introduced, according to Castioni et al. (2021), a debate about social inequalities, given that a large part of Brazilian students, especially those from public higher education institutions, presented difficulties of access to virtual platforms. Thus, such circumstances brought harmful effects to the students' learning process, which resulted in numerous challenges for the provision of quality education.

According to Zeithaml, Bitner and Gremler (2014), service quality is currently a key factor for the success of organizations, whether public or private. In this vein, Parasuraman, Berry and Zeithaml (1998) complement that the quality of a service is linked to the satisfaction of people who demand services, being necessary, therefore, that the needs and expectations of such individuals are met.

Thus, models that measure the quality of services through users' perception have been developed over the last decades, among which we highlight the Servqual model, which aims to measure the quality of service through five dimensions, which are: reliability, responsiveness, safety, empathy, and tangibility (MELL; DUTRA; OLIVEIRA, 2000).

However, despite the existence of these models, Hoffman and Bateson (2008) reiterate that they present a generic approach, and it is necessary to adapt them according to the nature of each type of service. As Oliveira and Ikeda (2007) point out, this means that service quality measurement models may, after being adapted, be applicable to the field of education.

In this context, the present research aimed to evaluate the quality of teaching in the Administration course at a public Brazilian University during the Covid-19 pandemic. To do so, an adaptation of the Servqual model by Parasuraman, Berry, and Zeithaml (1998) was performed.

As pointed out by Tucci et al. (2017), it is common for the efforts of the scientific community to focus on the mechanisms of pathological agents during the occurrence of pandemics, thus neglecting the implications that such an event can cause in other spheres of society, such as education. Thus, it is expected that this article will bring contributions through the proposed analysis, which will provide theoretical and practical subsidies concerning the quality of education during the pandemic period.

II. Theoretical axis

Services Marketing

At the end of the 1970s, the services sector began to gain a larger share in the global economy, and as of this, a separation began between services and physical products within the marketing area. Thus, service marketing emerged with the aim of assisting organizations in achieving corporate objectives and began to involve, in this way, "a set of efforts and actions that perfect a sale with the aim of delighting the customer, differentiating the organization from its competitors" (PRADO et. al, 2017, p. 70).

Hoffman and Bateson (2008) reiterate that the main objective of this field of marketing is to ensure that customer expectations are met, after all, services are actions, processes or performances performed by a company, and may include even corporations that produce consumer goods. Notoriously, managers must develop strategies to meet the needs and desires of consumers, because this way it is possible to retain their loyalty to obtain competitive advantages in the market.

Moreover, this marketing area, unlike traditional marketing, is based on a subjective factor for customer satisfaction, since services are characterized by intangibility, i.e., they cannot be seen, tasted or consumed before the purchase. Consequently, it is essential to have quality in the work offered so that the demanding party has a favorable experience in the post-purchase process, since the result of the service directly affects the future intentions of buyers (LOVELOCK; WRIGHT, 2006).

As pointed out by Zeithaml, Bitner and Gremler (2014), service marketing is characterized by having a triangle that is formed by three elements: the company, the customers and the employees. These elements act in an interconnected way in order to maintain a synergistic relationship and enable the development of services. The technological factor is also emphasized as an essential element in this relationship, since the technology employed in the services has the ability to generate, or not, customer satisfaction. In this case, for the maintenance and construction of an effective relationship with consumers, the joint use of internal, external and interactive marketing is necessary.

These authors point out that companies can, through external marketing, establish promotional strategies to generate promises to customers in order to meet their expectations. Thus, these promises are fulfilled through internal marketing, since employees are the main agents capable of keeping them. Maintenance, in turn, is accomplished through interactive marketing, that is, when the customer interacts effectively with the organization from the moment the service is produced and, consequently, consumed.

Quality in Services

The concept of quality has undergone, over time, numerous re-significations, gaining prominence, especially in the post-war scenario. At the end of World War II, Japan entered a period of economic recession due to the destruction caused by the bombing of Hiroshima and Nagasaki. However, despite all the tragedy involved, the Japanese sought to strengthen their economy and enlisted the help of W. Edwards Deming and a group of engineers to bring about a rebirth of industry in the country. In the 1970s, the Japanese achieved this feat by using total quality as a competitive differential and, since then, the concept of quality has been widely debated in various fields of knowledge due to its importance (TOFOLI, 2007).

According to Garvin (2002), quality was seen, at first, linked to the standardization of goods and/or services. However, this perspective has become obsolete and, nowadays, the focus has shifted to strategic quality management, with the greatest concern being consumer satisfaction. Tofoli (2007) emphasizes that

quality is, first of all, derived from a perception inherent to the cultural functions of a given group. Thus, it is a broad concept that can be found in companies, production systems, costs and other spheres of society.

In the specific case of quality in the services sector, some peculiarities of this type of work should be taken into consideration, such as intangibility, heterogeneity, inseparability and perishability. In view of this, Giancesi and Corrêa (1996, p. 81) emphasize that "quality in services can be understood as the degree to which customer experiences are met", thus involving a process of continuous improvement of the activities developed by organizations. In the post-purchase process, the consumer may feel satisfied if the service has met his or her needs; or dissatisfied if not. At this moment, opinions about the brand will be defined, which may influence other people through word of mouth marketing.

Zeithaml and Bitner (2014) add that the primary factor for a service provision with quality is linked to the understanding of the desires and needs of customers, since such understanding enables a competitive advantage over the competition. Therefore, if services fall short of the expected level, the people who consume them become frustrated and, as a result, satisfaction with the organization plummets. Also according to the authors, five elements affect the service expected by the demanding party, namely: transient enhancers, perceived alternatives, expected services, perceived service role, and situational factors.

Transient enhancers are the individual and temporary factors that usually occur over a short period of time, thus making people more aware of their consumption needs. The perceived alternatives, on the other hand, encompass the other existing service providers, while the expected service concerns the anticipations made by customers about what they will receive. The second to last item mentioned - perceived service role - is related to the degree of influence that the customers themselves exert on the service. Finally, it is worth mentioning the situational factors, which represent "the conditions for service performance that customers perceive as underlying the service provider" (ZEITHAML; BITNER; GREMLER, 2014, p. 75).

In general parameters, people are more likely to judge the quality of services according to work performance, i.e., taking into account the ability to perform the activities within the stipulated deadline. In a market characterized by intense competitiveness, companies that can deliver what was proposed without delay are positively recognized and, consequently, the corporate image is strengthened before the public. In addition, labor processes become more efficient and, as a result, operating costs are reduced due to the preventions adopted. Notoriously, quality assurance makes the company more competitive in the market, thus ensuring the perpetuity of the enterprise and its expansion.

Success in the service sector depends, therefore, on marketing strategies focused on interpersonal relationships with customers and on providing quality work. The managers, therefore, must have a systemic vision to act in a aligned way facing the market changes, thus focusing efforts to improve the perception that people have about the corporate brand, as well as in relation to the service provided.

Servqual Model

The Servqual model was presented to the public in 1988, which constitutes a multidimensional approach that seeks to measure the quality of a service provided. Parasuraman, Berry and Zeithaml (1988) developed the aforementioned model using three basic characteristics of Oliver's (1980) satisfaction scale, which are: intangibility, heterogeneity and the interconnection of service, production and consumption.

As from this, Parasuraman, Berry and Zeithaml (1998) improved the model with new assessment techniques and, as a result, they proposed a questionnaire divided into two parts, where the first block refers to the expectations that the target audience wants from a given service, while the second addresses the consumers' perceptions about the service acquired. The questionnaire in question encompasses twenty-one questions in each block, which are distributed into five dimensions, namely: reliability, responsiveness, security, empathy, and tangibility. The model can be seen in chart 1.

Table 1. Servqual Model

Dimensions	Items
Reliability	Fulfilling promises made to customers
	Sincere interest in solving customers' problems
	Correct execution of the service for the first time
	Deadline compliance
	Keeping customers informed about deadlines
Responsiveness	Provide the services promptly to the customers
	Willingness to help
	Quick response to customer requests
Empathy	Individualized attention to customers

	Openness to hear complaints
	Serving the interests of customers
	Understanding specific customer needs
Security	Transmission of Confidence
	Security in transactions with the company
	Kind treatment of customers
	Technical knowledge to answer questions
Tangibility	Equipment with a modern look
	Installations with visual appeal
	Well-presented employees who take care of their appearance
	Materials with visual appeal inherent to the type of service offered
	Convenient office hours

Source: Parasuraman, Berry, and Zeithaml (1988).

III. Material And Methods

Exploratory research with a quantitative approach

For this study, exploratory research was used, which, according to Vergara (1998), aims to discover and/or explain certain phenomena in order to provide greater knowledge about a theme that has not yet been explored. In this type of research, there is not always the need to develop hypotheses, after all, the aim is to explore the sample universe to obtain more precise formulations and become familiar with the problem. Furthermore, exploratory research has two approaches: the quantitative approach, linked to the quantification of data through statistical resources; and the qualitative approach, used to understand the perceptions and representations of the subjects.

Given the above, a quantitative approach was applied, since it was established as a goal to analyze the quality of teaching in the Administration course of the ITR/UFRRJ during the Covid-19 pandemic and, therefore, it was necessary to use statistical resources to expose the results and analyze them. Thus, the research was based on a classical paradigm, which "understands that scientific knowledge is in the facts, so the scientific work should strive for the purification of the object, relegating what is not essential, so that the researcher can describe the general and reproducible facts." (FERREIRA, 2015, p. 115).

This approach included structured questionnaires with closed alternatives due to the large number of individuals in the sample, making it necessary, therefore, to apply mathematical instruments to carry out the research. With this, it was possible to measure the data through descriptive statistics (tables, absolute frequencies, relative frequencies, standard deviation and averages) and through the gaps between the perceptions and expectations of the students. The following topics will better describe the procedures that were adopted in this research.

Sample

The study was conducted through a sample calculated by the equation illustrated in Figure 1, which is used when the population is finite, that is, when it has a limited number of individuals and a sample space greater than 5% in relation to the population set (MALHOTRA, 2001). Thus, the sample size approximation was made and, consequently, the definition of the simple random sampling concerning the target population of this research, where n = sample size; n_0 = approximation of the sample size; e = margin of error; N = population size of the Administration course of the ITR/UFRRJ.

Figure 1. Calculations for sample approach and definition

$$n_0 = \frac{1}{E_0^2} \qquad n = \frac{N \cdot n_0}{N + n_0}$$

Source: Malhotra (2001).

For the calculation, we used a confidence level of 95%, margin of error of 5% and an estimated population of 314 students. Thus, the sample was composed of 174 individuals, and the research universe was limited to students who had classes in the Administration course at the ITR/UFRRJ during the Covid-19 pandemic, i.e., as of March 2020. It is important to note that an email was sent to the coordinator of the undergraduate course in order to identify the total number of students enrolled during the pandemic outbreak.

Regarding the selection, it was carried out through convenience that, according to Duarte (2010, p. 69), "is based on feasibility and occurs when the sources are selected for proximity or availability". Therefore, it was taken into account the existing accessibility in relation to the respondents, and the contact was made with the convenient elements of the sample.

Data Collection

As for data collection, a questionnaire was applied from the Servqual model of Zeithaml, Parasuraman and Berry (1988), which was composed of a Likert type scale through multiple choice questions. The Likert scale used presented a set of statements ranging from one to five points, which allowed measuring the attitudes of the interviewees according to their degree of agreement with the questions. This scale was developed by Likert (1935) and is based on a psychometric method that combines applied mathematics with psychology, whose alternatives range from "(1) strongly disagree", "(2) partially disagree", "(3) neither agree nor disagree", "(4) partially agree" to "(5) strongly agree".

The research instrument encompassed the five dimensions of the aforementioned model (tangibility, reliability, responsiveness, security, and empathy) and thus made it possible to assess the quality of teaching. The questionnaire was divided into two parts with 15 assertions in each block, where the first part sought to assess the expectations (E) expected from students, while the second analyzed the perceptions (P) that they have in relation to the service performed by teachers. Moreover, it should be noted that additional questions were included to understand the respondents' profile, thus including questions about gender, age, period and number of subjects taken in the remote period.

The data were collected in the first semester of 2021 and, initially, there was a pre-test with 15 interviewees to identify possible errors in the questionnaire in order to improve it. As a consequence of the pre-test, the questionnaire eliminated some initial assertions proposed in the Servqual model due to the difficulty of completion by the students, since the questionnaire was characterized by being too large. After the adjustments phase, the survey was conducted with the calculated sample, and the new data collection was completed in a period of 1 month. Chart 2 below illustrates the adaptation of the Servqual model made for this research.

Table 2. Adaptation of the Servqual model

Dimensions	Items
Tangibility	Effective electronic devices for attending classes
	Accessible Virtual Platforms
	Easy-to-read teaching materials that are disseminated on an ongoing basis
Reliability	Compliance with the menu
	Deadline compliance
	Subjects covered in class and error-free proofreading
Responsiveness	Ability to respond quickly to students' questions
	Prompt service on proof view
	Willingness to help the student
Security	Conveying confidence about the content taught
	Adoption of an efficient didactic
Empathy	Personalized assistance to students
	Search for alternatives to improve learning
	Understanding the specific needs of the students
	Openness to hear complaints

Source: Adapted from Parasuraman, Berry, and Zeithaml (1988).

Due to the social isolation arising from the Covid-19 pandemic, the application of the questionnaire occurred through the Internet and, specifically, through the Google Forms platform. Moreover, the choice of electronic means for filling out the form was due to the accessibility in relation to the sample elements, because

the web is, as Malhotra (2001) points out, a source of data that allows obtaining responses at a low cost and quickly. Thus, the contact with the interviewees happened through various social networks, such as Facebook, Instagram and WhatsApp.

Data Analysis

For data treatment, the statistical software SPSS version 23.0 was initially used with the adoption of descriptive statistics methods, which refer to the initial phase of data analysis, where the researcher organizes and describes all the material obtained during the work. Thus, descriptive tools such as tables with averages, frequencies and/or percentages were applied in order to quantify the data collected.

Given the preceding information, the mean and standard deviation of the responses obtained in the assertions proposed in the Servqual model were calculated in order to measure the expectations (E) and perceptions (P) of the ITR/UFRRJ Administration students. Subsequently, the difference between the values obtained was calculated, thus arriving at the Gap values, which, in turn, seek to measure the difference between the observed value (Disp. Orig) and the average of the control data (Disp. Ref) by means of uniform random variables. In order to obtain the Gaps values, it was evaluated if the data were, or not, far from the observed set. In this case, negative Gaps were designated as critical and, therefore, indicated the dimensions with possible failures in service delivery. For Parasuraman, Berry and Zeithaml (1988), the equation below illustrates the calculation used for such an analysis.

$$Q_j = D_j - E_j$$

Where = Q_j : evaluation of service quality from the respondents' point of view; D_j : perception values that the respondents give to the performance of a given service characteristic j ; and E_j : expectation values that the respondents give to the performance of a given service characteristic j .

Characterization of the study site

The Federal University under study is located in the city of Três Rios/RJ, and the Administration course is governed by the Department of Administrative and Social Sciences (DCAS), which is composed of 17 effective professors, 1 substitute and 1 technical-administrative server. The services offered encompass the three academic pillars (teaching, research and extension) and, besides this, the undergraduates have the opportunity to participate in other events, such as: monitoring, internships, symposiums, Junior enterprises, study groups and in loco visits to organizations. It should be noted that admission to this degree occurs annually, where students enter through the National High School Exam (ENEM), external transfer, internal transfer, ex-officio transfer, reoption, re-entry or internal movement.

Moreover, the bachelor's degree in question has an expected duration of 4 years and works in the evening with theoretical-practical classes, thus seeking to form future administrators with a spirit of leadership, creativity, critical analysis, problem-solving skills, and social values. The teaching curriculum has 43 compulsory subjects and encompasses the five administrative areas, i.e. finance, research and development (R&D), marketing, people management, and production. These contents are taught by the teachers through a traditional educational method, where the teacher is the active subject in the learning process, while the students are the passive agents.

With the beginning of the pandemic, the Ministry of Education published, on March 18, 2020, Ordinance No. 343/2020, which "provides for the replacement of classroom classes by digital media classes for the duration of the New Coronavirus pandemic situation - COVID-19". Thus, the face-to-face classes were suspended and the students began to study through a remote period, a period that, in turn, encompassed virtual platforms with asynchronous and synchronous classes.

It is worth noting that Três Rios is located in the Sul-Fluminense region in the interior of Rio de Janeiro, and is close to the Zona da Mata region of Minas Gerais/MG and the Serra region of Rio de Janeiro/RJ. Therefore, the ITR/UFRRJ has students from the local municipality and surrounding regions, such as Sapucaia, Areal, Levy Gasparian, Além Paraíba, Chiador, Juiz de Fora, Paraíba do Sul, Petrópolis, and others. According to data from the last census conducted by the Brazilian Institute of Geography and Statistics (2020), Três Rios has approximately 82,142 inhabitants and an estimated 97.9% literacy rate between 6 and 14 years of age. Furthermore, the city is located about 125 km from the state capital and occupies an estimated area of 322,843 km². Image 4 below illustrates the location of the ITR/UFRRJ.

IV. Result and data analysis

Through data collection, it was possible to verify, as illustrated in table 1 below, that 63.79% of the people who participated in the survey are female, while 36.21% are male. Thus, it is observed that the student body of the Administration course at ITR/UFRRJ is composed mostly of women. This result corroborates a

change that has been occurring in recent decades, where women have been occupying more and more space in higher education, which shows the occurrence of social transformations and a rupture around the patriarchal phenotype.

Table 3. Frequencies and percentages according to the variable sex.

Gender	Absolute	Frequency	Proportion Percentage
Females	111	0.6379	63.79%
Men	63	0.3621	36.21
Total	174	1.000	100%

Source: Research Data (2021).

As for age, the age range of the respondents varied from 18 to 50 years. The ages were grouped by classes (table 2) and, as a result, five ranges were obtained, with the highest frequency observed among students aged 18 to 24.

Table 4. Frequency and percentages according to the variable age.

Age	Absolute	Frequency	Proportion Percentage
18 - 24	98	0.5632	56,32%
25 - 31	52	0.2989	29,89%
32 - 38	14	0.0850	8,05%
39 - 43	7	0.0420	4,02%
44 - 50	3	0.0172	1,72%
Total	174	1.000	100%

Source: Research data (2021).

Furthermore, it is worth noting that the survey involved students from all periods, with the majority of respondents enrolled in the 5th to 7th periods. In view of the above, it is evident that the perceptions about the quality of services come from both veterans and freshmen. The data can be seen in table 3 below.

Table 5. Frequencies and percentages according to the variable period.

Period	Absolute	Frequency	Proportion Percentage
1°	13	0.0746	7.46%
2°	6	0.0345	3.45%
3°	14	0.0850	8.05%
4°	16	0.0920	9.20%
5°	40	0.2299	22.99%
6°	23	0.1322	13.22%
7°	26	0.1494	14.94%
8°	14	0.0850	8.05%
De-periodized	22	0.1264	12.64%
Total	174	1.000	100%

Source: Research data (2021).

Finally, the last question concerning the profile of the undergraduates sought to verify the number of subjects studied during the remote period. Thus, it was found that most students took 4 to 5 subjects, a situation that can be explained by the reduction in the number of subjects offered during the remote period (table 4).

Table 6: frequencies and percentages according to the variable number of courses taken during the remote period.

Qty. subject attended	Absolute	Frequency	Proportion Percentage
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1	7	0.0402	4.02%
2	4	0.0230	2.30%
3	14	0,0805	8.05%
4	48	0.2759	27.59%
5	45	0.2586	25.86%
6	19	0.1092	10.92%
7	15	0.0862	8.62%
8	14	0.0805	8.05%
9	5	0.0287	2.87%
More than 9	3	0.0172	1.72%
Total	174	1.000	100%

Source: Research data (2021).

After identifying the profile of the students of the Administration course at ITR/UFRRJ, the present research sought to analyze the quality of teaching in that bachelor's degree during the Covid-19 pandemic. Thus, the first dimension analyzed was tangibility, which concerns the physical elements that make up the services.

As a result, it was possible to verify that all items of the aforementioned dimension gave negative indexes and, therefore, it is noted that the students' expectations in relation to tangible aspects are not being met. In total, three items were analyzed (accessible virtual platforms, easy-to-understand teaching materials and effective electronic devices), and the undergraduates pointed out as the main critical factor the difficulty in understanding the materials that are disclosed, since this statement presented the highest Gap value (-1.46).

It is worth mentioning that teaching materials are one of the main means that facilitate the learning process and, in this case, it is pondered that the pandemic panorama caused changes in educational methodologies, directly impacting the creation of pedagogical tools in the Administration course of the ITR/UFRRJ. Furthermore, it is worth noting the assertions around accessible virtual platforms and effective electronic devices, whose Gaps values gave, respectively, -1.0867 and -0.7266.

The results show that the systems used by the professors are unsatisfactory, which exposes a difficulty in technological adaptation for the new remote period. Also, the pandemic has intensified social inequality in the course under study, given the lack of effective electronic devices to attend classes. Thus, it is evident that emergency education restricted the channels of communication and information to the virtual environment, which ended up hindering the access to a quality public education.

Table 7. Tangibility Dimension

Items	P	E	Gap
Accessible Virtual Platforms	3.8000	4.8867	-1,0867
Easy-to-read teaching materials	3.4333	4.8933	-1,46
Effective electronic devices	3.8067	4.5333	-0,7266

Source: Research data (2021).

The second dimension of the Servqual scale analyzed was reliability, which encompasses the teachers' ability to deliver the service as promised to the students. The second dimension analyzed was the ability of the professors to deliver the service as promised to the students.

After the survey, it was possible to ascertain that all items were negative and, among them, the ability to deliver the service with the least possible error stands out, whose Gap value was -1.18. This shows that teachers are committing technical failures, failures that have a direct impact on teaching performance and, consequently, on the learning process of the students.

A gap is also observed in the compliance with deadlines (-1.1617), thus demonstrating that teachers exceed the execution time of the activities that were assigned to the students. Last but not least, it is worth emphasizing the compliance with the menu, which presented a Gap value of -0.30. Although the item in question presented the smallest gap in this dimension, it is noted that there is still a negative index, i.e., the students' expectations are not being met.

Notoriously, the lack of compliance with the syllabus may have implications for future courses and, consequently, affect students due to the information that was not passed on. This situation also involves formal aspects, since the aforementioned document contains previously established procedures of the course's academic activities. Therefore, it is always possible to go beyond the expected content, however, teachers should never fall short of what was formally proposed.

Table 8. Reliability Dimension

Items	P	E	Gap
Compliance with the menu	3,8867	4,1867	-0,3000
Deadline compliance	3,6800	4,8467	-1,1667
Subjects covered in class and error-free proofreading	3,4400	4,6200	-1,1800

Source: Research data (2021).

Following the presentation of the results, the third dimension investigated was responsiveness, which models the responsiveness in providing help and informing about the procedures of the execution to quickly and promptly meet the students. Based on what was presented, it was possible to detect that, as well as the other dimensions, the indicators fall into negative traits. To this end, questions were addressed that indicate the following items: prompt service for viewing the test, willingness to help and responsiveness to the students' doubts.

Thus, it was possible to identify, through the survey, that the respondents indicated the willingness to help as the main negative point, having the highest Gap (-1, 9867) among the questions. In view of this, with the difficulties in adapting to remote teaching, it is believed that the willingness to quickly help the undergraduates should be one of the guidelines of greater attention, understanding that there is a great importance to encourage studies during an atypical time for everyone.

The remaining topics presented -0.9667 and -0.9667 of Gaps. Thus, the results presented denote dissatisfaction with the lack of assistance to the needs of students at the University presented. This shows that there was no focus on providing quality service, since there were no ombudsman processes presented to one of the main agents involved, namely the students.

Therefore, it is portrayed that online teaching has hindered the proximity of the relationship between students and teachers, making the appeals originated in pandemic moments remain in second instance due to low priority given to responsiveness in the service. Thus, it is observed a lack of availability of teachers for the prompt service to students, which ends up generating an exacerbated wait in the learning process.

Table 9. Responsiveness Dimension

Items	P	E	Gap
Ability to respond quickly to students' questions	3,8533	4,4133	-0,5600
Prompt service on proof view	2,7467	4,7333	-1,9867
Willingness to help the student	3,3667	4,8800	-1,5000

Source: Research data (2021).

Still in the analysis of the results, this time based on the fourth dimension aimed at safety, it was discussed the transmission of confidence and good didactics to improve the students' learning process during the remote period. In this bias, among those pointed out, as an effect there is the Gap of -1.50 regarding the confidence passed on to the students during teaching, and -0.40 in response to the didactics presented to them.

With the quotients exposed, it becomes perceptible that the teachers of the administration course felt insecure, without the understanding that teachers should be seen as someone who is there to offer help, guidance, teach technical issues and confidently guide the content taught. As for the didactic issue, important for the academic training of undergraduates, since it guides the varied ways of teaching and understanding the construction of teaching-learning, through methodologies that arise from the teaching process.

In a pandemic moment, teachers were faced with the challenge of providing the best experience to students, besides having to ensure what is proposed so that students are safe. In addition, we can consider that this account of the experience of the respondents corroborates the fact that it is not enough for the teacher to master the content he or she teaches, but he or she must also know how to build, together with the student, the best ways for the teaching-learning process, in an objective way and with higher academic yields.

Table 10. Security Dimension

Items	P	E	Gap
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Conveying confidence about the content taught	4,3667	4,7667	-0,4000
Adoption of an efficient didactic	3,3667	4,8667	-1,5000

Source: Research data (2021).

Finally, the last dimension verified was empathy, which was analyzed through the following items: personalized service to students, openness to listen to complaints that may have arisen during the remote learning period, the search for alternatives by teachers to improve learning, and understanding of students' specific needs.

That said, the items reached unfavorable scores for the variables addressed, where the access to express demands obtained a Gap of -1.68, falling to 1-6333 when it comes to new alternatives to improve student learning, -1.4933 when it comes to understanding individual needs, and -1.36 represents the Gap arising from the private assistance to undergraduates who participated in this research.

In this way, it can be seen that there is a solid relationship between students and teachers due to lack of fluidity and greater freedom of opinion, being one of the greatest needs of students in this dimension. Moreover, there is a lack of actions to improve the students' learning, by means of different practices seen so far and innovative at the same time.

Therefore, it is visible that the junction of teaching strategies and the concerns with the students' experiences determine the quality of the service provided which, in this case, did not reach its total excellence. In summary, offering support to students, as well as listening to their ideas, suggestions, and complaints, can result in a higher quality of the educational process. In addition, this situation values their day-to-day involvement with the activities and classes, contributing to the maintenance of the academic environment, whether in physical units or distance learning classes.

Table 11: Empathy dimension

Items	P	E	Gap
Personalized attention to students	2,5467	3,9067	-1,3600
Search for alternatives to improve learning	2,900	4,5333	-1,6333
Understanding the specific needs of the students	3,3600	4,8533	-1,4933
Openness to hear complaints	3,1667	4,8467	- 1,6800

Source: Research data (2021).

V. Conclusion

After the exploratory research of quantitative approach carried out at a Federal University in the municipality of Três Rios/RJ, it is clear from the reports of the students of the Administration course that the Covid-19 pandemic contributed to worsen the access to quality public education. Thus, it was possible to identify a precariousness in education in all dimensions of the Servqual scale, that is, in tangibility, reliability, responsiveness, security, and empathy. Among the aforementioned dimensions, empathy presented the greatest gaps in Gaps values, and thus, it is evident that the interpersonal relationship of the faculty with the student body was the factor that most contributed to affecting the quality of teaching in the prebaccalaureate.

In general parameters, students, mostly female and belonging to generation Z, face difficulties in accessing classes due to the physical tools, thus explaining that the transition from the traditional model to the remote education model brought to light a foundation around the fundamental right of any student, i.e., the right of access to classes. This fact is linked to the restriction of the new teaching method to the virtual environment, which contributed to further aggravate social inequalities in education, where students in socioeconomic vulnerability were the most affected by the pandemic's harmful effects.

It is concluded, therefore, that the pandemic scenario has led to a new emergency scenario with medium and long-term impacts in the Administration course of the University under study, whose effects go beyond the faculty, since students face difficulties in accessing technological tools. Thus, it is necessary to plan effectively for the implementation of inclusive actions in order to guarantee students the right of access to quality public education in an unprecedented scenario for mankind.

References

- [1]. ARRUDA, E. P. Educação remota emergencial: elementos para políticas públicas na educação brasileira em tempos de Covid-19. *Em Rede - Revista De Educação a Distância*, 7(1), 257-275, 2020.
- [2]. BRASIL. Lei nº 9.394, de 20 de dezembro de 1996. Estabelece as diretrizes e bases da educação nacional. *Diário Oficial da União*, Brasília, DF, v. 134, n. 248, 23 dez., seção 1, p. 27.834-27.841, 1996.
- [3]. BRASIL. Ministério da Educação. Gabinete do Ministro. Portaria nº 343, de 17 de março de 2020. Dispõe sobre a substituição das aulas presenciais por aulas em meios digitais enquanto durar a situação de pandemia do Novo Coronavírus - COVID-19. *Diário Oficial da União*, Brasília, DF, ed. 53, 18 mar., seção 01, p. 39, 2020.
- [4]. CASTIONI, R. et al. Universidades federais na pandemia da Covid-19: acesso discente à internet e ensino remoto emergencial. *Ensaio: aval. pol. públ. Educ.*, Rio de Janeiro, 2021.
- [5]. CORDEIRO, K. M. A. O impacto da pandemia na educação: a utilização da tecnologia como ferramenta de ensino. IDAAM, 2020. Disponível em: <<http://repositorio.idaam.edu.br/jspui/handle/prefix/1157>>. Acesso em: 15 fev., 2020.
- [6]. DUARTE, J. Métodos e técnicas de pesquisa em comunicação. São Paulo: Editora Atlas S.A, 2010.
- [7]. FERREIRA, C. A. L. Pesquisa Quantitativa e qualitativa: perspectivas para o campo da educação. *Revista Mosaico*, v. 8, n. 2, p. 173-182, jul./dez. 2015.
- [8]. FROES, D. F. A pandemia a SARS-CoV-2: a origem, a inevitabilidade e o que precisamos de aprender. *Revista Militar*, n. 6/7, junho/julho, pp. 583-589, 2020.
- [9]. GARVIN, D. Gerenciando a qualidade. 1ª ed. São Paulo: QualityMark, 2002.
- [10]. GIANESI, I. G. N.; CORRÊA, H. L. Administração estratégica de serviços. 2ª ed. São Paulo: Atlas, 1996.
- [11]. Google Maps. Três Rios. 2021. Disponível em: <<https://www.google.com/maps/place/Tr%C3%AAs+Rios++Piracema,+Tr%C3%AAs+Rios++State+of+Rio+de+Janeiro/data=!4m2!3m1!1s0x985f7ad65e87a5:0xa3fe7489ec5b6c1e?sa=X&ved=2ahUKewj4otj76qvvAhX6ILkGHevSA0kQ8gEwAHoECAMQAQ>>. Acesso em: 22 fev, 2021.
- [12]. HOFFMAN, K. D.; BATESON, J. E. G. Princípios de marketing de serviços: conceitos, estratégias e casos. 2. ed. São Paulo: Cengage Learning, 2008.
- [13]. IBGE. População no último censo. 2020. Disponível em: <<https://cidades.ibge.gov.br/brasil/rj/tres-rios/panorama>>. Acesso em 23 fev., 2021.
- [14]. ITR/UFRRJ. Fotos - Campus Três Rios. 2020. Disponível em: <<https://www.google.com/amp/s/itr.ufrj.br/portal/institucional/fotos/%3famp>>. Acesso em 13 fev., 2021.
- [15]. LIKERT, R. A technique for the measurement of attitudes. *Archives of Psychology*. v. 22, n. 140, p. 44-53, 1932.
- [16]. LOVELOCK, C.; WIRTZ, J. Marketing de serviços: pessoas, tecnologia e resultados. 5. ed. São Paulo: Pearson Prentice Hall, 2006.
- [17]. MALHOTRA, N. K. Pesquisa de Marketing. 3ª ed. São Paulo: Editora Bookman, 2001.
- [18]. MANCUSO, A. C. B. et al. Estatística descritiva: perguntas que você sempre quis fazer, mas nunca teve coragem. *Clin Biomed Res*, 38(4), 2018.
- [19]. MELLO, S. C. B; DUTRA, H. F. O.; OLIVEIRA, P. A. S. Qualidade percebida no serviço educacional: a avaliação do corpo discente. *Revista Humanae, Vip*, p. 1-15. 2000.
- [20]. PARASURAMAN, A.; BERRY, L. L.; ZEITHAML, V. A. SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*, 64(1), p.12-40, spring. 1988.
- [21]. PRADO, J. S. et al. As estratégias de marketing de serviços e a prática dos 4 Ps. Paraná: FATEB, p. 68-94, 2017.
- [22]. TOFOLI, E. T. Gestão da qualidade em serviços: a busca por um diferencial pelas empresas de pequeno porte do setor supermercadista da região noroeste paulista. *Revista GEPROS*, vol. 4, jul-set/07, p. 139-150, 2007.
- [23]. TUCCI, V. et. al. The forgotten plague: psychiatric manifestations of ebola, zika, and emerging infectious diseases. *Philadelphia: J Glob Infect Dis.*, 9:151-6, 2017.
- [24]. VERGARA, S. C. Projetos e Relatórios de Pesquisa em Administração. São Paulo: Atlas, 1998.
- [25]. ZEITHAML, V. A.; BITNER, M. J.; GREMLER, D. D.. Marketing de Serviços: A Empresa com Foco no Cliente. São Paulo: AMGH Editora, 2014.