



Atena  
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Integrated Practices of Teaching,  
Research and University Extension

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Patrícia Brianne da Costa Penha  
Gabriella Lucena Feitosa  
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# Professional voice: integrated practices of teaching, research and university extension

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## PREFACE

Maria Fabiana Bonfim de Lima-Silva

This e-book is a collection of experiences from my insertion, in 2011, as a professor in the Department of Speech Therapy at the Federal University of Paraíba (UFPB). Upon joining this institution, I developed an extension project called the Voice Advisory Program for Teachers (ASSEVOX), based on the knowledge I gained during the period in which I took my master's and doctorate, at the Pontifical Catholic University of São Paulo (PUC-SP), under the guidance of the Professor Dr. Leslie Piccolotto Ferreira and Prof. Dr. Zuleica Camargo.

So, in the following year, with the desire that extension students could experience the reality of professors through practical experiences that went beyond the walls of the university, I submitted ASSEVOX to the UFPB 2012 Probex Notice, but unfortunately we did not receive the scholarship. Even so, with a pioneering group of six students, we started our actions through a Fluex project (Project only with volunteer students) in a private school with the objective of promoting vocal health for teachers and the school community. I remember that we went through several challenges, because the room that the school gave us for collection was not a clean, pleasant environment, however, we did not get discouraged and cleaned, painted the walls and renovated the entire room. Shortly after the renovation, we started our vocal health assessments and workshops. I remember to this day that many teachers were surprised by our act of cleaning the room, as no one had ever done anything to improve that room, and they said: "*It was an abandoned room*"; "...it was a real storage room for the school, now there is another room, well *organized and clean*".

It is worth noting that in the first meeting with the director of this school, it was emphasized that we would carry out vocal assessments of the teachers, but that after these procedures, the teachers participating in the project would receive the reports with the diagnosis and then participate in voice experience workshops with content theoretical and practical, within the school. In addition, our team inserted vocal health actions in the school calendar events (student day, teacher's day, family day, among others).

Then, in 2013, we took an important step towards ASSEVOX, we managed to get the project approved with a grant in the Probex 2013 Notice, and we entered into a partnership with the Department of Education and Culture of João Pessoa (SEDEC-JP). Thus, between 2012 and 2019, with the support of the Edital Probex and Fluex (UFPB), more than 60 extension workers participated in our project, from undergraduate, graduate and other courses (Psychology, Physiotherapy, among others). Currently, ASSEVOX has managed to cover 15 schools in the public and private network, including kindergarten, elementary and

high school. In addition, during these seven years, in person, we carried out an average of 420 vocal screenings, 44 voice experience workshops and 21 lectures. In the last lecture, held in 2019, we were invited by SEDEC-JP to talk about the importance of voice in teaching work and handling voice amplifiers, in which my doctoral student Patrícia Penha and I presented relevant data from the research developed by ASSEVOX and strategies correct handling of microphones (voice amplifiers). It is worth noting that more than 500 amplifiers were delivered to the teachers participating in this event.

Such actions carried out during this period, yielded us several products, including participation in local, regional and national events (congresses, seminars, meetings), 10 publications of scientific articles in national and international journals, 14 book chapters, 73 complete, expanded abstracts and annals, 21 course conclusion works, 31 scientific initiation works, 5 dissertations, among others.

However, in the first months of 2020, we were surprised by the onset of the SARS-CoV-2 pandemic, a rapidly spreading respiratory syndrome. Since then, several measures by the World Health Organization (WHO) have been taken to prevent the spread of this virus, including social distancing. This fact brought as the main impact to the ASSEVOX project the impossibility of carrying out the actions (workshops, screening and attendance) in person. As a result of these various changes, the project had to reinvent itself and adapt to the new reality, using digital platforms to continue developing its activities and contributing, more than ever, to society and the academic community. In addition, the project, which was previously aimed only at teachers, expanded its target audience to all voice professionals (teachers, telemarketers, digital influencers, actors, singers, telejournalists and others) and thus came to be called Vocal Advisory Program for Voice Professionals (ASSEVOX).

According to this new appearance, ASSEVOX showed itself to have solid foundations and an excellent potential to adapt to new situations. In this period, we idealized to make our *Instagram* profile a digital magazine, containing information accessible to voice professionals and the entire community. Through meetings, we create content, develop means of interaction and broaden our view of the most diverse forms of health promotion. With this, we continue with our scientific initiation projects, discuss book chapters, participate in open classes and regional events, publish scientific articles and, above all, drive our dreams!

Currently, we had the project "Analysis of the effects of a distance vocal health program for teachers in the state of Paraíba" approved in the Universal Demand Notice n° 09/2021, promoted by the Foundation for Research Support of the State of Paraíba (FAPESQ), which brings unprecedented insofar as there are no other proposals in force in the state with the purpose of assisting and supporting the essential professional for the development of our society, such as the teacher. issues related to the health and quality of life of several educators in the state, especially those who do not have the financial possibilities or conditions to be accompanied by a professional speech therapist.

This *e-book* is part of a beautiful journey full of challenges. A path traveled with dedication, responsibility and union. Therefore, we invite you, the reader, to know a little more about the work performed by the ASSEVOX group over these 10 years.

I wish you a good read and that this work is an inspiration for all those who wish to tread the paths of university extension, teaching and research.

## PRESENTATION

This *e-book* entitled “**Professional Voice: Integrated Teaching, Research and University Extension Practices**” is the result of an extension project called “Vocal Advisory Program for Voice Professionals” (ASSEVOX), which has been developed since the year of 2012 with the support of the public notice for the Extension Scholarship Program (PROBEX) of the Federal University of Paraíba (UFPB), whose main objective is to promote vocal health and prevent voice disorders in the most diverse professionals who depend on it to perform their work.

In this work, 14 chapters were gathered that explain from the experience of students and teachers who participated in the voice advisory program, to themes related to the prevention of voice disorders, vocal health promotion and around expressiveness. In them, there are studies about teachers, telemarketers, telejournalists and digital influencers. The purpose of this e-book is to expand the knowledge of undergraduate, graduate and Speech-Language Pathology professionals, as well as all those interested in studying voice professionals. In addition, we hope to encourage and drive the development of research through the vision and experiences of a university extension.

It is important to highlight that this work is composed of results of scientific initiation research and experiences around the ASSEVOX university extension. The chapters were prepared by students (undergraduate and graduate students) and by professional researchers from UFPB and other institutions (UNIPÊe PUC-SP) who, in a responsible and qualified way, proposed to explain their studies with current and relevant themes for the scientific community and society as a whole.

We wish you a great read!

Maria Fabiana Bonfim de Lima-Silva  
Aline Menezes Guedes Dias de Araújo  
Patrícia Brianne da Costa Penha  
Gabriella Lucena Feitosa  
Mayra Hadassa Ferreira Silva

## SUMÁRIO

### **CAPÍTULO 1..... 1**

EXPERIENCES OF EXTENSIONISTS PART OF A VOCAL ADVISORY PROGRAM FOR VOICE PROFESSIONALS - ASSEVOX


Lorena Sampaio Duarte  
Giulia Alfredo Moreira  
Maria Paloma Costa Carvalho  
Eduardo Lucas Sousa Enéas

 <https://doi.org/10.22533/at.ed.6192230051>

### **CAPÍTULO 2..... 11**

ASSEVOX THAT MADE SENSE: EXPERIENCE REPORTS FROM PUBLIC SCHOOL TEACHERS IN JOÃO PESSOA, PB


Adriana Carla de Sousa Turczinski  
Viviane Maria da Silva  
Iago Victor Amorim Teixeira  
Eduardo Lucas Sousa Enéas

 <https://doi.org/10.22533/at.ed.6192230052>

### **CAPÍTULO 3..... 20**

SELF-PERCEPTION OF THE EXPRESSIVITY OF THE TEACHER OF EARLY CHILDHOOD EDUCATION IN REMOTE EDUCATION


Mayra Hadassa Ferreira Silva  
Gabriella Lucena Feitosa  
Cícera Geangela Alves Félix  
Rebecka Victoria Ferreira de Sousa  
Danilo Augusto de Holanda Ferreira  
Patrícia Brianne da Costa Penha

 <https://doi.org/10.22533/at.ed.6192230053>

### **CAPÍTULO 4..... 29**

WORK AND VOICE CONDITIONS OF ELEMENTARY EDUCATION TEACHERS IN THE REMOTE CONTEXT

Rebecka Victória Ferreira de Sousa  
Patrícia Brianne da Costa Penha  
Clara Horrana Amaral Santos  
Gabriella Lucena Feitosa  
Mayra Hadassa Ferreira Silva  
Danilo Augusto de Holanda Ferreira

 <https://doi.org/10.22533/at.ed.6192230054>

### **CAPÍTULO 5..... 38**

WORKING CONDITIONS AND SELF-PERCEPTION OF VOICE AND EXPRESSIVENESS

## OF HIGHER EDUCATION TEACHERS IN THE REMOTE CONTEXT


Gabriella Lucena Feitosa  
Patrícia Brianne da Costa Penha  
Mayra Hadassa Ferreira Silva  
Rebecka Victória Ferreira de Sousa  
Danilo Augusto de Holanda Ferreira  
Maria Fabiana Bonfim de Lima-Silva

 <https://doi.org/10.22533/at.ed.6192230055>

### **CAPÍTULO 6..... 47**

#### **RELATIONSHIP BETWEEN VOCAL USE AND SELF-REPORTED BODILY PAIN BY TEACHERS**


Tháise Sara Costa Dias  
Pâmela Pontes dos Santos  
Soeme Ferreira dos Santos  
Patrícia Brianne da Costa Penha

 <https://doi.org/10.22533/at.ed.6192230056>

### **CAPÍTULO 7..... 56**

#### **PERCEPTUAL ASPECTS OF THE SPEECH EXPRESSIVITY OF TELEOPERATORS IN AN EMERGENCY CALL CENTER**


MaryelleThayane Lins da Silva  
Bárbara Tayná Santos Eugênio da Silva Dantas  
Ana Beatriz Santana de Morais  
Cláudio da Cruz Santos  
Giulia Alfredo Moreira  
Aline Menezes Guedes Dias de Araújo

 <https://doi.org/10.22533/at.ed.6192230057>

### **CAPÍTULO 8..... 65**

#### **RELATIONSHIP BETWEEN PERCEPTUAL PARAMETERS AND THE PLEASANTNESS OF THE VOICE OF TELEMARKETERS AT AN EMERGENCY CALL CENTER**

Stherfanny Maia Evangelista de Lima  
Bárbara Tayná Santos Eugênio da Silva Dantas  
Helmana de Macêdo Nunes  
Débora Nayara do Vale Morais  
Aline Menezes Guedes Dias de Araújo  
Maria Fabiana Bonfim de Lima-Silva


 <https://doi.org/10.22533/at.ed.6192230058>

### **CAPÍTULO 9..... 73**

#### **ASPECTS OF QUALITY AND VOCAL DYNAMICS OF TELEOPERATORS OF AN EMERGENCY CALL CENTER**

Maria Luiza Cruz Leite Lira  
Bárbara Tayná Santos Eugênio da Silva Dantas


Cláudio da Cruz Santos  
Aline Menezes Guedes Dias de Araújo

 <https://doi.org/10.22533/at.ed.6192230059>

**CAPÍTULO 10..... 82**

RELATIONSHIP BETWEEN COVID-19 SYMPTOMS AND VOICE QUALITY OF LIFE AMONG TELEOPERATORS IN AN EMERGENCY CALL CENTER


Ana Beatriz Santana de Morais  
Bárbara Tayná Santos Eugênio da Silva Dantas  
Cláudio da Cruz Santos  
Aline Menezes Guedes Dias de Araújo  
Larissa Nadjara Alves Almeida  
Millena Irley Batista da Silva  
Maria Fabiana Bonfim de Lima-Silva

 <https://doi.org/10.22533/at.ed.61922300510>

**CAPÍTULO 11..... 90**

RELATIONSHIP BETWEEN VOCAL AND STRESS SYMPTOMS IN EMERGENCY TELEOPERATORS


Soeme Ferreira dos Santos  
Gabriela Lucena Feitosa  
Camila Macêdo Araújo de Medeiros  
Tháise Sara Costa Dias  
Valdízia Domingos da Silva  
Patrícia Brianne da Costa Penha

 <https://doi.org/10.22533/at.ed.61922300511>

**CAPÍTULO 12..... 99**

EFFECTS OF A VOICE ADVISORY PROGRAM FOR POLICE EMERGENCY TELEOPERATORS


Vanderssom Correia Lima  
Eduardo Lucas Sousa Enéas  
Maria Fabiana Bonfim de Lima-Silva

 <https://doi.org/10.22533/at.ed.61922300512>

**CAPÍTULO 13..... 107**

PHONETIC VARIATION OF THE REGIONAL ACCENT IN TELEJORNAL PRESENTERS: AN EVALUATION THROUGH VOCAL PROFILE ANALYSIS SCHEME

Wégina Jordana da Silva  
Ewelin Maria Lemos Fernandes  
Telma Dias dos Santos  
Maria Fabiana Bonfim de Lima-Silva

 <https://doi.org/10.22533/at.ed.61922300513>

**CAPÍTULO 14..... 117**

**DIGITAL INFLUENCERS: ANALYSIS OF EXPRESSIVENESS AND THE CONTRIBUTION OF COMMUNICATION TO THE CONSUMER MARKET IN THE CITY OF JOÃO PESSOA**

Ana Carla Cardoso Guedes Moreira

Hionara Nascimento Barboza

Laurinda Soares da Franca Pereira

Weidinara de Oliveira Rodrigues da Fonseca

Telma Dias dos Santos

Maria Fabiana Bonfim de Lima-Silva

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**AUTHORS ..... 126**



## WORKING CONDITIONS AND SELF-PERCEPTION OF VOICE AND EXPRESSIVENESS OF HIGHER EDUCATION TEACHERS IN THE REMOTE CONTEXT

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**ABSTRACT:** Teacher communication involves voice, speech and body, so any change or imbalance in communication resources can affect the performance of their work. In view of the SARS-CoV-2, the adaptation of environments, the increase in the workload and the presence of noise can be factors that impact the work performance of the teacher. **Objective:** To verify

the working conditions and self-perception of voice and expressiveness of higher education teachers in the remote context. **Methods:** Observational, descriptive, cross-sectional, quantitative study. Approved by the Ethics Committee for Research with Human Beings, under CAAE: 10719513.5.0000.5188. 55 professors from higher education, working in remote education, participated. Data were obtained through an online questionnaire containing 47 questions. The propagation of the access link to the questionnaire occurred through social networks. **Results:** It was observed that the work conditions increased workload and the presence of stress in the remote context. Regarding vocal self-perception, it was found that most professors like their voice, consider it pleasant and with adequate intensity, although they expose it at high volume. Regarding expressiveness, it was analyzed that teachers characterize their speech speed as adequate, precise articulation, and that they make use of body and facial expressions. **Conclusion:** It was found that in the remote context, teachers had an increase in workload, as well as the presence of stress. As for the self-perception vocal and expressiveness, it was observed that participants are satisfied with their voice and use facial and body expressive resources during their classes. **KEYWORDS:** Working Conditions, Faculty, Education, Distance, Voice.

## 1 | INTRODUCTION

The teacher is a professional who has the voice as his main work tool. When it comes to occupation, they are considered the most susceptible to the development of voice disorders due to the multiple factors present in their work context (PENHA, 2019).

Regarding the higher education teacher, De Souza Neme and Limongi (2020), conducted a systematic review where they observed that the sickness of university professors happens mainly due to the overload of activities. In addition, it was found that internal and external noise can be considered risk factors for the health of these professionals, affecting their performance in the educational environment.

However, teachers' communication involves voice, speech, and body issues, and depends on how the content is disseminated. And considering the communicative profile of these professionals, it is understood that any vocal alteration or imbalance in communication resources may affect the performance of their work (DE AZEVEDO et al., 2014).

The study by Correira and Servilha (2013) also conducted with university teachers, indicated that they evaluate their professional environment in a more positive way when related to teachers from other levels of education, however, negative points are still highlighted, such as inadequate temperature, issues of tension and stress.

Faced with the SARS-CoV-2 pandemic, several countries have established countermeasures to reduce the spread of the disease, including social distancing. This is a resource that limits contact between infected and non-infected people, contributing to the reduction in the speed of the virus spread (BRAZIL, 2020).

In Brazil, the Ministry of Health has regulated isolation criteria implemented throughout the national territory and, in view of this, several sectors have migrated their work modality to remote. For teachers, remote teaching has become one of the main resources to continue the work exercise, which is often developed at home (BRAZIL, 2020).

The exercise of teaching in the remote context may result in the adaptation of environments, increased workload, presence of external and internal noise, as well as difficulties for the performance of this new teaching modality, considering that teachers in large part, have not received any kind of training (OLIVEIRA; JUNIOR, 2020).

Reflecting on these factors, the following guiding question arose: does remote teaching favor implications for the communicative and work performance of higher education teachers? Given this, this study aims to verify the working conditions and self-perception of the voice and expressiveness of higher education teachers in the remote context.

## 2 | METHODS

This is an observational, descriptive, cross-sectional, quantitative study. It was approved by the Ethics Committee on Human Research of the institution of origin on May 27, 2021, under process number 091/13, CAAE: 10719513.5.0000.5188.

A total of 55 teachers who work in the public and private education network in Brazil participated in this research. As inclusion criteria, the following were established: teachers of both genders, working in higher education, who were teaching in remote education and who signed the Informed Consent Form (ICF) as per Resolution MS/CNS/CNEP n° 466/12 of December 12, 2012.

Initially, the form presented the TCLE, being in accordance with the recommendations of the National Research Ethics Committee (CONEP), in which the participant could only proceed to the completion of the questions after their acceptance.

To carry out the study an online questionnaire was created through Google Forms, containing 4 sections and 47 questions covering issues related to sociodemographic characteristics, professional performance, synchronous and asynchronous daily workload, working conditions in the remote context, as well as self-perception of communicative and expressive aspects. The dissemination of the link to access the online questionnaire began through WhatsApp and then Instagram.

The data were tabulated and analyzed using descriptive and inferential statistics in the software Statistical Package for Social Sciences (SPSS, v. 20, IBM, Chicago, IL). Descriptive analysis was performed using measures of central tendency, measures of dispersion, and frequency analysis of the study data. Some data were analyzed by inferential statistics, applying statistical test to verify hypotheses of association through the chi-square test ( $\chi^2$ ) considering significance level of 5%.

## 3 | RESULTS AND DISCUSSION

Research around the teacher's voice is often developed, considering that this professional presents high rates of voice disorders (PENHA, 2019). However, in the face of the pandemic scenario of SARS-CoV-2, it is observed that there are no studies in the literature about the expressiveness and working conditions of teachers in remote education. Thus, the present study sought to verify the working conditions and the self-perception of the voice and expressiveness of higher education teachers in the remote context.

In agreement with other studies about the voice of teachers, this study verified the predominance of the female gender, being 70.90% (n=39), which can be explained by historical and cultural issues, where teaching has become a professional career more exercised by women (PENHA et al., 2019; SANTOS; ESPINOSA; MARCONI, 2020).

As for the daily workload of the participating teachers, it was observed that most of them work 8 hours or more per day, corresponding to 43.60% (n=24) of the sample. However, these findings may be related to the performance of synchronous and asynchronous classes and moments for elaboration of content and activities, in addition to the performance of teachers in more than one institution, showing a high workload and, consequently, greater demands in voice and expressiveness (DE SOUZA NEME; LIMONGI, 2020).

<b>Variablel</b>	<b>n</b>	<b>%</b>
<b>Current Work Environment</b>		
The environment is quiet	17	30,90
There is noise, but it is not constant and does not bother me	32	58,20
There is noise, it is constant and it hinders my activities	6	10,90
<b>Total</b>	<b>55</b>	<b>100</b>

Table 1 - Characterization of the sample regarding the work environment in the face of the HIV pandemic SARS-CoV-2. João Pessoa, 2021.

Source: survey data, 2021.

Noise is one of the harmful agents to vocal health, which is most often reported by teachers (DE SOUZA NEME; LIMONGI, 2020). In classroom teaching, studies show that noise is evidenced as one of the main complaints of teachers (SILVA, 2021). However, among the findings of this study, presented in Table 1, it was found that 58.20% (n=32) characterized that in their work environment in the remote context there is noise, but it is not constant and does not disturb, while 30.90% (n=17) indicated their work environment as quiet and 10.90% (n=6) pointed out that there is noise, it is constant and hinders the performance of activities. Therefore, it is understood that most professionals do not live with this factor, and this may go against the realization of adaptations in their work environment because of remote learning.

<b>Variable</b>	<b>n</b>	<b>%</b>
<b>Have you adapted environments?</b>		
Yes	42	76,40
No	13	23,60
<b>Total</b>	<b>55</b>	<b>100</b>

Table 2 - Characterization of the sample regarding adaptations made at home by teachers in the face of the HIV pandemic SARS-CoV-2. João Pessoa, 2021.

Source: survey data, 2021.

To give continuity to the exercise of their function, being in the remote context, 76.40% (n=42) of the teachers made adaptations in their homes, as observed in table 2. Such changes may have been made due to the need for a comfortable and reserved environment from the other rooms. This information is important, since most of the teachers report a heavy workload and, consequently, this is an environment where they spend most of their time. In addition, environmental modifications can help curb situations of imbalance in the physical health of these professionals, as well as triggers of stress (FERNANDES; VANDENBERGUE, 2018).

Variable	Yes %	No %	Sometimes %	Total %
<b>Rhythm of work</b>				
Before the pandemic, was the pace of work stressful?	49,10	16,40	34,50	100
In the face of the pandemic, is the pace of work stressful?	65,50	16,40	18,20	100

Table 3 - Characterization of the sample regarding the rhythm of work before and after the pandemic SARS-CoV-2. João Pessoa, 2021.

Source: survey data, 2021.

The unfavorable conditions in the educational environment are considered relevant to the favoring of stress in teachers (FERNANDES; VANDENBERGUE, 2018). According to the findings of table 3 it was observed that 49.10% (n=27) considered that the pace of work was stressful before the pandemic, 34.50% (n=19) indicated that sometimes, and 16.40% (n=9) did not consider it stressful. Before SARS-CoV-2, 65.50% (n=36) of the teachers pointed out the presence of stress in the rhythm of their work. Thus, it is understood that there was an increase in the number of teachers who consider the pace of work stressful. These results may be related to the fact that teachers are socially isolated, with the existence of concerns about socioeconomic uncertainties, with the fear of contamination by Covid-19 and with the new adaptations to technology (OLIVEIRA; JUNIOR, 2020). It can also be considered that 70.90% (n=39) of the teachers in the research are female, and culturally, it is understood that women are more susceptible to the accumulation of activities in their homes (PENHA, 2019).

Variable	n	%
<b>Do you like your voice?</b>		
Yes	45	81,80
No	10	18,20
<b>How would you rate your voice?</b>		
Pleasant	31	56,40
Unpleasant	2	3,60
Never thought about it	22	40,00
<b>How would you define the volume of your voice?</b>		
High	27	49,10
Appropriate	24	43,60
Low	4	7,30
<b>How do you define the intensity of your voice?</b>		
Strong	22	40,00
Adequate	29	52,70
Weak	4	7,30

Table 4 - Characterization of the sample regarding vocal self-perception. João Pessoa, 2021.

Source: survey data, 2021.

Self-perception is considered subjective, however, it is a resource widely used to understand the sensitivity of the subject about his voice, knowing that greater awareness and vocal knowledge are relevant to identify signs and symptoms of a possible illness (PAULA, 2019).

In view of this, information about the teachers' vocal self-perception, exposed in table 4 points out that, of the 55 study participants, 81.80% (n=45) like their voice and 53.40% (n=31) classify it as pleasant. This factor may be related to the time of professional use of the voice, making teachers more adapted to their vocal characteristics. Therefore, it appears that teachers were satisfied with their voices, and that these may be meeting their personal and professional demands (ANHAIA et al., 2015).

Regarding the self-perception of voice volume 49.10% (n=27) of teachers consider it as high, and this finding may be evidenced due to personality issues. As for vocal intensity, it was analyzed that 52.70% (n=29) perceived it as adequate. This is in accordance with the literature, because this resource is often used to get the student's attention (SERVILHA; DA SILVA MONTEIRO, 2007). In the remote context it is not so attractive, since the interaction usually happens through chats and in moments after the lecture class.

Variable	n	%
<b>How do you define your speaking speed?</b>		
Fast	24	43,60
Appropriate	30	54,50
Slow	1	1,80
<b>How do you define your speaking articulation?</b>		
Precise	44	80,00
Imprecise	19	18,20
Exaggerated	1	1,80
<b>Do you use body expressions in your classes?</b>		
Never	8	14,50
Rarely	3	5,50
Sometimes	16	29,10
Always	27	49,10
Don't know	1	1,80
<b>Do you use facial expressions in your classes?</b>		
Rarely	3	5,50
Sometimes	15	27,30
Always	36	65,50
Don't know	1	1,80

Table 5 - Characterization of the sample regarding the self-perception of expressiveness. João Pessoa, 2021.

Source: survey data, 2021.

Table 5 shows that 54.50% (n=30) of the teachers considered their speech rate to be adequate. As for the articulation of speech, 80.00% (n=44) of teachers characterized it as accurate, and this is an interesting finding, because the articulatory accuracy assists in understanding the message and consequently in the communicative performance of the teacher (ROMANO et al., 2011). With regard to body expressions 49.10% (n=27) of these said they always use, and data on the use of facial expressions identified that 65.50% (n=36) of participants ensure always employ this attribute during classes. The data, therefore, prove to be positive since the use of expressive resources is relevant to classroom management (ROMANO et al., 2011; DE AZEVEDO et al., 2014).

It was possible to observe that the fact that students asked the teacher to repeat the content taught was not related to the self-perception of the teacher regarding the volume of his voice (p=0.966) or intensity of it (p=0.991), nor to the speed of speech (p=0.936). Other reasons not related to the vocal dynamics of the professor could explain this type of request by the student, such as, for example, the complexity of the content being taught or even the discontinuity of the audio in the synchronous class due to internet connection problems.

Variable	n	%
<b>Have you received training on voice and/or expressiveness?</b>		
Yes	16	29,10
No	39	70,90
Total	55	100

Table 6 - Characterization of the sample regarding participation in voice and/or expressiveness training. João Pessoa, 2021.

Source: survey data, 2021.

When asked about participation in programs or training on voice and/or expressiveness, 70.90% (n=39) indicated that they did not receive any kind of guidance, as shown in table 6. These data reflect the few actions to raise awareness and offer knowledge about important aspects for the communicative performance of these professionals, from academic training to teaching practice (PENHA, 2019).

Given the data found throughout the research, it can be seen that, as in the face-to-face, the remote context can provide higher education teachers with several factors that can culminate in voice illness and harm their communicative performance. Among these factors, there is greater evidence of the presence of stress and the high workload.

Considering the unexpected context of remote teaching due to the SARS-CoV-2 pandemic, the research proved to be relevant, since it is a theme that is little found in the literature. Through the findings, we observed the importance of new studies that seek to understand the remote work context of higher education teachers, as well as the relevance of offering training and guidance that can encourage and help them to create a favorable environment for their work. Developing also, new knowledge in voice and expressiveness in order to make them aware of such important aspects in the execution of their work functions.

## 4 | CONCLUSION

From the results, it was observed in terms of working conditions, higher education teachers reported an increase in the workload, as well as the presence of stress in the new work context. Regarding vocal self-perception, they indicated that they like their voice, consider it pleasant and with adequate intensity, although most teachers characterize it with a high volume. Regarding the self-perception of expressiveness, it was identified that the participants characterize their speech rate as adequate, precise articulation and that they make use of facial and body expressions during their classes.



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