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Student experience with remote teaching during the SARS-COV-2 pandemic in a university center

ARTICLE

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Abstract
The COVID-19 pandemic promoted the need for social distancing, which, in turn, forced educational institutions to adopt technologies that allowed the continuation of face-to-face studies, in a safer way, in the remote modality. The adaptation to this format had to be fast. Thus, this study aimed to understand the perception of students from a university center in the rural area of São Paulo. The participants were invited by email to answer a self-administered online questionnaire about their experience during the adoption of this emergency measure by institution. This questionnaire included objective questions involves, for example, the perception of their skills in using virtual platforms and impact on mental health and academic performance. In a qualitative way, questions were raised about benefits and challenges of implementing remote teaching. Varied perceptions were found, indicating that there were benefits in the implementation of the virtual modality, but also that there were points to be improved.
Keywords: Social Distancing. University education. Digital technologies.

Experiência discente com o ensino remoto na pandemia por SARS-COV-2 em um centro universitário

Resumo
A pandemia de COVID-19 promoveu a necessidade de distanciamento social, que, por sua vez, obrigou as instituições de ensino a adotarem tecnologias que permitiram a continuação dos estudos presenciais de maneira mais segura, na modalidade remota. A adaptação para esse formato precisou ser rápida. Assim, este estudo visou compreender a percepção de estudantes de um centro universitário do interior paulista nesse novo cenário de aprendizagem. Os participantes foram convidados por e-mail a responder um questionário autoaplicável on-line sobre a experiência vivida durante a adoção desta medida emergencial pela instituição. Esse formulário contou com perguntas objetivas

envolvendo, por exemplo, a percepção sobre suas habilidades no uso das plataformas virtuais e o impacto na saúde mental e desempenho acadêmico. Ademais, de forma qualitativa, interrogou-se sobre benefícios e desafios da implementação do ensino remoto. Encontraram-se percepções variadas, indicando que houve benefícios na implementação da modalidade virtual, mas também que houve pontos a serem melhorados.
Palavras-chave: Distanciamento social. Ensino superior. Tecnologias digitais.

1 Introduction

The SARS-COV-2 pandemic, declared in 2020, has impacted the routine of the world's population. To reduce the spread of the virus, educational institutions have reinvented themselves, using information and communication technologies to implement online methods to maintain their activities, either synchronously (when communication takes place at the same time, such as web conferences) or asynchronously (when it is not simultaneous, such as forums and videotaped classes) (Arruda; Siqueira, 2021).

At the same time as remote learning has allowed academic progress to continue, it has also highlighted the limitations of technology-mediated learning (Oliveira; Pontes, 2022). This is due to problems related to knowledge about the resources available, gaps in teacher training for virtual dynamics and the adaptation of teaching methodologies to the new format (Araújo *et al*., 2021). Social changes such as the Internet, globalization and cyberculture have long indicated a technological influence on the educational scenario (Lima; Silva, 2022), and the pandemic situation has intensified this process.

The insertion of technologies in education is not new; even before the pandemic, these technologies that enable virtual teaching were already being used, albeit optionally and to a lesser extent. Initially, these technologies allowed people who needed to study, but were unable to access a face-to-face course, to continue academically (Medeiros, 2021). However, the context of using these digital resources exclusively to reduce contamination by the COVID-19 virus has required students and teachers to adapt to this new model (Neves *et al*., 2021). In addition, it must be remembered that Internet conditions and technological resources are not homogeneous throughout Brazil. Therefore, not all

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teachers and students have all the necessary conditions to carry out activities digitally (Medeiros, 2021).

The concern to investigate the consequences of teaching during the pandemic has generated several publications. In a survey of the state of the art of emergency remote teaching in Brazil, Neves, Assis and Sabino (2021) analyzed 16 publications, 9 of which were related to pedagogical practices in the health area. It should be noted that the concern to understand the repercussions on education has motivated research involving all levels of education: infant, primary, secondary and higher education (Souza *et al*., 2021; Gonçalves, Britto, 2020; Faria *et al*., 2022; Moraes *et al*., 2022).

Thus, as Lima and Silva (2022) point out, in this context of the pandemic, it is important for institutions to assess students' perceptions of the proposed methodologies, with a view to improving teaching-learning methods. Considering the importance of this diagnosis and the gaps that still exist on the repercussions of remote teaching on university students who were inserted in a teaching model based on physical contact and face-to-face interaction, this study aimed to understand the perception of students at a university center about the change from face-to-face to virtual teaching and the repercussions of this experience during the pandemic period.

2 Methodology

This is a cross-sectional, exploratory field study with a quantitative and qualitative approach, carried out at a private, non-profit university located in the rural area of the state of São Paulo. The institution analyzed has the following higher education courses: administration, computer science, accounting, graphic design, law, production engineering, human resources management, management processes, advertising and information systems. Students from all the courses were invited by e-mail to take part in the survey, using a self-administered virtual questionnaire created in Google Forms®. The questionnaire was sent out six to eight months after the institution had implemented virtual teaching.

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The inclusion criteria for sending the e-mail inviting them to take part in the survey were: 1) being a higher education student enrolled at the institution at the time of the questionnaire; 2) being at least in their second term, so that it would be possible to compare their experience of face-to-face teaching with virtual teaching.

The questions initially involved characterizing the participants, collecting the following data: gender, age, course and semester enrolled. Next, the questions were aimed at understanding student experiences with the migration from face-to-face to remote teaching. The questions varied in structure.

In order to assess the students' ability to use digital resources, both when the new teaching model was first implemented and at the time of data collection, we opted for a scale graded from 1 to 5, with 1 indicating little ability and 5 indicating a lot of ability. The scores were grouped into three groups: 1 and 2 as low ability, 3 as medium and 4 and 5 as high ability.

In addition, a graded scale from 0 to 5 was used to measure the degree of difficulty in participating in online academic activities, with 0 corresponding to no difficulty and 5 to a lot of difficulty. Once again, we opted for the strategy of grouping the scores, with 0 being considered no difficulty, 1 and 2 as little difficulty, 3 as medium, and 4 and 5 as high.

Next, the challenges that remote learning brought were investigated. For this question, the following options were given: 1) Greater tiredness due to the greater use of technological equipment; 2) Scarce time due to the accumulation of tasks; 3) Increased time in work activities, extending beyond the scheduled workload; 4) Lack of collaboration from family members; 5) No difficulties. In addition to the options, a space was provided in which the participant could express other difficulties that were not covered by the options given.

The study was approved by the Research Ethics Committee under protocol number 4.450.207 and all participants agreed to the Free and Informed Consent Form, which was provided along with the questionnaire.

The quantitative data was tabulated and analyzed using Microsoft Excel ® 2019 software. The age item was analyzed using the mean and standard deviation, while the other quantitative topics were analyzed using absolute and relative frequency.

As for the qualitative data, we read all the questionnaires and identified the central ideas in the students' discourse, which were then organized into categories representing the main advantages and disadvantages pointed out by the participants in relation to the teaching method adopted during the period of social isolation. The justification for this approach is to value the subjective perceptions of each participant's reality (Batista *et al*., 2021), presenting topics that were not previously covered in their entirety in the objective questioning.

3 Results and Discussion

214 students took part, of whom 108 (50.5%) declared themselves to be female, 104 (48.6%) male and 2 (0.9%) non-binary. The average age was 21, with a standard deviation of 5.65. Table 1 shows the distribution of students according to their degree course.

Table 1. Distribution of students according to their undergraduate course by absolute and relative frequency.

Course	Absolute Frequency	Relative Frequency
Business Administration	9	4,2%
Computer Science	30	14%
Accounting	17	7,9%
Graphic Design	10	4,7%
Law	105	49,1%
Production Engineering	12	5,6%
Human Resources Management	2	0,9%
Management Processes	2	0,9%
Advertising	2	0,9%
Information Systems	25	11,7%
Total	214	100%

Source: author. Year: 2024.

Most of the participants were in their fourth or sixth year (Table 2), had no previous experience with the virtual platforms that provided the synchronous remote activities (84.1%), accessed them exclusively from home (71.2%), and did not feel uncomfortable about privacy (82.7%).

Table 2. Distribution of students according to semester of graduation by absolute and relative frequency.

Semester	Absolute Frequency	Relative Frequency
Second	26	12,1%
Third	2	0,9%
Fourth	68	31,8%
Sixth	57	26,6%
Seventh	1	0,5%
Eighth	37	17,3%
Tenth	23	10,7%
Total	214	100%

Source: author. Year: 2024.

The student's self-perception of their ability to use the available resources both at the start and at the time of the questionnaire was assessed using a scale graded between 1 and 5, with 1 being considered poor ability and 5 being very good ability. We considered scores 1 and 2 to be not very good, 3 to be average and 4 and 5 to be very good. Tables 3 and 4 show these results.

Table 3. Distribution of students based on their ability to use platforms at the start of the pandemic by absolute and relative frequency.

Initial Skill	Absolute Frequency	Relative Frequency
Low	40	18,7%
Medium	50	23,4%
High	124	57,9%
Total	214	100%

Source: author. Year: 2024.

Table 4. Distribution of students based on their ability to use platforms at the time of the questionnaire by absolute and relative frequency

Skill	Absolute Frequency	Relative Frequency
Low	3	1,4%

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Medium	22	10,3%
High	189	88,3%
Total	214	100%

Source: author. Year: 2024.

Almost a fifth of the participants indicated low initial ability to use digital resources when they were implemented (Table 3). The use of technology, for example, through social media such as WhatsApp and Facebook, is common among university students (Fermann *et al*., 2021); however, the inclusion of these or similar resources in the academic environment was hardly encouraged in face-to-face courses before the pandemic (Nascimento *et al*., 2019). Thus, it is possible to see that, with the practice and use of the platforms, there was an increase in the number of students who considered their aptitude to be high, making the moment an opportunity to acquire new skills.

The degree of difficulty in participating in online academic commitments was also analyzed in comparison to face-to-face meetings. A scale of 0 to 5 was also used, with 0 being no difficulty and 5 being a lot of difficulty. Scores 1 and 2 were considered to be low difficulty, 3 medium, and 4 and 5 high.

Table 5. Distribution of students according to difficulty in participating in online academic activities compared to face-to-face activities

Difficulty	Absolute Frequency	Relative Frequency
No difficulty	86	40,2%
Little	66	30,8%
Medium	25	11,7%
High	37	17,3%
Total	214	100%

Source: author. Year: 2024.

Even though more than 40% of students denied any difficulty in remote learning, in the question that assessed factors that hindered the completion of online activities, only 13 (3%) did not point out any obstacles. One respondent even pointed out that he had adapted very well to the new model and was considering changing his course from face-to-face to online when the institution returned to the pre-pandemic method. Alternatives and a space were provided in which students could express more challenges than those

already covered, and they could tick as many as they felt necessary; 432 options were thus obtained. Table 6 shows the most common problems, with over 65 responses.

Table 6. Distribution of factors that interfere with doing online activities by absolute and relative frequency

Factor	Absolute Frequency	Relative Frequency
Difficulty connecting to the Internet	96	22,2%
Increased tiredness due to greater use of technological equipment	94	21,8%
Limited time due to the accumulation of tasks	80	18,5%
Increased time spent on work activities, extending beyond the scheduled workload	68	15,7%
Lack of cooperation from family members	65	15%
Cumulative total	403	93,2%

Source: author. Year: 2024.

Lima and Silva (2022) carried out a study in which they noticed that high school students were fragile when it came to constructing knowledge during the virtual period. They also highlighted a significant percentage of students with technical problems related to the internet or equipment, making it difficult to participate in classes. At a university center located in the rural area of the state of Rio de Janeiro, a study with 159 health students (physical education, nursing, medicine and nutrition) showed that a quarter of the participants rated the quality as poor or very poor and almost half had an excellent or good perception of their adaptation to remote education (Pereira *et al*., 2020). These data are in line with the findings of this research, since the improvement in the ability to use the resources, as shown in Tables 3 and 4, and internet connection problems were the challenge most pointed out by our participants.

The majority of students reported that the migration from face-to-face to remote did not impact their mental health or academic performance. However, more than a quarter reported a worsening in their mental health in the first question (Table 7), and more than a third in the second (Table 8). Student mental health is an important aspect to assess. The systematic review by Becker *et al*. (2021), which analyzed 14 articles, concluded that

remote teaching increased symptoms of anxiety, stress and burnout among university students.

Table 7. Distribution of students based on the perceived interference of remote activities on their mental health in absolute and relative frequency

Perception	Absolute Frequency	Relative Frequency
Improved	37	17,3%
No change	116	54,2%
Worsened	61	28,5%
Total	214	100%

Source: author. Year: 2024.

Approximate percentages of participants in this study indicated that they did not notice any changes in their academic performance (39%) or that they noticed a worsening (37%). A study evaluating more than 2,000 students enrolled at a federal educational institution in Minas Gerais, with admissions between 2009 and 2021, showed an increase in performance coefficients and a decrease in the dropout rate during the pandemic period (Pinheiro, Sabino, 2022). Thus, remote teaching had different impressions on each student, but did not indicate an improvement in performance in most cases.

Table 8. Distribution of students based on their perception of their performance in remote activities compared to face-to-face activities by absolute and relative frequency

Perception	Absolute Frequency	Relative Frequency
Improved	51	23,8%
No change	84	39,3%
Worsened	79	36,9%
Total	214	100%

Source: author. Year: 2024.

Lack of experience with virtual platforms and the impact on mental health were topics that directly affected student participation during remote teaching. They were then asked about the forms of institutional support they received, as shown in the table below. Students were able to check as many boxes as necessary for their reality, as well as indicating that they received no support (7.2%).

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Table 9. Distribution of students according to institutional support offered by absolute and relative frequency

Support	Absolute Frequency	Relative Frequency
Technical	173	54,1%
Pedagogical	105	32,8%
Emotional and pedagogical	19	5,9%
None	23	7,2%
Total	320	100%

Source: author. Year: 2024.

The question of ties with teachers was also assessed, and more than half of the students pointed out that there was distancing (Table 10). Moraes *et al*. (2022) looked at the teachers' point of view, conducting a study with 39 higher education teachers and observed that almost three-quarters of the participants felt distanced from the students. It should be noted that the teacher-student relationship is a factor that influences the learning process, the student's motivation for the content and their reflective and investigative capacity, which can have positive or negative repercussions (Belo *et al*., 2021; Secatto, Secatto, 2021).

Table 10. Distribution of students according to perception of relationship with teachers by absolute and relative frequency

Perception	Absolute Frequency	Relative Frequency
No change	64	29,9%
Further away	111	51,9%
Closer	39	18,2%
Total	214	100%

Source: author. Year: 2024.

In view of their experience, the students were asked about the future of technologies in teaching, and the majority believe that they will be used simultaneously with face-to-face teaching, even after the pandemic is over (Table 11).

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Table 11. Distribution of students according to opinion about the future of remote technologies by absolute and relative frequency

Opinion	Absolute Frequency	Relative Frequency
Permanent, concomitant with the face-to-face method	139	65%
Permanent, replacing the face-to-face method	23	10,7%
Temporary, restricted to the pandemic period	52	24,3%
Total	214	100%

Source: author. Year: 2024.

Since the 1970s, there has been interest in combining information technology and education. Decade after decade, important steps have been taken, such as Telecurso (which provided video lessons on basic and technical education) and the FORMAR project (training public basic education teachers) in the 1980s, TV Escola in the 1990s and the creation of the SUS Open University System (UNA-SUS), which since 2008 has offered more than 400 courses from 29 institutions, certifying more than 3 million professionals (Fernandes *et al*., 2024; UNASUS, 2024).

According to data from the Higher Education Census 2022, presented by the Anísio Teixeira National Institute for Educational Studies and Research (INEP), an autarchy linked to the Ministry of Education, 75.2% of the number of places on undergraduate courses and 63% of entrants are in distance learning. In addition, this presentation indicated that between 2018 and 2022 the number of places offered by distance learning increased by 139.5%, while face-to-face courses fell by 11% over this period.

This indicates the trend that the use of technology in education, enabling both remote and distance learning, is an aspect that will be part of the daily lives of teachers and students from now on. This can happen simultaneously and in conjunction with face-to-face teaching, as most of the participants in this study believe, or even going beyond this traditional way of teaching, as the 2022 Census data shows.

In order to value the uniqueness of the participants and the subjectivity of their realities, they were asked qualitatively (Batista *et al*., 2021) about the benefits and detriments of remote teaching. Below are three excerpts representing the advantages and

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another three the disadvantages. The participants have been generically referred to as Student 1 to Student 6. After each excerpt, a discussion of the literature takes place:

> *Because I'm visually impaired, avoiding the commute helped me and didn't hinder me* (Student 1).

In the context of remote teaching, teachers had to take into account the limitations and needs of students who already had difficulties in the classroom, adapting their pedagogical planning from early childhood education to higher education (Lima, Silva, 2021). The first excerpt selected points out the advantage of not having to travel, given that the student is visually impaired. This statement contrasts with the literature review by Lima, Novato and Carvalho (2022), who concluded that students with disabilities, in this case those with hearing impairment and deafness, in addition to the challenges faced by students in general, still had other difficulties, such as using technologies that were not appropriate for educational institutions and, when they were assisted, there was difficulty in handling them. It can be seen that the advantages and difficulties with remote learning also vary depending on the conditions of the target audience for Special Education.

> *I believe that teaching has become more accessible and, at the same time, it has allowed students to learn in a slightly different way than just taking exams. The group work has allowed for discussion between the members, which I believe has brought greater learning than studying for individual exams, because in the face of this work and the group discussions, questions have arisen which I believe that with the application of an evaluation, we would not have reached such a question, much less the answer to it* (Student 2).

The second student, on the other hand, pointed to new learning and reflections gained from the implemented model. The new reality made it necessary to develop new skills in order to maintain the learning process. For example, Pereira, Aarão and Furnelato (2022) observed that students at a medical school developed skills in self-management of time, emotions and retention of curricular content through personal organization and learning about the technological resources available.

> *[...] the college environment was never good for me, remote learning took a certain "weight" off me and gave me a better relationship with my course* (Student 3).

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Student 3 highlights the importance of the environment in education. The integrative review by Costa and Zagonel (2020) concluded that the educational environment influences the teaching-learning process. In contrast to the positive experience of Student 3, Pereira *et al*. (2020) found negative aspects related to external factors during the performance of remote activities by university students from Rio de Janeiro, such as the presence of children on site, the greater accommodation at home making it difficult to concentrate and facilitating distractions. Therefore, impressions of remote learning depend on the environment in which the student carries out their activities.

> *My mental, physical and emotional health was in shambles... I needed psychiatric and psychological counseling once a week and an increase in the dosage of my medication. The increased pressure from teachers didn't help. The class would end and I wouldn't be able to study because of the headache of having to stare at the computer screen* (Student 4).

Student 4 reinforces the physical, mental and emotional health impacts of migrating to digital education. The need to stay connected for longer than usual can contribute to anxiety related to nomophobia (acronym for "No Mobile Phone Phobia", related to the fear or anxiety of not being connected), and this symptomatology was found in more than a third of the participants in the Modesto *et al*. study (2022). Although the review by Becker *et al*. (2021) identified an increase in anxiety, stress and burnout among university students, the results on the impact of remote teaching on depressive, somatic and motivational symptoms were controversial. Thus, it is possible to observe the heterogeneity of the effects that studying digitally has had on students.

> *I don't know if the teachers think we don't work, but between the fourth and now the fifth year, my class in general complains and so do I, because I work, and the excessive activities that the teachers give us are saturating us a lot, activities that if we were in person, we wouldn't have so much. This ends up exhausting and frustrating us* (Student 5).

Briefly, to reinforce the variety of experiences that remote teaching instigated, the third discourse referred to a more favorable environment for student participation, reducing the pressure to participate in the course of activities. This point of view contrasted with the problems listed by Student 4, such as the deterioration of mental and physical health and

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the greater pressure from teachers. This situation was confirmed in the speech of Student 5, who also faced physical exhaustion and difficulty in reconciling the new demands of remote teaching. Vasconcelos *et al*. (2021) noticed problems related to sleep, time management, anxiety and stress in nursing students in Pernambuco, while Nunes (2021), in the state of Rio de Janeiro, found negative feelings in the majority of students at a federal institute with higher degrees in mechanical engineering and technologists, mainly anxiety, worry, lack of motivation, discouragement, stress and tiredness. Therefore, it was generally inferred that some of the students had health problems, regardless of location or course.

> *I believe that many teachers weren't prepared to teach remote classes, since teachers have always been in the classroom and I don't blame them for not being so compatible with all the technology. One of the difficulties I encountered was that the teacher who was used to having direct contact with the students, could gradually adapt the methodology so that the class learned the subject clearly, consequently during remote teaching he was unable to get to know the class and its pace, as the students were more intimidated* (Student 6).

Finally, Student 6 highlighted the lack of teacher training. It was emphasized that teachers also suffered impacts, with physical, mental and emotional illness, in addition to having gaps in their training on how to teach remotely, with little time for this adaptation (Fialho, Neves, 2022). This new work routine was quickly established using tools that until then had been unfamiliar to many, with the need to adapt day-to-day activities and the assessment process (Matias *et al*., 2023). Even with challenges such as tiredness and difficulty connecting to the Internet, it was reported that teachers managed to improve their resourcefulness during remote classes (Moraes *et al*., 2022). This student's statement reinforced the need for educational institutions to pay attention to the teaching-learning conditions of both students and teachers in order to optimize this process.

4 Conclusions

This study sought to investigate the perceptions of students at a university center about the change from face-to-face to virtual teaching and the repercussions of these experiences. Various experiences have shown that this period was not homogeneous. 214

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students took part from 10 different courses at the same higher education institution, which was characterized by having no previous experience with the resources used. Even in the face of challenges such as connection difficulties, increased tiredness and distance from teachers, the students showed an improvement in their ability to use the virtual resources available over time. However, there are points on which the participants' perceptions varied, such as the impact on mental health and academic performance, emphasizing that the experiences during remote teaching were not uniform for everyone.

Thus, combining the wide variety of answers found in qualitative terms and the significant percentage of quantitative questions that also confirmed that the adoption of remote learning did not have the same repercussions for all students, we can see the importance of educational institutions reflecting on ways to improve the use of technology, allowing everyone to make better use of it.

Considering that the pandemic forced a rapid migration from a teaching system based on human contact to one based on the use of screens and technology, our study is pertinent in that it assessed the changes brought about by this type of teaching in a large sample of students. Even with the spread of the virus under control and the re-establishment of face-to-face activities, the use of technology in education is still the subject of debate and study, with more and more students adhering to distance learning. Therefore, it is suggested that institutions aiming to include virtual technologies and platforms in face-to-face undergraduate courses investigate not only the characteristics of students, but also those of teachers, with a view to maintaining a bond and a more productive and positive experience for all involved.

References

ARAÚJO L. F. F.; PROGETTI C. B.; SANTOS R. A. O processo de ensino-aprendizagem: desafios em tempo de isolamento social. **Rev. Pemo**, Fortaleza, v.3, n.3, e334992, 2021. Disponível em: https://doi.org/10.47149/pemo.v3i3.4992

ARRUDA, J. S.; SIQUEIRA, L. M. R. C.; Metodologias Ativas, Ensino Híbrido e os Artefatos Digitais: sala de aula em tempos de pandemia. **Rev. Pemo**, Fortaleza, v.3, n.1, e314292, 2021. Disponível em: https://doi.org/10.47149/pemo.v3i1.4292

BATISTA, A. M. D.; FRANCISCHETTI, I.; VIEIRA, C. M.; PARPINELI, V. L. F. O uso do discurso do sujeito coletivo para a análise de dados qualitativos no campo da educação. **Revista Humanidades e Inovação**, v.8, n.36, 2021. Disponível em: https://revista.unitins.br/index.php/humanidadeseinovacao/article/view/4273

BECKER, A. S et al. O impacto na saúde mental de estudantes universitários submetidos ao ensino digital durante o isolamento social decorrente da pandemia de Covid-19: um revisão sistemática. **Revista da AMRIGS**, Porto Alegre, 65(1): 2-11, 2021. Disponível em: https://meriva.pucrs.br/dspace/bitstream/10923/25163/2/O_impacto_na_sade_mental_de_estudantes_universitrios_submetidos_ao_ensino_digital_remoto_durante_o_isolamento_social.pdf

BELO, P. A. P.; OLIVEIRA, R. M.; SILVA, R. C. Reflexos da relação professor-aluno para a aprendizagem no contexto formal de ensino. **Rev. Pemo**, Fortaleza, v.3, n.2, e323880, 2021. Disponível em: https://doi.org/10.47149/pemo.v3i2.3880

BRASIL. Ministério da Educação. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira, Diretoria de Estatísticas Educacionais. **Censo da Educação Superior 2022**. Disponível em: https://download.inep.gov.br/educacao_superior/censo_superior/documentos/2022/apresentacao_censo_da_educacao_superior_2022.pdf Acesso em 09/06/2024.

COSTA, M.; ZAGONEL, I. P. S.; Percepção do estudante sobre a influência do ambiente/clima educacional no processo ensino-aprendizagem: uma revisão integrativa. **Revista Espaço para a Saúde**, 21(1):71-81, 2020. Doi 10.22421/15177130-2020v21n1p71

FARIA, D, C.; NERI FAZ, MORAES, F. D. F.; GONÇALVES, L, M, C.; Desafios dos anos iniciais do ensino fundamental no ensino remoto: experiências educativas mediadas por tecnologias digitais. **Revista Docência e Cibercultura**, v.6, n.5, p.89-107, edição especial 2022. Disponível em: https://www.e-publicacoes.uerj.br/re-doc/article/view/65691/pdf

FERMANN, I. L, et al. Uso de internet e mídias sociais por estudantes universitários: um campo de estudo emergencial. **Ciências Psicológicas**, v. 15, n.1, 2021. Disponível em: https://doi.org/10.22235/cp.v15i1.2389

FERNANDES, C, D.; BEZERRA CAM; AQUINO, S, C, S.; VIANA, D. C.; Uso das tecnologias da informação e comunicação (TICs) como metodologia complementar no

ambiente acadêmico. **Rev. Pemo**, Fortaleza, v. 6, e11078, 2024. Disponível em: https://doi.org/10.47149/pemo.v6.e11078

FIALHO, L. M. F.; NEVES, V. N. S.; Professores em meio ao ensino remoto emergencial: repercussões do isolamento social na educação formal. **Educ. Pesqui**., São Paulo, v.48, 2022. Disponível em: https://doi.org/10.1590/S1678-4634202248260256por

GONÇALVES, E. M. R.; BRITTO, A. L. F. M.; Ensino remoto na Educação Infantil em tempos de pandemia: reflexões acerca das novas formas de ensinar. **Revista Práxis**, v.12, n.1 (Sup.), 2020. Disponível em: https://revistas.unifoa.edu.br/praxis/article/view/3505/2702

LIMA, F. K. C.; SILVA, J. L, M.; A percepção de um grupo de alunos sobre o contexto da educação remota. **Rev. Pemo**, Fortaleza, v.4, e47088, 2022. Disponível em: https://doi.org/10.47149/pemo.v.4.7088

LIMA, M. S. N. O. F.; SILVA, C. M. L.; Prática docente de alunos com deficiências no ensino remoto. **Ensino em Perspectivas**, Fortaleza, v.2, n.4, p.1-11, 2021. Disponível em: https://revistas.uece.br/index.php/ensinoemperspectivas/article/view/6621

LIMA, P. V.; NOVATO, T. S.; CARVALHO, M. P.; Desafios e medidas de enfrentamento na educação dos surdos e deficientes auditivos em tempos de pandemia. **Revista Brasileira de Educação Especial**, Corumbá, v.28, e0055, p.597-618, 2022. Disponível em: https://doi.org/10.1590/1980-54702022v28e0055

MATIAS, A. B.; et al. A pandemia da COVID-19 e o trabalho docente: percepções de professores de uma universidade pública no estado de São Paulo, Brasil. **Ciênc. Saúde coletiva** 28(2)2023. Disponível em: https://doi.org/10.1590/1413-81232023282.11972022

MEDEIROS, J. C.; Possibilidades de educação em tempos de COVID-19. **Rev. Pemo**, Fortaleza, v.3, n.3, e335198, 2021. Disponível em: https://doi.org/10.47149/pemo.v3i3.5198

MODESTO, J. G.; FONSECA, G. A.; SOUSA G. P.; O uso da tecnologia e nomofobia em estudantes universitários. **Revista Conhecimento Online**, Novo Hamburgo, a.14, v.2, 2022. Disponível em: https://doi.org/10.25112/rco.v2.3025

MORAES, G. S.; et al. Vivências de docentes de um centro universitário durante pandemia de Covid-19. In: Cavalcante P, Ozório FJDG, Muniz QHMA. **Formação e trabalho docente em tempos de pandemia: Desafios e possibilidades**. 1ed. Belo Horizonte: Poisson, 2022, p.88-93. Disponível em: http://dx.doi.org/10.36229/978-65-5866-185-6.CAP.10

NASCIMENTO, W. R. D.; SALVIATO-SILVA A. C.; DELL'AGLI, B. A. V.; O desempenho em tecnologias digitais para aprendizagem: um estudo com universitários. **ETD-Educação Temática Digital**, Campinas, v.21, n.1, p.182-201, 2019. Disponível em: https://doi.org/10.20396/etd.v21i1.8651482

NEVES, V. N. S.; ASSIS, V. D. A.; SABINO, R. N.; Ensino remoto emergencial durante a pandemia de COVID-19 no Brasil: estado da arte. **Rev. Pemo**, Fortaleza, v.3, n.2, e325271, 2021. Disponível em: https://doi.org/10.47149/pemo.v3i2.5271

NUNES, R. C. Um olhar sobre a evasão de estudantes universitários durante os estudos remotos provocados pela pandemia do COVID-19. **Research, Society and Development**, v.10, n.3, 2021. Disponível em: http://dx.doi.org/10.33448/rsd-v10i3.13022

OLIVEIRA, M. A.; PONTES, V. M. A.; O letramento digital e o ensino remoto: a percepção dos estudantes sobre a aprendizagem. **Rev. Pemo**, Fortaleza, v.4, e47212, 2022. Disponível em: https://doi.org/10.47149/pemo.v.4.7212

PEREIRA, G. B. F.; AARÃO, T. L. S.; FURLANETO, I. P.; Percepção de estudantes de Medicina sobre as habilidades de autogestão adquiridas durante a vigência do ensino remoto. **Revista Brasileira de Educação Médica**, 46(4):e136, 2022. Disponível em: https://doi.org/10.1590/1981-5271v46.4-20220052

PEREIRA, R. M. S, et al. Vivência de estudantes universitários em tempos de pandemia do covid-19. **Revista Práxis**, v.12, n.1 (sup.), 2020. Disponível em: https://doi.org/10.47385/praxis.v12.n1sup.3458

PINHEIRO, D. C.; SABINO, G. F. T.; Ensino "(ter)remoto"? Reflexões a partir do desempenho de estudantes universitários no período pandêmico. **Revista Humanidades e Inovação**, Palmas, v.9, n.26, 2022. Disponível em: https://revista.unitins.br/index.php/humanidadeseinovacao/article/view/6742

SECATTO, A. G.; SECATTO, C. P.; Pesquisa e autoria: experiências no ensino remoto. **Rev. Pemo**, Fortaleza, v.3, n.3, e335580, 2021. Disponível em: https://doi.org/10.47149/pemo.v3i3.5580

SOUZA, M. F.; FERRÃO, N. S. D.; CHERMONT, N. M. S.F.; Os desafios dos professores do Ensino Médio no Ensino Remoto em tempos de pandemia. **Rev. Pemo**, Fortaleza, v.3, n.1, e316366, 2021. Disponível em: https://doi.org/10.47149/pemo.v3i1.6366

Universidade Aberta do SUS. Rede UNA-SUS em números. Disponível em: https://www.unasus.gov.br/numeros/arouca Acesso em 09/06/2024.

VASCONCELOS, C. M. R, et al. Sentimentos dos estudantes utilizando ensino remoto durante pandemia COVID-19: interferência no processo de aprendizagem. **Revista de Saúde Pública do Paraná**. 2021. Disponível em: https://doi.org/10.32811/25954482-2021v4n3p145

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