

Perceptions of Elementary School Students about Virtual Classes during Coronavirus (COVID-19) Pandemic in Brazil

Rodrigo Genaro Arduini* , Janaína Aparecida De Oliveira Augusto ,
Joyce Nelly Leal de Moraes, Patrícia Regina Flaviano Stella,
Rita de Cassia Coutinho Vieira Fornasari, Thalita Francielli Lopes Ferreira,
Sylvia Maria Ciasca 

Laboratório de Pesquisa em Distúrbios, Dificuldades de Aprendizagem e Transtornos de Atenção (DISAPRE), Hospital das Clínicas from Campinas' State University-HC/UNICAMP, Campinas, São Paulo, Brazil
Email: *rodrigogenaro@gmail.com

How to cite this paper: Arduini, R. G., De Oliveira Augusto, J. A., de Moraes, J. N. L., Stella, P. R. F., de Cassia Coutinho Vieira Fornasari, R., Ferreira, T. F. L., & Ciasca, S. M. (2021). Perceptions of Elementary School Students about Virtual Classes during Coronavirus (COVID-19) Pandemic in Brazil. *Psychology*, 12, 1410-1422.

<https://doi.org/10.4236/psych.2021.129089>

Received: August 10, 2021

Accepted: September 13, 2021

Published: September 16, 2021

Copyright © 2021 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

The new coronavirus outbreak determined the closure of schools and universities around the world. In Brazil, implementation of online teaching faced many challenges, especially for public schools. We analyzed, via an online questionnaire, the speech of children aged 6 to 11 years old to evaluate their thoughts about virtual classes. The results showed a significant negative correlation between children's learning perception and their feelings about online classes. A duration longer than 3 hours for the virtual classes was associated with students perceiving them as "boring" and "tiresome"; and children who did not enjoy being taught in front of a screen also perceived their learning during this period as "poor". Possible psychological impacts for children under confinement, like fear and stress may have contributed to these perceptions. Our limitations were: the small sample size compared with Brazil's population and, also the concentration of answers in the southern (the richest and most developed) region. When giving children predefined answers, we could not be able to realize the true dimension of their emotions. The results showed that there is a need for institutions to prepare a good virtual environment for teaching, with proper training for the staff involved and attractive classes, able to captivate the students' attention and allow better learning. In a vast territory like Brazil, there is a need of proper public policies and funding to allow better internet access and reduce educational inequality. Families shall be warned to pay attention to children's signs of poor mental health, once confinement may be a trigger for symptoms of anxiety and depression, a synergistic conjunction that is able to deteriorate the capacity of attention and our children's ability of learning.

Keywords

Schools, COVID-19, Online Systems, Education, Child

1. Introduction

According to the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2020), the new coronavirus (SARS-CoV-2) pandemic determined the closure of schools and universities around the world, affecting more than 90% of the students globally.

In Brazil, complying with some federal laws (Brasil, 2020a, 2020b), numerous public and private educational institutions have replaced classroom lessons with virtual ones (Castaman & Rodrigues, 2020). Therefore, the “EaD” method (“Educação à Distância”: Long Distance Education) was implemented by several institutions as a way of maintaining the academic year, since it allows the students to remotely be in the same location as the teacher (Mesquita et al., 2014). EaD has been present in our country’s academia, officially, since 2005 and has a massive presence for higher level degrees before the pandemic (Leite & Silva, 2020). In recent years, EaD had significative advances, corroborating with teachers and students’ needs of developing new educational skills related to digital technologies, specially breaking up with the idea of text-only based learning and few interactions between users, which was common in the beginning of the method’s implementation. On the other hand, remote education includes pedagogical practices provided via online platforms, whether live or recorded, besides the availability of syllabus and tasks in digital media such as social networks and emails (Alves, 2020). During the pandemic period, educational institutions have been trying to implement EaD in ways that could push its boundaries beyond what has been practiced in Brazil ever since, where is vital that it may be able to support a diversity of teaching experiences for the students, as stimulate the participation of family members; however, recent studies could show that this method is contributing to educational inequity (Alves, 2020; Dias & Pinto, 2020).

The prompt changes in teaching methods have obligated teachers to transmit their contents and adapt their once classroom lessons into virtual platforms, with the application of Communication and Information Digital Technology (CIDT). Standing out, most of the time these classes were superficially planned and prepared in haste (Castaman & Rodrigues, 2020). In contrast, like EaD, CIDT usage was not recent and used to be a part of some Brazilian schools and teachers’ routines, as part of complimentary education; nonetheless, household structures are limiting for its proper operations. Including CIDT in educational institutions is still a barrier for the Brazilian reality, as poor infrastructure and teachers’ formation are important variables that directly interfere with the critical, intentional, and productive utilization of these technologies (Braga, 2018; Thadei, 2018).

However, this kind of technology may be insufficient sometimes. In our country, most families are unable to access the internet or even obtain personal computers, tablets, or cell phones that would allow them to do so. Additionally, a high number of teachers needed to learn, as quickly as possible, how to use and engage these virtual platforms, insert online activities, evaluate their pupils, and produce contents that could permit students to comprehend the school subjects; besides, they had to prepare and provide recorded and online classes. In 2020, a research led by Peninsula Institute with basic education teachers in Brazil have identified that 88% of them never ministered online classes, and 83.4% did not feel confidence in doing so. The effort of most schools and universities to ensure the use of digital tools is remarkable; however, there was not enough time to test them properly, nor train the teaching and technical-administrative staff to use them correctly (Dias & Pinto, 2020). Consequently, studies performed during the pandemic showed that private schools are more prone to offer a better support, adaptation and adequacy to remote contents when compared to public schools (Península Institute, 2020); such results reinforce UNESCO alerts regarding educational inequality, and also unfolds the major challenges for education institutions during pandemic: allow full access to the curricula for all the students.

Students' physical and mental health status are points to be considered: the long-lasting confinement, absence of social contact with classmates, the fear of SARS-CoV-2 infection, and the lack of space at home turned children and adolescents less active than they were when attending school. Feeding also became an issue for low-income students, as school meals are crucial for their well-being once food insecurity grew dangerously in the last 2 years. Their absence implicated higher levels of stress and, accordingly, a worsening in physical and mental health for most elementary school students, and their families (Dias & Pinto, 2020). Family support during COVID-19 pandemic was fundamental to develop protective factors that allowed a better quality of life for children and teenagers; however, aspects such as time, availability, and comprehension of adults about the school subjects influenced kids' learning abilities during this period. It is important to prevent and reduce the high levels of anxiety, depression, and stress that confinement generated in students (Maia & Dias, 2020).

Teachers' mental health status is another subject that matters: there is supporting evidence showing increasing mental and professional demands in this period, influencing the quality of classes and academic matters and impacting the motivation of the students, especially regarding their participation during online classes and homework completion (Maia & Dias, 2020). Therefore, solidarity, resilience, and continuation of social relations between educators and students may be stimulated to minimize the negative psychological effects of the isolation during the pandemic.

Other issues like capacity and the possibility of accessing online materials and virtual classes shall be considered to understand the impact in learning and teaching during social isolation. That said, researchers are alerting that this situ-

ation is going to worsen inequality in education and students' progress (Cifuentes-Faura, 2020; Dias & Pinto, 2020). Some public schools have initiatives to mitigate the observed inequalities: Amazonas and São Paulo's Education Secretaries provided recorded classes through television channels or mobile apps; many cities allowed students' family members to pick up printed homework and complimentary material. Nevertheless, Chagas (2020) showed that, by August 2020, 26% of the students from public schools were not able to access any kind of remote education.

One of the major challenges for educators during social distancing is to keep students motivated and effectively participating during online classes once, the migration process from presential to virtual classes may be seen as demotivating, tiresome, unattractive and uninteresting. Motivation is a golden factor for educational success, where teachers need to produce stimulating and interesting contents for their students. Classes duration is also a critical matter: most schools tried to maintain the same length for classes in the virtual model, what may also seem tiresome and unmotivating (Dias & Pinto, 2020). Besides, some papers indicate a change in education from a defying and unique moment like this. By that means, one could assert that CITD could not only be reframed but, also, occupy a new role in the teaching-learning process (Avelino & Mendes, 2020; Barreto & Rocha, 2020; Martins, 2020). Public policies are fundamental to guarantee proper funding and adequate educational access, through smart use of available technologies, prioritize the most vulnerable citizens, and protect educators and students, to provide a secure and prosperous future (Dias & Pinto, 2020).

Thus, the main objective of this study was to evaluate the speech of Brazilian elementary students about online classes and their perception of whether they enjoy this kind of teaching method or not. Secondly, analyze what kind of school was attended and if it could interfere in the students' classes preferences, understand their perception on learning (if adequate or poor) during this period and the possible influence of these classes' duration and children's perceptions about them.

2. Methods

2.1. Participants

Inclusion criteria were: children aged 6 to 11 years, actually enrolled in elementary private or public schools (1st to 6th year), in Brazilian territory, and attending online classes at the time of the inquiry. We chose this age group to evaluate because, according to our country's Educational National Planning, that is the period of schooling where children start to learn how to read, write and make basic mathematical operations. We thought that, if online learning could affect these kids in any way, these abilities could represent these effects for a long time, and educational arrangements eventually needed to be done could be accessed by this inquiry. Cognitive and structural capacities to accomplish verbal and/or writing communication were needed, as the questions should be answered via online

questionnaire. Were excluded from our research all children outside the determined age groups, students attending teaching facilities outside the country's territory or those not recognized by Brazil's Ministry of Education; also, those children who declared not being able to or not having the opportunity of attending online classes, and those who declined participating in the beginning of the survey.

2.2. Procedures

Data collection was made under a previously elaborated questionnaire, which contained 18 questions regarding schooling; age; gender; school funding (public or private); current living and studying location; regular classes' period; online classes attendance, length, daytime period, and if the student liked it or not; and open questions about their preferences or dislikes about these virtual classes. We analyzed the answers for these open questions by normalizing some keywords (detaching some adjectives from the phrases) and, through categoric analysis of the speech content regarding the online classes, determined positive, neutral or negative "values" for these words. The questionnaire was available for access through personal computers, *tablets*, and cell phones, at Google Forms (Google Mountain View/CA) platform over 24 days (Aug. 28th-Sep. 20th 2020). Consent form was electronically applied for both responsible adult and child and their denial was an exclusion criterion. All participants could only access the whole questionnaire after answering the exclusionary questions: "Do you agree to participate in this study?" and "Do you/Does your child attend online classes?". Answering "no" to one of these questions automatically excluded the participants. Disclosure was made using the researchers' personal social medias and our Laboratory's social profiles (DISAPRE, Laboratório de Pesquisa em Distúrbios, Dificuldades de Aprendizagem e Transtornos de Atenção).

2.3. Questionnaire

Initially, the responder had to provide simple epidemiological information about yourself, such as gender, birth date, geographical region of origin, and school funding.

Later, online classes information's were requested: duration, period of attendance, virtual platform used; after that, students were requested to answer questions regarding their online experience, like:

- Thoughts about this educational mode (boring, motivating, tiresome, nice);
- Self-perception about learning capacities in the virtual platform;
- What did they miss at home during the online classes' period;
- A final open question regarding children's thoughts on this experience.

2.4. Data Analysis

Statistical analysis was produced using the SPSS software (IBM, Armonk/NY), version 25. For inferential analysis, non-parametric tests were chosen: 1) *Chi-square* for verifying the association between school funding and: enjoying

online classes and children's perceptions about it; enjoying online classes and: self-learning perception and gender; gender and: self-learning perception and thoughts about online classes; 2) *Mann-Whitney* test was used to check the difference between public and private schools students and self-learning perception; 3) *Spearman's correlation* for analyzing the connections under age and: children's perceptions about the online classes and what was missed during school closure period; also, online classes length and children's perceptions about it. Correlation coefficients under .3 were considered weak, among .3 - .6, moderate; and over .7, strong (Cohen, 1988). Moreover, we related the effect sizes of the correlations found were reported (r .10, small, r .30, average, r .50, great; Cohen, 1992). Results with a p -value $< .05$ were considered statistically significant and, $p < .1$, marginally significant (Field, 2009). Descriptive analysis was performed to show frequencies of the given responses, as well as to characterize the sample.

3. Results

3.1. Sample Statistics

Five hundred and thirty-two Brazilian students were enrolled. Our sample had 51.9% boys, ages ranging from 6 to 11 years (mean: 8.35 y; SD: 1.73); most of them living in the Southern region (84.4%). Regarding schooling, 27.4% were attending the first year of elementary school, as shown in **Figure 1**. Besides, 67.3% were regularly registered in private schools and, about attending periods, 53% had morning classes, 40.4%, studied in the afternoon, and 6.6% were enrolled in full-time education. Online classes had a mean duration of 178.78 minutes (SD: 85.75). It was a prospective cohort study, with a convenience sample.

3.2. Online Classes

Data presented in **Table 1** corresponds to the responses given by the participants regarding online classes. It is possible to verify that 88% of the children were able to attend virtual education by the time of the questionnaire availability, and 50.2% declared enjoying those classes. The most used online platforms for accessing the virtual teaching environment were Google Meet (31.6%), Google Classroom (30.6%), and Zoom (13.2%).

3.3. Students' Perceptions

Concerning kids enjoying or not the virtual environment, 19.5% of the participants declared that they were "tiresome", 15.3% "different", 13.1% reported not being able to pay attention and 11.8% said they were "annoying". Still, 10.7% thought it was a "nice" experience and 7.3% were "comfortable" with this kind of teaching-learning tool, as we can see in **Table 2**.

Regarding the question: "what do you miss at school?", 33.3% pointed out that were missing their colleagues, 23.6% the teachers, 22.9% the school environment, and 20.2%, the break. When asked about how the children felt about their learning perception via online classes, 50.9% of the participants answered that have learned poorly, 44% a lot, and 5.1%, nothing at all.

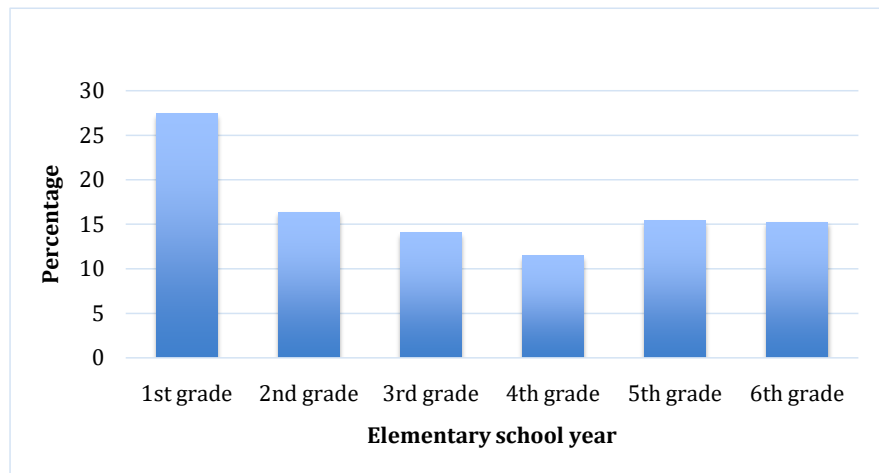


Figure 1. Participants' schooling in elementary school I (1st to 5th year) and II (6th year), in percentage.

Table 1. Online classes demography: frequency analysis (n = 532).

Question	Answer	n (%)
Are you/Is your child attending online classes?	Yes	468 (88)
	No	64 (12)
Do you/Does your child enjoy the online classes?	Yes	236 (50.2)
	No	234 (49.8)
Virtual platforms	Zoom	81 (13.2)
	Google Meet	195 (31.6)
	Google Classroom	189 (30.6)
	EdModo	2 (0.3)
	Moodle	5 (0.8)
	Plurall	37 (6.0)
	Microsoft Teams	42 (6.8)
	Educa Digital	16 (2.6)
	Others	50 (8.1)

Table 2. Online classes perceptions (stimulated responses): frequency analysis.

Perception	N	%
Boring	117	11.8
Tiresome	194	19.5
I can't pay attention	130	13.1
Different	152	15.3
Comfortable	73	7.3
Nice	106	10.7
Funny	63	6.3
Innovative	59	5.9
Motivating	38	3.8
I can't learn	63	6.3

When questioned for their opinions about the online classes via open descriptions, 68.7% of the kids provided negative answers concerning this experience, such as: “I am not respected”, or “Classes all look the same”, or “It’s lame! I can’t play!”. On the other hand, 20.1% had positive feelings about their virtual education, with impressions like: “I can learn other things beyond school matters: online classes allow more subjects to appear during interactions, unrelated to teachers’ explanations”.

According to our findings, school funding (public or private) has not influenced learning self-perception during online classes ($U = 19203$, $p = .329$); nor had association with enjoying or not this kind of teaching process ($X^2(2) = 2.115$; $p = .162$). Students from public schools have classified online classes as “boring” ($p = .005$) and “tiresome” ($p = .004$) but, at private schools, we found some relation with negative thoughts about the COVID-19 pandemic ($p = .052$).

There was an association between “enjoying online classes” and “learning self-perception” ($X^2(2) = 101.848$; $p < .001$): 65.7% of the children who reported that enjoyed the online classes, also perceived they have learned a lot with this method, whereas 67.9% of those who did not enjoy the classes, indicated poor learning.

A significant association was found for children’s “thoughts about online classes” and “enjoy online classes” ($X^2(2) = 14.980$; $p < .001$): 77.7% of those who did not enjoy the virtual environment presented negative thoughts about it. But a significant tendency was observed between “thoughts about online classes” and “feeling comfortable with online classes” ($X^2(2) = 9.539$; $p = .008$); 87.6% of the kids describing negative thoughts about the period under online classes did not classify them as comfortable.

Regarding genders: boys expressed more negative thoughts related to online classes than girls; however, no statistical significance was achieved ($p = .205$). Besides, boys tend to relate they did not enjoy virtual classes more than girls ($p = .009$). Also, boys considered these classes “boring” ($p = .581$) and “tiresome” ($p = .319$) more than girls, apart from “having difficulty in paying attention” ($p = .012$) and “having difficulty in learning” ($p = .184$).

Table 3 correlates children’s perceptions about online classes and extended length. Frank associations were found between classes lasting more than 3 hours a day and “boring” and “tiresome” descriptions (small size effect); the significant weak negative correlation was observed at children’s perceptions and learning self-perception, ($r_s = -.107$, $p < .001$; small size effect).

At last, age was not a significant variable regarding: learning self-perception ($r_s = -.068$, $p = .173$); difficulty in paying attention during classes ($r = -.046$, $p = .356$); considering online classes motivating ($r = -.084$, $p = .093$), or funny ($r = -.099$, $p = .048$), or boring ($r = .087$, $p = .082$), or tiresome ($r = .122$, $p = .015$), or different ($r = .038$, $p = .453$); nor comfortable ($r = -.019$, $p = .709$); or nice ($r = -.116$, $p = .020$), or innovative ($r = .010$, $p = .845$). Younger and older children in our sample seem to be missing school ($r = .084$, $p = .093$), missing friends ($r = .066$, $p = .189$) missing the break ($r_{pb} = .079$, $p = .114$) or the teacher ($r = -.014$, $p = .782$) with the same intensity.

Table 3. Correlations between online classes length and children's perceptions about it.

Classification	Extended length (more than 3 hours/day)	
	<i>R</i>	<i>p</i>
Boring	.120	.010*
Tiresome	.134	.004**
I can't pay attention	.062	.185
Different	.030	.525
Comfortable	.085	.070
Nice	-.041	.379
Funny	-.074	.114
Innovative	-.018	.701
Motivating	.046	.331
I can't learn	.042	.337

* $p \leq .10$; ** $p < .05$.

4. Discussion

The objective of this study was to comprehend the perception of Brazilian elementary school students regarding online classes during “lockdown” and school closure periods due to COVID-19 pandemic.

4.1. Online Attention and Learning Perceptions

Eighty-eight percent of our sample was attending online classes at the moment of the questionnaire release for data collection. A similar percentage was found in an Indian paper (83.7%, Grover et al., 2020) but, instead, only a few children reported difficulty in paying attention to the virtual classes (13.1% vs. 80.6%) and learning difficulties (6.3% vs. 82.4%), nevertheless, it is important to highlight that, differently from the Indian study, which evaluated the students' behavior and educational performances under parents' perception, ours prioritized kids' opinions, what could have influenced such difference.

Our results showed a significant negative correlation between children's learning self-perception and their feelings about online classes. In this regard, at the beginning of the pandemic, Wang et al. (2020) published a series of recommendations based on Chinese experiences and about possible psychological impacts for children under confinement, like fear, frustration, stress, boredom, uncertainties, post-traumatic stress symptoms, detachment among peers, and others.

4.2. Mental Health Considerations

Given the above, the National Health Commission of the People's Republic of China (NHCPRC) and the World Health Organization (WHO) proposed that during domestic confinement periods, parents and caregivers should look for “warning signs” of poor mental health in children and talk freely about it

(NHCPRC, 2020; WHO, 2020; Ye, 2020). By these means, positive parenting practices (like positive monitoring and moral behavior) are crucial during the periods of imposed social isolation, to promote a better familiar quality of life and parent-sibling interactions (Gomide, 2014). Besides, the massive exposure to news regarding advances in infections and pandemic outcomes influenced the emergence of panic and anxiety symptoms (NHCPRC, 2020; WHO, 2020).

Children are prone to observe their relatives' humors and react to them during quarantine. Through the positive parenting techniques, relatives/caregivers could create consistent daily routines to avoid or minimize all the suffering that social isolation may produce (Shah et al., 2020).

We observed an association between "negative thoughts about the pandemic/online classes period" and "not enjoying virtual classes", with 77.7% of the children describing dissatisfaction with the classes, presenting negative thoughts. Imran, Zeshan & Pervaiz (2020) point out that social distancing and lack of interaction among peers may favor a more negative perception of this period.

Around 87.6% of the children reported negative thoughts regarding online classes, also did not classify them as "comfortable"; a similar result was found in India, with (81.7%) (Grover et al., 2020).

A duration longer than 3 hours for the virtual classes was associated with students perceiving them as "boring" and "tiresome"; in that regard, Ye (2020) shows the importance of schools being able to offer a better learning experience, promoting a healthier lifestyle for children, and allowing that the academic content is sufficient for the educational needs without overloading the students.

4.3. Virtual Classes

No association was found regarding the virtual platform used and the self-perception of learning, corroborating Pal & Vanijja (2020) findings.

Finally, there was a positive association for those children who enjoyed virtual classes and their learning self-perception (65.7% of whom declared that liked the online environment also perceived learning a lot in this period); though, 67.9% of the "I do not enjoy virtual classes" group affirmed their learning perception was poor. Previous studies pointed out that online learning may bring benefits for the students, once they are able to learn everywhere, every time, and according to their own pace. The perception regarding online classes is usually positive for most of the students (Alqurashi, 2019, Arias et al., 2019, Rodrigues et al., 2019).

5. Conclusion

Our limitations are, specially, the small sample size, compared with the population immensity of Brazil, and, also, the concentration of answers in the southern region of the country, what certainly leaves a socioeconomic bias, once this is the richest and most developed region, with easier internet access and more solid school structures, even in the public network. Another problem was that when giving children predefined answers, we could not be able to realize the true di-

mension of their emotions.

The results found in our query serve as evidence that there is a need for educational institutions and teachers to prepare a good virtual environment, with proper training for the involved staff and attractive classes, able to captivate the students' attention and allow better learning. Teachers and students need time and support to become acquainted to this new feature, and untrained personnel, such as parents or school staff, would make the studying process more difficult. Funding and training strategies are cardinal aspects for pursuing success in this subject.

In a territorially vast country as Brazil, there is an urgent (and sometimes hard to solve) necessity of improving the internet infrastructure: from distributing or granting proper devices (personal computers, cell phones) to training relatives, children, and teachers in the best ways of using these devices and amplifying the internet network itself, through cables or satellite connections. Without this kind of public policies, educational inequality will be severely increased in our country.

Families shall be warned to pay more attention to children's signs of poor mental health, once confinement and social isolation are key factors for promoting better control of SARS-CoV-2 spread, they may also be a trigger for symptoms of anxiety, depression or even worsen the presence of negative thoughts in situations like this. Together, these mental conditions are a synergistic conjunction that will deteriorate the capacity of attention and our children's ability of learning, with impact regarding labor, academic institutions, economics and societies interactions for decades.

Finally, our study was a flashlight trying to shine some of the multiple and complex aspects regarding online classes in Brazil during the pandemic. Public and coordinated policies from city, state and federal levels, with proper funding, seeking to train teachers' online skills and students' capacities to properly access the virtual environment are the keys for a better outcome on learning retention. We could analyze that children's mental health status was shaken due to lockdown and social distancing and, from that point, tools that, even virtually, could allow some kind of support for these individuals, need to be thought by responsible authorities.

More studies with more extensive questions regarding specific school subjects, with bigger and more accurate samples and time of analysis are needed to evaluate the real impact on mental health and learning capabilities of the future generations and their possible outcomes.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

Alqurashi, E. (2019). Predicting Student Satisfaction and Perceived Learning within On-

- line Learning Environments. *Distance Education*, 40, 133-148.
<https://doi.org/10.1080/01587919.2018.1553562>
- Alves, L. (2020). Educação remota: entre a ilusão e a realidade. *Educação*, 8, 348-365.
<https://doi.org/10.17564/2316-3828.2020v8n3p348-365>
- Arias, A. V., Naffah, S. C., & Hernandez, J. B. (2019). A Proposed Model of E-Learning Tools Acceptance among University Students in Developing Countries. *Education and Information Technologies*, 24, 1057-1071. <https://doi.org/10.1007/s10639-018-9815-2>
- Avelino, W. F., & Mendes, J. G. (2020). A realidade da educação brasileira a partir da COVID-19. *Boletim de Conjuntura (BOCA)*, 2, 56-62.
- Barreto, A. C. F., & Rocha, D. N. (2020). COVID 19 e Educação: Resistências, Desafios e (Im)Possibilidades. *Revista Encantar. Educação, Cultura e Sociedade*, 2, 1-11.
- Braga, R. (2018). Apresentação. In C. Fausto, & T. Daros (Eds), *A sala de aula inovadora:estratégias pedagógicas para fomentar o aprendizado ativo* (1st ed., pp. 6-7). Penso Editora.
- Brasil (2020a). *Medida Provisória Nº 934, de 1º de abril de 2020*. Diário Oficial da União. <https://www.in.gov.br/en/web/dou/-/medida-provisoria-n-934-de-1-de-abril-de-2020-250710591>
- Brasil (2020b). *Portaria Nº 343, de 17 de março de 2020*. Diário Oficial da União. <https://www.in.gov.br/en/web/dou/-/portaria-n-343-de-17-de-marco-de-2020-248564376>
- Castaman, A. S., & Rodrigues, R. A. (2020). Educação a Distância na crise COVID-19: Um relato de experiência. *Research, Society and Development*, 9, 1-26.
<https://doi.org/10.33448/rsd-v9i6.3699>
- Chagas, E. (2020). DataSenado: quase 20 milhões de alunos deixaram de ter aulas durante pandemia. Senadonoticias. <https://www12.senado.leg.br/noticias/materias/2020/08/12/datasenado-quase-20-milhoes-de-alunos-deixaram-de-ter-aulas-durante-pandemia>
- Cifuentes-Faura, J. (2020). Consecuencias en los niños del cierre de escuelas por Covid-19: el papel del gobierno, profesores y padres. *Revista Internacional de Educación para la Justicia Social*, 9, 1-12.
<https://revistas.uam.es/riejs/article/view/12216>
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed). Routledge.
- Dias, E., & Pinto, F. C. F. (2020). Educação e sociedade. *Ensaio: Avaliação e Políticas Públicas em Educação*, 27, 449-454. <https://doi.org/10.1590/s0104-40362019002701041>
- Field, A. (2009). *Descobrimdo a estatística usando o SPSS* (2th ed.). Artmed.
- Gomide, P. I. C. (2014). *Inventário de Estilos Parentais. Modelo teórico: Manual de aplicação, apuração e interpretação* (3rd ed.). Editora Vozes.
- Grover, S., Goyal, S. K., Mehra, A., Sahoo, S., & Goyal, S. (2020). A Survey of Parents of Children Attending the Online Classes during the Ongoing COVID-19 Pandemic. *Indian Journal of Pediatrics*, 88, 280. <https://doi.org/10.1007/s12098-020-03523-5>
- Imran, N., Zeshan, M., & Pervaiz, Z. (2020). Mental Health Considerations for Children & Adolescents in COVID-19 Pandemic. *Pakistan Journal of Medical Sciences*, 36, 67-72. <https://doi.org/10.12669/pjms.36.COVID19-S4.2759>
- Leite, M. S., Silva, S. R. F. (2017). *Redimensionamento da Computação em Processo de Ensino na Educação Básica: O pensamento Computacional, o Universo e a Cultura Digital*. Analls of Workshops from VI Brazilian Congress of Informatics for Education. <https://doi.org/10.5753/cbie.wcbie.2017.804>

- Maia, B. R., & Dias, P. C. (2020). Ansiedade, depressão e estresse em estudantes universitários: o impacto da COVID 19. *Estudos de Psicologia (Campinas)*, 37, Article ID: e200067. <https://doi.org/10.1590/1982-0275202037e200067>
- Martins, R. X. (2020). A COVID-19 e o fim da Educação a Distância: um ensaio. *Revista de Educação a Distância*, 7, 242-256. <http://repositorio.ufla.br/jspui/handle/1/43156>
- Mesquita, D., Piva, D., & Gara, E. B. M. (2014). *Ambiente virtual de aprendizagem: conceitos, normas, procedimentos e práticas pedagógicas no ensino a distância* (1st ed). Editora Érica.
- National Health Commission of the People's Republic of China (NHCPRC) (2020). *Guideline for Psychological Crisis Intervention during 2019-nCoV*. National Health Commission of the People's Republic of China. <http://www.nhc.gov.cn/jkj/s3577/202001/6adc08b966594253b2b791be5c3b9467.shtml>
- Pal, D., & Vanijja, V. (2020). Perceived Usability Evaluation of Microsoft Teams as an Online Learning Platform during COVID-19 Using System Usability Scale and Technology Acceptance Model in India. *Children and Youth Services Review*, 119, Article ID: 105535. <https://doi.org/10.1016/j.childyouth.2020.105535>
- Península Institute (2020). *Sentimento e percepção dos professores brasileiros nos diferentes estágios do Coronavírus no Brasil*. Península Institute. <https://www.institutopeninsula.org.br/>
- United Nations Educational, Scientific and Cultural Organization (UNESCO) (2020). *A Comissão Futuros da Educação da Unesco apela ao planejamento antecipado contra o aumento das desigualdades após a COVID-19*. United Nations Educational, Scientific and Cultural Organization. <https://pt.unesco.org/news/comissao-futuros-da-educacao-da-unesco-apela-ao-planejamento-antecipado-o-aumento-das>
- Rodrigues, H., Almeida, F., Figueiredo, V., & Lopes, S. L. (2019). Tracking E-Learning through Published Papers: A Systematic Review. *Computers & Education*, 136, 87-98. <https://doi.org/10.1016/j.compedu.2019.03.007>
- Shah, K., Mann, S., Singh, R., Bangar, R., & Kulkarni, R. (2020). Impact of COVID-19 on the Mental Health of Children and Adolescents. *Cureus*, 12, Article ID: e10051. <https://doi.org/10.7759/cureus.10051>
- Thadei, J. (2018). Mediação e educação na atualidade: um diálogo com formadores de professores. In L. Bacich, & J. Moran (Eds.), *Metodologias ativas para uma educação inovadora: uma abordagem teórico-prática* (pp. 90-115). Penso Editora.
- World Health Organization (WHO) (2020). *Coronavirus Disease (COVID-19) Advice for the Public*. World Health Organization. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>
- Ye, J. (2020). Pediatric Mental and Behavioral Health in the Period of Quarantine and Social Distancing With COVID-19. *JMIR pediatrics and parenting*, 3, Article ID: e19867. <https://doi.org/10.2196/19867>
- Wang, G., Zhang, Y., Zhao, J., Zhang, J., & Jiang, F. (2020). Mitigate the Effects of Home Confinement on Children during the COVID-19 Outbreak. *Lancet*, 395, 945-947.