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“I Don’t Know if I Can Handle It All”: Students’ Affect During Remote Education in the COVID-19 Pandemic in Brazil

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Abstract

The COVID-19 pandemic has impacted society in different areas. In education, several reports show the deleterious effects of the disease on the physical and mental health of students, family members, and teachers around the world. Also, in Brazil, affect studies indicate the prevalence of anxiety, stress, and depression among students. The present research, of a qualitative nature, explores what it means, under the lens of affect and from the student’s perspective, to experience remote education during the COVID-19 pandemic. An online questionnaire of 41 closed- and open-ended questions was given to 363 students from a public school in southeastern Brazil. This article analyzes the affective fields that emerged from the discursive textual analysis of the students’ responses ($n = 100$). Four affective fields were categorized: friends, classes, home, and teachers; intersecting emotions, attitudes, values, beliefs, and motivation. In general, students expressed more negative than positive affect but a positive disposition toward face-to-face classes. Boys focused their affect more on classes, while girls on teachers. The affective fields allow us to consider the friends–home–teachers tripod as fundamental to overcoming the phenomenon of affective fatigue that has been identified.

Keywords: affective field, affective fatigue, discursive textual analysis, face-to-face class

Introduction

In January 2020, about a month after the emergence of pneumonia cases without a defined cause in Wuhan, China, a team from the National Health Commission of that country identified the genome of beta coronavirus (2019-nCoVs) in the group of patients (Tan et al., 2020). The World Health Organization (WHO, 2020a) then named the disease COVID-19, severe acute respiratory syndrome caused by coronavirus 2 infection, or SARS-CoV-2. Then, when the virus spread to reach 114 countries, with 118,000 cases and more than 4,000 deaths, in March 2020, the WHO (2020b) declared the disease a pandemic. COVID-19's impacts have been felt in different ways around the world. The biggest one, arguably, is the loss of life; according to the WHO (2021) on May 25, 2021, in its weekly epidemiological update, 3,449,189 people died from the disease; 451,424 of those were in Brazil.

COVID-19 in Brazil is a multidimensional problem, as it permeates aspects that are sometimes neglected, such as the burden of the disease in the prison population (Crispim et al., 2021); care for pregnant women and puerperal women (Souza & Amorim, 2021); and the increased risk of domestic violence against children, adolescents, and women (Marques et al., 2020). The pandemic accentuates structural social inequality (Boschetti & Behring, 2021), causes job insecurity (Souza, 2021), increases the specific risk of economic activity (Salles, 2021), and consequently precipitates the fear that the country will return to the famine map (Bernardes et al., 2021).

In these interconnected dimensions, education is a whole chapter. The suspension of face-to-face classes made the possibility of making the educational process an intrinsic factor of the perceived educational inequalities explicit, given the conditions of the offer, access, and performance of educational activities. Thus, in a country that already faces rising unemployment in a semi-paralyzed government (Malta Campos & Vieira, 2021), the crisis in Brazilian education policies is being consolidated by the union of two processes: an intentional precariousness of education (Costa et al., 2021) and the conjunctural aspect brought about by the pandemic. Fundamentally, the result of this sum amplifies a crisis that is political, economic, social, and sanitary (Saviani, 2020).

This article emerges from discussions held at the meetings of the Research Group on Public Policies in Education of the master's program in teaching practices at the Metropolitan University of Santos (UNIMES) on the impacts of COVID-19 on school communities, which started the trajectory of activities in emergency remote education (ERE) (Hodges et al., 2020).

COVID-19 Impacts on Student Affect

It is necessary to understand the different consequences of COVID-19 for children and adolescents, with particular attention paid to the aspects that involve education, as one of the significant changes in students' routine has been the abrupt transition to ERE. Larsen et al. (2021), with research data with 442 Norwegian students, points out that the majority (78%) missed their friends and were concerned about the possibility of becoming infected and infecting others with the virus. They report that students felt lonelier and had difficulty concentrating. Tang et al. (2021) describe a study with 4,391 students from Shanghai, China: a quarter of the students had anxiety symptoms, about 20% had depression, and more than 650 students had symptoms of stress. As in the Norwegian study, students who perceived the isolation situation as more positive had less psychological distress and were more satisfied with life. Loades et al. (2020) reviewed 63 studies from countries on all continents to analyze the impact of

loneliness on children and adolescents isolated because of COVID-19. With information from 51,576 students, they found a relationship between loneliness and mental health problems, pointing out, as a predictor of related future problems, the length of time that students experienced loneliness.

Psycho-emotional impacts on students in Brazil have also been investigated. In 977 higher education students, Vieira et al. (2020) identified changes in mood, less satisfaction with life, and the emergence of anxiety and distress. Enes and Bicalho (2021) observed discouragement and concern with income, in addition to complaints about homesickness for face-to-face meetings. Marin et al. (2021) analyzed 14 studies on psychosocial aspects, concluding that the pandemic led to increased depression rates. Esteves et al. (2021) researched the prevalence of moderate to severe symptoms of stress, depression, and anxiety in 208 students.

Research on basic education in Brazil shows similar results. Santos and Mendonça (2021) report that students expressed not feeling motivated for classes, feeling the absence of friends and the "coziness of the classroom" (p. 124). Dutra et al. (2020) and Zimer et al. (2020) identify students' feelings of lack of colleagues. Students most declared frustration, sadness, and fear in Reis et al.'s study (2020). With data from approximately 11,000 students, the Conselho Nacional de Juventude survey (2020) shows that almost half of those students affirmed that the emotional aspects of the pandemic had hindered their studies. According to the research, anxiety, boredom, and impatience are the most common negative feelings, while feeling welcomed comes in as the most positive one.

Affect

Affect is an internal system of representation (Goldin & Kaput, 1996). Representations are highly structured personal or cultural systems that can be understood as symbolic schemes or representational acts. The internal representations are unobservable and need to be inferred and refer to the mental configurations of the individuals. Therefore, affect is a specific representation system and companion of other elements, such as imagery, verbal/syntactic, planning, and executive control. According to DeBellis and Goldin (2006), the interaction between these systems communicates meanings to the subject, and through externalizations, their configurations can communicate meanings to others.

From Radford's (2015) point of view, in a socio-historical reading and of physiological non-reductionism, affect is understood "beyond physio-psychological responses, evaluations, and judgments dimensioned by moral aspects of a specific context—as culturally established, historically influenced, and delimited element that makes up an internal system of representations intrinsically and inextricably linked to cognition" (Comelli, 2020, p. 43).

Together with the presented perspectives, Schindler and Bakker's (2020) holistic position was adopted to deal with affect. It breaks away from the isolated interpretation of affective constructs, seeing them in an interrelated way. This entails considering affect as an *affective field*, as a fluid phenomenon in which the various dimensions are related internally (e.g., emotions to each other) and externally (as beliefs connecting with values). With a similar approach, Comelli (2020) suggests that affect also be analyzed from a multi-affect perspective. Considering the lack of standard definitions for affective constructs (Hannula, 2019; Hart, 1989), mediated by Schindler and Bakker (2020), as well as the authors they use as a reference, this research will consider the following definitions:

Emotions are feelings such as happiness, fear, or anger in a particular situation that are temporary and unstable ... ; Attitudes are stabilized affective responses within certain situations

or rather a psychological tendency towards an object or entity ... ; Beliefs are students' views of some aspect of the world ... beliefs about problem solving; Self-efficacy is a student's own assessment/judgment of her capabilities to execute specific behaviors in specific situations ... ; Interest is a preferred engagement of a person (student) with a certain entity, which can be more or less situational or enduring ... ; Motivation is the ensemble of reasons and influences why students engage in any pursuit ... ; Value is the appreciation or perceived importance of objects, contents, and actions. (Schindler & Bakker, p. 307)

Methodology

The research seeks to understand aspects of the impact of the COVID-19 pandemic on teaching and learning in basic education, emphasizing issues involving information and communication technologies. Among other aspects, it aims to understand how students and teachers manage their educational tasks, assess their difficulties, perceive the technical problems faced, and view and express their affect during the pandemic period.

The data focuses on the dimensions of students' affect from an urban Brazilian public school in the municipality of Santos, state of São Paulo. It corresponds to a section of a more extensive and ongoing investigation named Perceptions of Students and Teachers About Remote Education in the Pandemic (PERSONAE).

Conducted by the Research Group on Public Policies in Education of the master's program in teaching practices at the Metropolitan University of Santos, PERSONAE focuses on subjects from a metropolitan region with a total population of 1,881,706 inhabitants, where, on average, 97.6% of students aged 6 to 14 are enrolled in school, and an average gross domestic product (GDP) per capita of approximately US\$6,000.00 per year (Instituto Brasileiro de Geografia e Estatística, 2021).

The work stages carried out at PERSONAE followed a perspective of collaborative research—interaction between the components of the research group plus the sharing of meanings, information, skills, resources, and objectives for completing the agreed-upon tasks (Bukvova, 2010; Sonnenwald, 2007). Online discussion meetings were held by videoconference, with Google tools used for the production and collective analysis of materials and data.

Of a qualitative nature (Ritchie et al., 2013), this research subscribes as a *paradigm* concept, the “set of basic beliefs (or metaphysics) that deals with ultimates or first principles” (Guba & Lincoln, 1994, p. 107). Although there are crossings between paradigms, the philosophy adopted is a constructivist one: it is (a) ontologically relativist, being it that reality is taken as a social, experiential, and contextual construction of researchers and participants; (b) epistemologically subjectivist, because of the interaction between researchers, research, researched, and phenomenon, the reality is established as a human creation; and (c) methodologically interpretive (hermeneutics/dialectic), as it seeks to explore a phenomenon from the position of interpreters of the data and the meanings attributed to the information (Creswell, 2007; Guba & Lincoln, 1994). Of phenomenological inspiration, we consider Zahavi's (2019) position, which assures that “at its core, phenomenology is a philosophical endeavor. Its task is not to contribute to or augment the scope of our empirical knowledge, but rather to step back and investigate the nature and basis of this knowledge” (p. 259). Thus, the research adheres to the criticism of scientism, recognizing the subjects as embodied beings and inserted in society, history,

culture, and nature. It is about assuming intersubjectivity, that "there are aspects of myself and aspects of the world that only become available and accessible through the other" (Zahavi, 2018, p. 67).

Given the strands, the paradigm, and the approach presented, we seek to answer the following question: What does it mean, under the lens of affections and from the student's perspective, to experience remote education during the COVID-19 pandemic?

Participants

The participants in this study come from an urban public school in Santos, located in São Paulo, Brazil. According to information obtained at the school, 363 students—175 girls (48.2%) and 188 boys (51.8%) between 11 and 17 years of age—were part of the institution. The data production was carried out employing a voluntary sample, in a non-probabilistic sample, carried out for convenience (one of the researchers taught at the participating institution). Data were obtained from 100 students. Differences are observed in the representativeness of the respondent students to the reality of the participating institution: girls make up about 48% of the school's students but represented 57% of the participants (see Table 1).

Table 1

Sample Description—Age and Gender Identity by Grade

| Grade | Gender identity | Sample (n = 100) | | | | School (N = 363) | |
|-------|-----------------|------------------|------|-----|-------|------------------|-------|
| | | Age | | n | % | n | % |
| | | M | SD | | | | |
| 6 | Girl | 11.72 | 0.81 | 19 | 63.3 | 49 | 46.7 |
| | Boy | 11.91 | 0.83 | 11 | 36.7 | 56 | 53.3 |
| | Subtotal | 11.80 | 0.81 | 30 | 30.0 | 105 | 28.9 |
| 7 | Girl | 12.60 | 0.63 | 15 | 48.4 | 41 | 39.0 |
| | Boy | 12.87 | 0.74 | 15 | 48.4 | 64 | 61.0 |
| | Not declared | 13.00 | - | 1 | 3.2 | - | - |
| | Subtotal | 12.74 | 0.68 | 31 | 31.0 | 105 | 28.9 |
| 8 | Girl | 13.56 | 0.53 | 9 | 47.4 | 36 | 52.9 |
| | Boy | 13.50 | 0.53 | 10 | 52.6 | 32 | 47.1 |
| | Subtotal | 13.53 | 0.51 | 19 | 19.0 | 68 | 18.7 |
| 9 | Girl | 14.71 | 0.47 | 14 | 70.0 | 49 | 57.6 |
| | Boy | 14.67 | 0.52 | 6 | 30.0 | 36 | 42.4 |
| | Subtotal | 14.70 | 0.47 | 20 | 20.0 | 85 | 23.4 |
| All | Girl | 12.98 | 1.33 | 57 | 57.0 | 175 | 48.2 |
| | Boy | 13.02 | 1.12 | 42 | 42.0 | 188 | 51.8 |
| | Not declared | 13.00 | - | 1 | 1.0 | - | - |
| | Total | 13.00 | 1.23 | 100 | 100.0 | 363 | 100.0 |

Considering the subtotal percentages of students per grade, the research is close to portraying the distribution of the number of students in the school. For example, 19% of students from the sample are

in eighth grade; they represent 18.7% of students at the school. The table shows the average age (M) and its standard deviation (SD) by grade, by gender within the grade, and the sample as a whole (All). The ages of the participating boys and girls (in addition to the subjects who did not want to declare their gender identity) range from 11 to 15 years old ($M = 13.0$ years, $SD = 1.23$).

Research Instrument

A questionnaire was produced on Google Forms with 41 open- and closed-ended questions, divided into four sections: first, sociodemographic characteristics: age, gender identification, and grade; second and third, resources and conditions for teaching and learning in homes and school, before and during the pandemic; and fourth, the affective field.

Procedures

After approval from the school management team, data collection was carried out between December 3 and December 17, 2020. Structured in a Google Form, the questionnaire was posted as an invitation in the Google Classroom of the 11 student rooms. The form contained the description, objectives, and destination of the data and results. Participants voluntarily and anonymously completed the form. A code is assigned to each respondent, as configured: individual number (1 to 100), gender (M for male and F for female), age (11 to 15), and grade (from 6 for the sixth grade to 9 for the ninth grade).

Data Analysis

Demographic variables were categorized by gender identity, age, and grade. The closed questions referring to structural aspects of the school and pedagogical teaching were tabulated, and for demographic data, descriptive statistics were performed. The answers to the open questions analyzed in this article were edited without changing the general meaning or structure of the texts (access at: <https://drive.google.com/file/d/1vpIr3mBMK425ue43H6DqVaxHyeTCLeGI/view?usp=sharing>).

Affect was identified according to the constructs of the theoretical framework and tabulated—initially and for didactic purposes—according to an arbitrary gradient of affective intensity: positive, negative, neutral, and intersecting affect. For text analysis, discursive textual analysis (DTA) was adopted. Based on the rigor and in-depth reading of the texts produced, DTA allows the analysis and synthesis of textual materials “to describe and interpret them in order to achieve a more complex understanding of the phenomena and discourses from which they were produced” (Moraes & Galiazzi, 2007, p. 114). This technique is a qualitative and self-organized process. Understanding of textual productions that express the participants' comments was based on three components: deconstruction of texts in units of analysis (unitarization); creation of a relationship between the units, forming sets of categories (categorization); and production of the explanatory text of what was understood about the phenomenon from the previous components (meta-text).

Results and Discussion

Students were asked to express the affect that came to mind when reflecting on the period of remote education in the pandemic. Through their words, decoded by different affective expressions, it was possible to voice those going through this ordeal. The following excerpt summarizes internal conflicts, questions of self-esteem, self-concept, and doubts about human resilience based on the voice of a student:

When I think that there is no certainty about the moment we are experiencing, I feel terrible; there is a lump in the throat and an immense desire to cry. ... I do my best every day, but I still feel like a bad student. *I don't know if I can handle it all* [emphasis added]. (50F14-8)

Not recognizing one's own ability to resist is part of the picture of several negative feelings identified among students. Table 2 shows the relative frequency of identified expressions according to an arbitrary positive–negative gradient in general distribution. As each student represents an answer, when a student answered, "I feel kind of left and sad because of this difficult phase" (9M13-8), we counted this expression as negative affect.

Table 2

Distribution of Affect in the Positive–Negative Gradient Among Girls and Boys

| Position on the gradient | Girls (n = 57) | | | Boys (n = 42) | | | Not declared (n = 1) | | | Total (N = 100) | |
|----------------------------|----------------|----------|----------|---------------|----------|----------|----------------------|----------|----------|-----------------|------|
| | n | % gender | % sample | n | % gender | % sample | n | % gender | % sample | n | % |
| Negative | 39 | 68.4 | 39.0 | 25 | 59.5 | 25.0 | - | - | - | 64 | 64.0 |
| Positive | 7 | 12.3 | 7.0 | 8 | 19.1 | 8.0 | - | - | - | 15 | 15.0 |
| Intersected | 6 | 10.5 | 6.0 | 5 | 11.9 | 5.0 | - | - | - | 11 | 11.0 |
| Neutral | 1 | 1.8 | 1.0 | 2 | 4.8 | 2.0 | - | - | - | 3 | 3.0 |
| Do not know/not manifested | 4 | 7.02 | 4.0 | 2 | 4.8 | 2.0 | 1 | 100.0 | 1.0 | 7 | 7.0 |

Among both girls (68.4%) and boys (59.5%), negative affect, such as feeling sad or afraid, was considerably more present. In general, in 64% of the responses, there was an expression of negative affect, which corresponds to a little more than four times the number of positive responses. Although they have a small representation in the answers, the neutral statements (3%) stand out. Those who either did not speak up or said that they did not know made up 10% of the data. How is it possible to ignore the importance of the statement, "It is a wave of feelings that cannot be explained" (70F14-9)? Far from not meaning anything, the words of this female student can represent affective confusion; this incapacitates her to both understand and express herself clearly. When projecting her ideas, the student seemed to be saying that there was something powerful happening inside of her during this pandemic, and she was having difficulties understanding what it is. This expression, which can be difficulty in dealing with emotions and feelings as well as the very shame in expressing oneself, can also be found in the records—"I prefer not to speak" (36F11-6) and "I can't think of anything now" (44F13-6)—of some other students.

Table 3 shows the frequencies of the eight main terms/words that directly express affect-cognitive elements (the student who did not express their gender identity was excluded from this analysis because they did not express themselves through a sentence/text). Sadness-related data were the most present (18.2%), followed by confusion (12.1%), fear (9.1%), and happiness (9.1%). These data are consistent with those present in Table 2.

Table 3

Distribution of Affect-Cognitive Terms Among Girls and Boys

| Terms | Girls (n = 57) | | | Boys (n = 42) | | | Total (N = 99) | |
|-----------------|----------------|----------|----------|---------------|----------|----------|----------------|------|
| | n | % gender | % sample | n | % gender | % sample | n | % |
| Sadness | 10 | 17.5 | 10.1 | 8 | 19.0 | 8.1 | 18 | 18.2 |
| Confusion | 8 | 14.0 | 8.1 | 4 | 9.5 | 4.0 | 12 | 12.1 |
| Fear | 7 | 12.3 | 7.1 | 2 | 4.8 | 2.0 | 9 | 9.1 |
| Happiness | 4 | 7.0 | 4.0 | 5 | 11.9 | 5.1 | 9 | 9.1 |
| Anger | 4 | 7.0 | 4.0 | 4 | 9.5 | 4.0 | 8 | 8.1 |
| Terror/horrible | 5 | 8.8 | 5.1 | - | - | - | 5 | 5.1 |
| Anxiety | 3 | 5.3 | 3.0 | 1 | 2.4 | 1.0 | 4 | 4.0 |
| Discouragement | 3 | 5.3 | 3.0 | - | - | - | 3 | 3.0 |

Fear (12.3%) and feeling horrible (8.8%) had a more significant weight among girls. Boys did not express feeling lousy and discouraged. On the other hand, happiness was the second most cited item among boys (11.9%), while for girls, this position is occupied by confusion (14.0%). Although it is not a matter of saying that girls were able to reflect better on their affect, the data show that they wrote longer texts, in addition to using more direct terms and expressing more affective elements. Girls used, on average, 15.6 words to present their ideas (average of 72.2 characters), while boys positioned themselves using, on average, 10.3 words (average of 50.7 characters). Although they have the same cognitive and potential resources for composing texts, girls have been considered better at spelling (recovery and production of letters), composition (production of words to express ideas), and organization (translation of ideas) than boys (De Smedt et al., 2018).

Affective Fields

Response excerpts (units of analysis) were grouped into four categories or affective fields. Table 4 shows the total number of units of analysis (TUA) produced in total (N = 44) and considering girls (n = 28, 63.6%) and boys (n = 16, 36.4%) in relation to the categories.

Table 4

Distribution of Units of Analysis by Category and Among Girls and Boys

| Category | Girls | | | n | Boys | | TUA | |
|----------|-------|----------|-------|----|----------|-------|-----|-------|
| | n | % gender | % TUA | | % gender | % TUA | n | % |
| Friends | 7 | 25.0 | 15.9 | 3 | 18.8 | 6.8 | 10 | 22.7 |
| Classes | 7 | 25.0 | 15.9 | 9 | 56.3 | 20.5 | 16 | 36.4 |
| Home | 6 | 21.4 | 13.6 | 2 | 12.5 | 4.5 | 8 | 18.2 |
| Teachers | 8 | 28.6 | 18.2 | 2 | 12.5 | 4.5 | 10 | 22.7 |
| Total | 28 | 100.0 | 63.6 | 16 | 100.0 | 36.4 | 44 | 100.0 |

Note. TUA = total units of analysis.

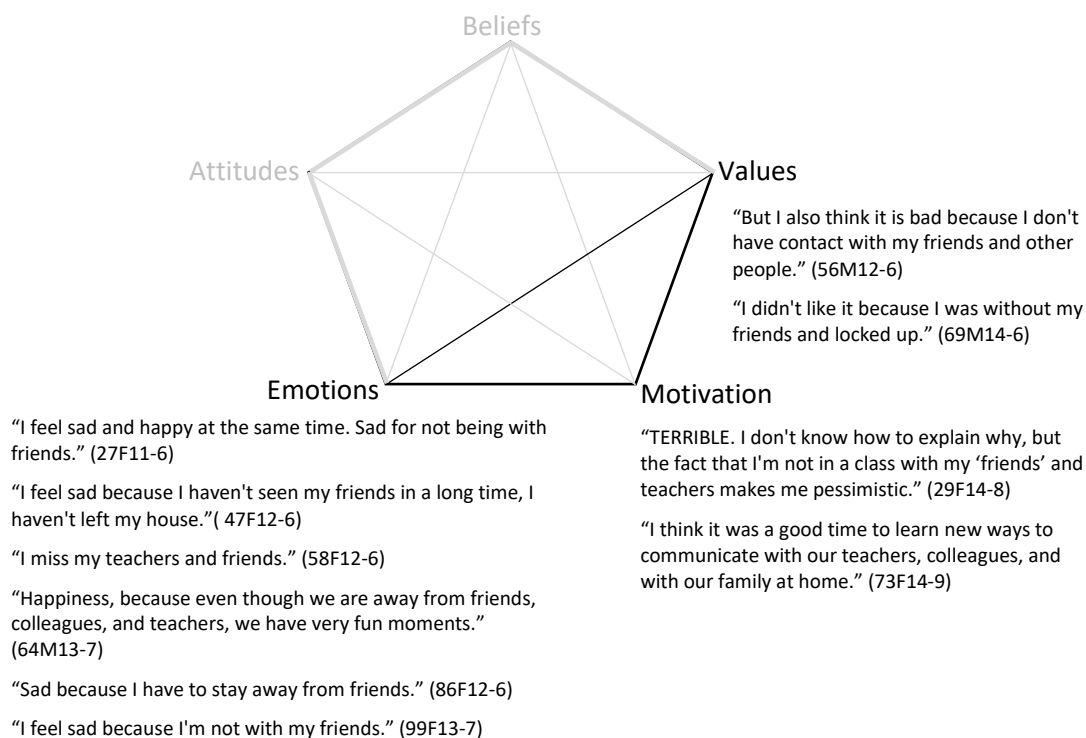
Although they correspond to 57.0% of the participants, the girls weighed in proportionally more in the analysis, probably because they expressed themselves in slightly more detailed texts. Girls, in general, seemed not to express their affect in a more direct way to a category. The difference between the number of units of analysis coming from the girls' statements in each category is small. Comparatively, they seem to have been more inclined to talk about their teachers than about home. On the other hand, boys directed their expressions of affect to classes; 56.3% of the categorized units were directed to this theme.

Students' Affective Field Concerning Friends

When expressing their ideas and directing them to friends, students mainly brought up emotions, motivations, and values (Figure 1). Students expressed the importance and value of friends as a factor of support for getting through the pandemic period. The regulation of affect, in particular, emotions and motivations, has an essential foundation in this element. Friends are needed during COVID-19 (Larsen et al., 2021). They are both the benchmark for students affirming their sadness ("not being with friends" [27F11-6]) and for saying that, despite being distant from those they appreciate, they have had "very fun moments" (64M13-7).

Figure 1

Representation of Students' Affective Field Concerning Friends



On the other hand, the emotionally positive moments students experienced may have allowed them to be inclined to consider that "it was a good time to learn new ways to communicate" (73F14-9), even though all the nostalgia gave them reasons to feel "TERRIBLE" (29F14-8). The absence of contact with their closest relations points to *affective fatigue* during the period—sadness was an emotion identified in many responses (Table 3). Friends help students socialize emotions and develop affective repertoires, thus allowing positive thoughts and feelings to be internalized if there is adequate support (Klimes-

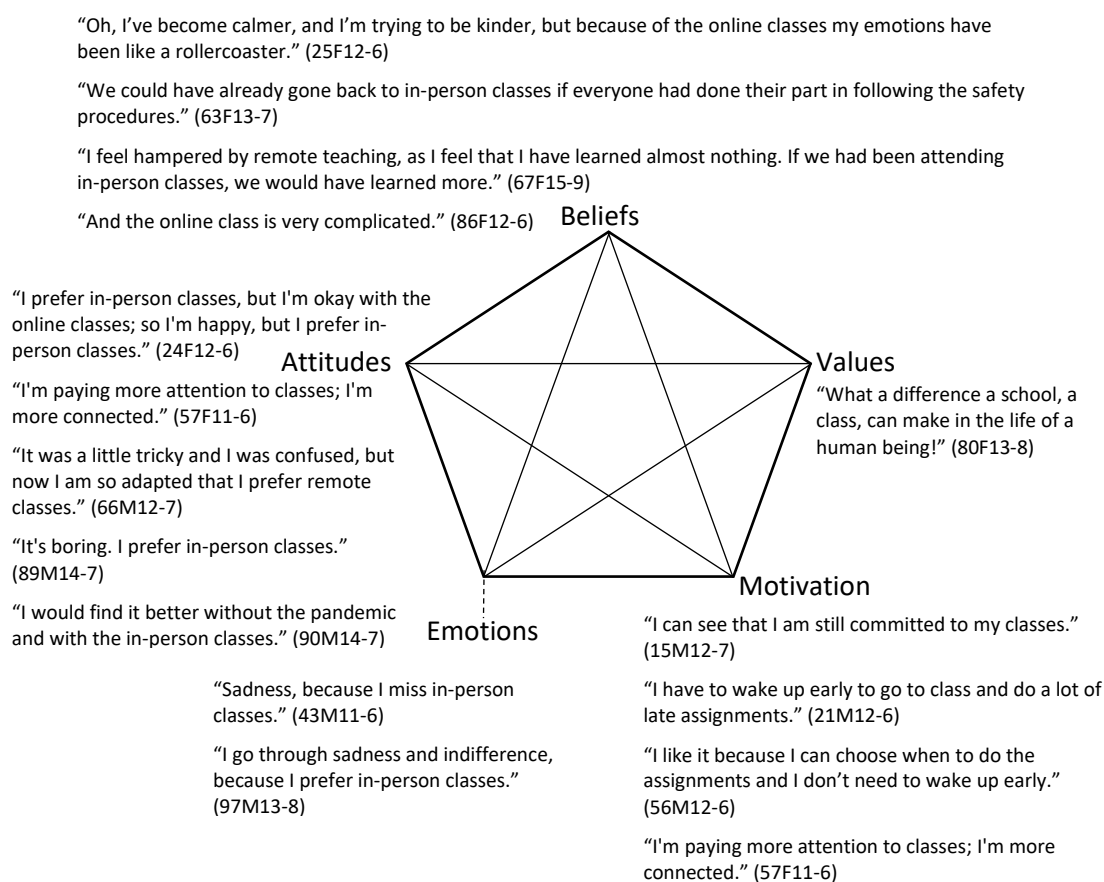
Dougan et al., 2014). Failure to exercise these possibilities is a negative factor brought on by the pandemic.

Students' Affective Field Concerning Classes

Most units of analysis are categorized in the affective field of the classes. Furthermore, this shows a full field of affect (Figure 2).

Figure 2

Representation of Students' Affective Field Concerning Classes



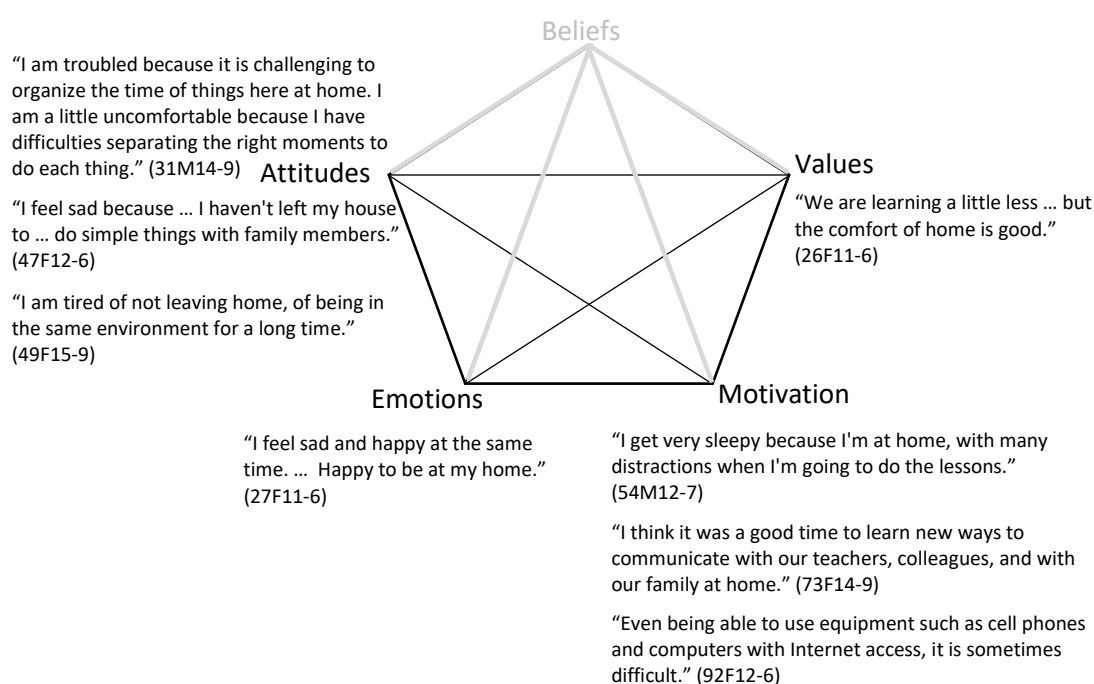
Face-to-face classes represent a guide to behavior, something desired and essential, as it is so central that it is seen as something that "is missing in the life of a human being" (80F13-8). Students consider remote classes as a more complicated or even harmful activity, based on the belief that almost nothing has been learned: "And if we had been attending in-person classes, we would have learned more" (67F15-9). Students believed remote classes had an influence on their affect: "Because of the online classes, my emotions have been like a rollercoaster" (25F12-6). They also realized that a behavioral response to the new situation is needed: "I'm more connected" (57F11-6). Some statements portray the students' positive attitudes toward face-to-face classes. This represent a well-known area to them that may not require the development of new responses, habits, and adaptations in the level of attention: ("I am paying more attention to class" [57F11-6]), commitment ("I am still committed to my classes" [15M12-7]), and time management ("I like it because I can choose when to do activities" [56M12-6]) that remote classes require. Remote classes also imply regulating feelings of sadness and indifference, which build up without the support and socialization provided by friends.

Students' Affective Field Concerning Home

The home is an *affective anchor* for students (Figure 3). It is culturally central because it is associated with family, identity, and security (Fitchen, 1989). The home can have more personal (happiness, belonging, privacy), social (relationships with friends, entertainment), or physical (structure, services, work environment) meanings (Sixsmith, 1986). This anchor is expressed in the perception of comfort—"The comfort of home is good" (26F11-6)—and happiness—"Happy to be at my home" (27F11-6). Despite that students can engage in different ways and motivate themselves to learn while being at home all the time, "Even being able to use equipment such as cell phones and computers with Internet access, it is sometimes difficult" (92F12-6).

Figure 3

Representation of Students' Affective Field Concerning Home



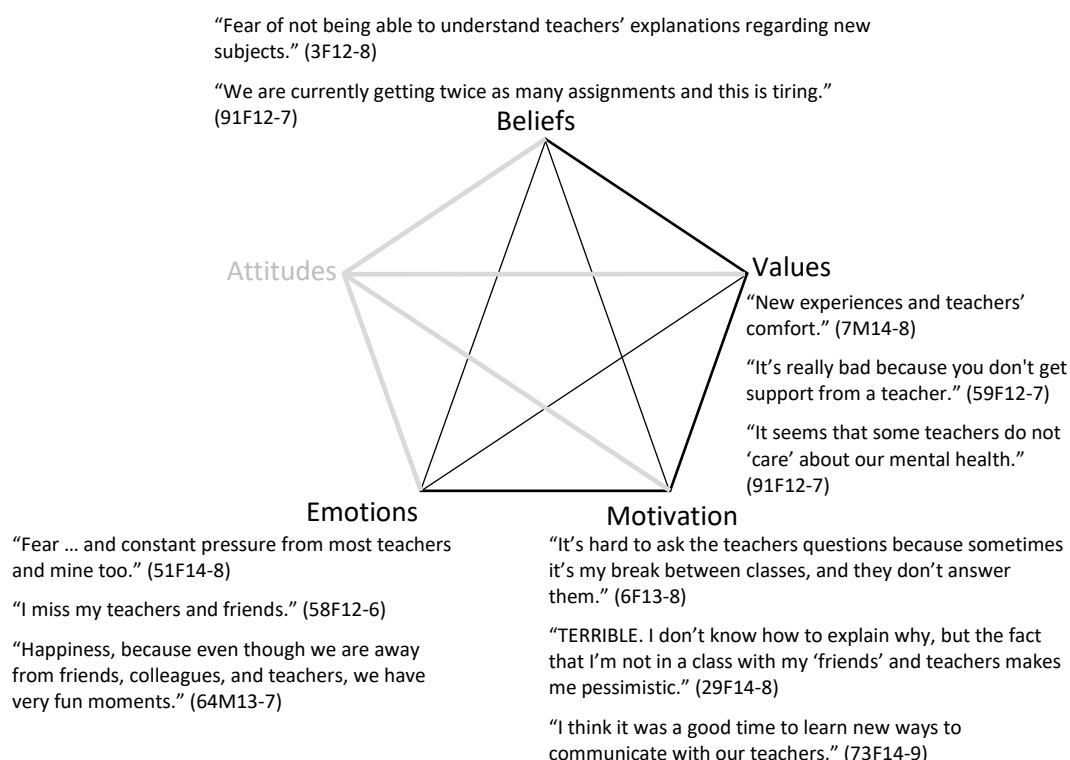
The home seems to be overburdened in terms of its role, contributing to what we call affective fatigue. There is a conflict that can be portrayed as follows: I love my home, but I am tired of being here, with distractions, without learning, doing confusing things.

Students' Affective Field Concerning Teachers

The fear reported by students seems to express the confrontation between self-concept about their abilities, expectations of results, self-image beliefs, and the way they relate to teachers in this affective field (Figure 4). Students are afraid of "not being able to understand teachers' explanations" (3F12-8). They are afraid of "constant pressure" (51F14-8) but miss their teachers, despite feeling overwhelmed and under too many demands. They were concerned about the attention they received ("They [teachers] don't answer" [6F13-8]), with teachers' supportive role ("teachers' comfort" [7M14-8]) and empathy ("It seems that some teachers do not 'care' about our mental health" [91F12-7]) emphasized.

Figure 4

Representation of Students' Affective Field Concerning Teachers



The teacher–student relationship plays a vital role in students' efforts to learn (Lumpkin, 2007). Students express that the teacher who cares and supports is configured as an essential and valuable affective element, in agreement with the literature (Wentzel, 2016). However, students have been in remote classes for an extended period, so the role of teachers in the affective field of students can take different paths between extremes: strengthened, it reinforces the engagement for the construction of new knowledge; or weakened, it ends up interfering in learning.

Conclusion

In this article, we have tried to understand what it means, under the lens of affect and from the student's perspective, to experience remote education during the COVID-19 pandemic. The affect identified in the research has a representational function, in addition to the subjects, revealing both the impacts brought about by the pandemic and pointing out the necessary supports to overcome it.

By giving students a voice, in addition to the analysis that can be carried out, the word, the main element of the dialogue, becomes two dimensions—action and reflection—so interwoven that Freire (2014) calls them the "true word" (p. 107). It was by the word that the students' affect was understood a little better. In our research, we recognized four affective fields of the participants.

In the affective field related to friends, affect is intertwined, which points to the extreme importance of the role of this element in education, especially in adverse periods. To a certain extent, the classes and the school make up a complex field, given the number of intersecting variables and affect. Understanding the preference for face-to-face classes requires a deeper understanding of the construction of identities in collaborative environments, their imbrication with the supportive role of friends and teachers, specific and global motivational states, or even the social representations that one has of schools. It also requires understanding why boys expressed more affect in this field.

Another critical element, with two faces in the pandemic, are the teachers: they provoke expectations and anxieties, but they are also a figure of comfort and care; therefore, they need to be recognized and valued in this positive role. Considering that isolation due to COVID-19 influences our ability to recognize the happiness of others and increases that of perceiving sadness (Meléndez et al., 2020), students may be capturing distorted information issued by teachers, interfering with the positive role that this element usually portrays.

Finally, the affective field that involves the home shows its relevance in the period, constituting itself as a central affective anchor. The home to which students refer in their texts, despite all the turbulence, still seems to be the only known and safe soil. Thus, the home's importance in this research is corroborated. Furthermore, it is recognized that interpreting the complexity of its representativeness involves understanding the role of families, identities, cultural elements, and personal, social, and physical meanings in students' lives.

Helgeson et al. (2006) point out that positive effects may occur from traumatic events, and these benefits are more significant the more distant from the traumatic situation one is. Negative emotions are known to decrease, and positive ones to become more robust, as time goes by (Folkman, 2008). From the negative affect expressed by the participants, we can say that this distance had not yet been reached, indicating that the participants were still experiencing the pandemic intensely at the time of research. On the other hand, we also detected positive perspectives. However, we ask ourselves when, under what circumstances, and at what intensity—and if it is even relevant—beneficial effects can be seen in students going forward. In sum, identifying the phenomenon of *affective fatigue*—usually studied in patients undergoing cancer surgery—points to the complexity of experiencing remote education during the pandemic.

Given this demand and considering the various research already carried out, the search for solutions to the issues brought about by COVID-19 in education must involve multidimensional strategies that consider the reported phenomenon and the friends–home–teachers tripod (even though we recognize that the empirical evidence may not have been sufficient to allow for a more precise connection between the affective fields discussed). In this sense, it is necessary to plan measures, together with educators, so that the government and schools can implement projects focused on the problem, for example, guaranteeing psychological services and quality training for all, especially students and teachers.

References

- Bernardes, M. S., Vieira, V. C. R., Francisco, P. M. S. B., Marín-León, L., Camargo, D. F. M., & Segall-Corrêa, A. M. (2021). (In) segurança alimentar no Brasil no pré e pós pandemia da COVID-19: reflexões e perspectivas [Food (in)security in Brazil in the pre- and post-pandemic of COVID-19: Reflections and perspectives]. *InterAmerican Journal of Medicine and Health*, 4. <https://doi.org/10.31005/iajmh.v4i.160>
- Boschetti, I., & Behring, E. R. (2021). Assistência Social na pandemia da COVID-19: proteção para quem? [Social assistance in the COVID-19 pandemic: Protection for whom?]. *Serviço Social & Sociedade*, (140), 66–83. <https://doi.org/10.1590/0101-6628.238>
- Bukvova, H. (2010). Studying research collaboration: A literature review. *Sprouts: Working Papers on Information Systems*, 10(3), Article 326. https://aisel.aisnet.org/sprouts_all/326
- Comelli, F. A. M. (2020). *Matemática e meta-afeto: lentes afetivas sobre a relação afeto-cognição na educação matemática* [Mathematics and meta-affect: Affective lenses on the affect-cognition relationship in mathematics education] [Doctoral dissertation, Pontifical Catholic University of São Paulo]. <https://tede.pucsp.br/bitstream/handle/23161/2/Felipe%20Augusto%20de%20Mesquita%20Comelli.pdf>
- Conselho Nacional de Juventude. (2020). *Pesquisa juventudes e a pandemia do coronavírus* [Research on youth and the coronavirus pandemic]. https://4fa1d1bc-0675-4684-8ee9-031db9beoab.filesusr.com/ugd/fod618_41b201dbab994b44b00aabca41f971bb.pdf
- Costa, R. M. P., da Silva, A. V. L., & Neto, E. D. A. A. (2021). Aspectos nefastos da pandemia da COVID-19 sobre a política de educação no Brasil [Nefarious aspects of the COVID-19 pandemic on education policy in Brazil]. *Research, Society and Development*, 10(3), Article e29310313313. <https://doi.org/10.33448/rsd-v10i3.13313>
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches*. Sage Publications. <https://us.sagepub.com/en-us/nam/qualitative-inquiry-and-research-design/book246896>
- Crispim, J. D. A., Ramos, A. C. V., Berra, T. Z., Santos, M. S. D., Santos, F. L. D., Alves, L. S., da Costa, F. B. P., & Arcêncio, R. A. (2021). Impacto e tendência da COVID-19 no sistema penitenciário do Brasil: um estudo ecológico [Impact and trend of COVID-19 in the Brazilian prison system: An ecological study]. *Ciência & Saúde Coletiva*, 26(1), 169–178. <https://doi.org/10.1590/1413-81232020261.38442020>
- DeBellis, V. A., & Goldin, G. A. (2006). Affect and meta-affect in mathematical problem solving: A representational perspective. *Educational Studies in Mathematics*, 63(2), 131–147. <https://doi.org/10.1007/s10649-006-9026-4>
- De Smedt, F., Merchie, E., Barendse, M., Rosseel, Y., De Naeghel, J., & Van Keer, H. (2018). Cognitive and motivational challenges in writing: Studying the relation with writing performance across

- students' gender and achievement level. *Reading Research Quarterly*, 53(2), 249–272.
<https://doi.org/10.1002/rrq.193>
- Dutra, J. L. C., Carvalho, N. C. C., & Saraiva, T. A. R. (2020). Os efeitos da pandemia de COVID-19 na saúde mental das crianças [The effects of the COVID-19 pandemic on children's mental health]. *Pedagogia em Ação*, 13(1), 293–301.
<http://periodicos.pucminas.br/index.php/pedagogiacao/article/view/23772/16788>
- Enes, E. N. S., & Bicalho, M. G. P. Afetos e subjetividades de estudantes na pandemia: Relato de experiência [Affections and subjectivities of students in the pandemic: Experience report]. *Educação Contemporânea—Ensino Superior*, 15, 8–15.
https://recipp.ipp.pt/bitstream/10400.22/17293/1/CAPL_CIETI_GCA_cap23.pdf
- Esteves, C. S., Oliveira, C. R. D., & Argimon, I. I. D. L. (2021). Social distancing: Prevalence of depressive, anxiety, and stress symptoms among Brazilian students during the COVID-19 pandemic. *Frontiers in Public Health*, 8, Article 923.
<https://doi.org/10.3389/fpubh.2020.589966>
- Fitchen, J. M. (1989). When toxic chemicals pollute residential environments: The cultural meanings of home and homeownership. *Human Organization*, 48(4), 313–324.
<https://doi.org/10.17730/humo.48.4.j5306054tk7w6813>
- Folkman, S. (2008). The case for positive emotions in the stress process. *Anxiety, Stress, and Coping*, 21(1), 3–14. <https://doi.org/10.1080/10615800701740457>
- Freire, P. (2014). *Pedagogia do oprimido* [Pedagogy of the oppressed]. Paz e Terra.
<https://www.record.com.br/produto/pedagogia-do-oprimido-3/>
- Goldin, G. A., & Kaput, J. J. (1996). A joint perspective on the idea of representation in learning and doing mathematics. In L. Steffe, P. Nesher, P. Cobb, G. Goldin, & B. Greer (Eds.), *Theories of mathematical learning* (pp. 397–430). Erlbaum.
<https://www.taylorfrancis.com/chapters/edit/10.4324/9780203053126-30/joint-perspective-idea-representation-learning-mathematics-gerald-goldin-james-kaput>
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research* (105–117). Sage Publications.
<https://psycnet.apa.org/record/1994-98625-005>
- Hannula, M. S. (2019). Young learners' mathematics-related affect: A commentary on concepts, methods, and developmental trends. *Educational Studies in Mathematics*, 100(3), 309–316.
<https://doi.org/10.1007/s10649-018-9865-9>
- Hart, L. E. (1989). Describing the affective domain: Saying what we mean. In D. B. McLeod & V. M. Adams (Eds.), *Affect and mathematical problem solving* (pp. 37–45). Springer.
https://doi.org/10.1007/978-1-4612-3614-6_3

- Helgeson, V. S., Reynolds, K. A., & Tomich, P. L. (2006). A meta-analytic review of benefit finding and growth. *Journal of Consulting and Clinical Psychology, 74*(5), 797–816.
<https://doi.org/10.1037/0022-006X.74.5.797>
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020, March 27). The difference between emergency remote teaching and online learning. *Educause Review*.
<https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Instituto Brasileiro de Geografia e Estatística. (2021). Cidades@. <https://cidades.ibge.gov.br>
- Klimes-Dougan, B., Pearson, T. E., Jappe, L., Mathieson, L., Simard, M. R., Hastings, P., & Zahn-Waxler, C. (2014). Adolescent emotion socialization: A longitudinal study of friends' responses to negative emotions. *Social Development, 23*(2), 395–412.
<https://doi.org/10.1111/sode.12045>
- Larsen, L., Helland, M. S., & Holt, T. (2021). The impact of school closure and social isolation on children in vulnerable families during COVID-19: A focus on children's reactions. *European Child & Adolescent Psychiatry*. Advance online publication. <https://doi.org/10.1007/s00787-021-01758-x>
- Loades, M. E., Chatburn, E., Higson-Sweeney, N., Reynolds, S., Shafran, R., Brigden, A., Linney, C., McManus, M. N., Borwick, C., & Crawley, E. (2020). Rapid systematic review: The impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19. *Journal of the American Academy of Child & Adolescent Psychiatry, 59*(11), 1218–1239.E3. <https://doi.org/10.1016/j.jaac.2020.05.009>
- Lumpkin, A. (2007). Caring teachers the key to student learning. *Kappa Delta Pi Record, 43*(4), 158–160. <https://doi.org/10.1080/00228958.2007.10516474>
- Malta Campos, M., & Vieira, L. F. (2021). COVID-19 and early childhood in Brazil: Impacts on children's well-being, education and care. *European Early Childhood Education Research Journal, 29*(1), 125–140. <https://doi.org/10.1080/1350293X.2021.1872671>
- Marin, G. A., de Araujo Caetano, I. R., Bianchin, J. M., & Cavicchioli, F. L. (2021). Depressão e efeitos da COVID-19 em universitários [Depression and effects of COVID-19 in university students]. *InterAmerican Journal of Medicine and Health, 4*. <https://doi.org/10.31005/iajmh.v4i.187>
- Marques, E. S., Moraes, C. L. D., Hasselmann, M. H., Deslandes, S. F., & Reichenheim, M. E. (2020). A violência contra mulheres, crianças e adolescentes em tempos de pandemia pela COVID-19: panorama, motivações e formas de enfrentamento [Violence against women, children, and adolescents during the COVID-19 pandemic: Overview, contributing factors, and mitigating measures]. *Cadernos de Saúde Pública, 36*(4), Article e00074420.
<https://doi.org/10.1590/0102-311X00074420>
- Meléndez, J. C., Satorres, E., Reyes-Olmedo, M., Delhom, I., Real, E., & Lora, Y. (2020). Emotion recognition changes in a confinement situation due to COVID-19. *Journal of Environmental Psychology, 72*, Article 101518. <https://doi.org/10.1016/j.jenvp.2020.101518>

- Moraes, R., & Galiazzi, M. C. (2007). *Análise textual discursiva* [Discursive textual analysis]. Editora Unijuí.
- Radford, L. (2015). Of love, frustration, and mathematics: A cultural-historical approach to emotions in mathematics teaching and learning. In B. Peppin & B. Roesken-Winter (Eds.), *From beliefs to dynamic affect systems in mathematics education* (pp. 25–49). Springer.
https://doi.org/10.1007/978-3-319-06808-4_2
- Reis, N., Oliveira, C. C. D., & Andrade, A. G. D. (2020). *COVID-19 E o Calendário Escolar Brasileiro: Medo E Frustração* [COVID-19 and the Brazilian school calendar: Fear And frustration] (MPRA Paper No. 100800). University Library of Munich, Germany. <https://mpra.ub.uni-muenchen.de/id/eprint/100800>
- Ritchie, J., Lewis, J., Nicholls, C. M., & Ormston, R. (Eds.). (2013). *Qualitative research practice: A guide for social science students and researchers*. Sage Publications.
<https://uk.sagepub.com/en-gb/eur/qualitative-research-practice/book237434>
- Salles, A. A. (2021). O impacto inicial da pandemia de COVID-19 no risco da atividade econômica no Brasil [The initial impact of the COVID-19 pandemic on the risk of economic activity in Brazil]. *Pesquisa Operacional para o Desenvolvimento*, 13, 1–16.
<https://doi.org/10.4322/PODes.2021.002>
- Santos, G., & Mendonça, M. (2021). Pandemia e o ensino remoto: Uma reflexão acerca da vivência afetivo-emocional dos estudantes [Pandemic and remote teaching: A reflection about students' affective-emotional experience]. *Revista Educação e Humanidades*, 2(1), 110–131.
<https://periodicos.ufam.edu.br/index.php/reh/article/view/8499/6054>
- Saviani, D. (2020). Crise estrutural, conjuntura nacional, coronavírus e educação—o desmonte da educação nacional [Structural crisis, national situation, coronavirus and education—The dismantling of national education]. *Revista Exitus*, 10, e020063–e020063.
<https://doi.org/10.24065/2237-9460.2020v10n1ID1463>
- Schindler, M., & Bakker, A. (2020). Affective field during collaborative problem posing and problem solving: A case study. *Educational Studies in Mathematics*, 105(3), 303–324.
<https://doi.org/10.1007/s10649-020-09973-0>
- Sixsmith, J. (1986). The meaning of home: An exploratory study of environmental experience. *Journal of environmental psychology*, 6(4), 281–298. [https://doi.org/10.1016/S0272-4944\(86\)80002-0](https://doi.org/10.1016/S0272-4944(86)80002-0)
- Sonnenwald, D. H. (2007). Scientific collaboration. *Annual Review of Information Science and Technology*, 41(1), 643–681. <https://doi.org/10.1002/aris.2007.1440410121>
- Souza, A. S. R., & Amorim, M. M. R. (2021). Maternal mortality by COVID-19 in Brazil. *Revista Brasileira de Saúde Materno Infantil*, 21, 253–256. <https://doi.org/10.1590/1806-9304202100S100014>

- Souza, D. D. O. (2021). As dimensões da precarização do trabalho em face da pandemia de COVID-19 [The dimensions of job insecurity due to the COVID-19 pandemic]. *Trabalho, Educação e Saúde*, 19. <http://dx.doi.org/10.1590/1981-7746-sol00311>
- Tan, W., Zhao, X., Ma, X., Wang, W., Niu, P., Xu, W., Gao, G. F., & Wu, G. (2020). A novel coronavirus genome identified in a cluster of pneumonia cases—Wuhan, China 2019–2020. *China CDC Weekly*, 2(4), 61–62. <https://doi.org/10.46234/ccdcw2020.017>
- Tang, S., Xiang, M., Cheung, T., & Xiang, Y. T. (2021). Mental health and its correlates among children and adolescents during COVID-19 school closure: The importance of parent-child discussion. *Journal of Affective Disorders*, 279, 353–360. <https://doi.org/10.1016/j.jad.2020.10.016>
- Vieira, K. M., Postiglioni, G. F., Donaduzzi, G., dos Santos Porto, C., & Klein, L. L. (2020). Vida de estudante durante a pandemia: isolamento social, ensino remoto e satisfação com a vida [Student life during pandemic: Social isolation, remote education and life satisfaction]. *EaD em Foco*, 10(3). <https://doi.org/10.18264/eadf.v10i3.1147>
- Wentzel, K. R. (2016). Teacher–student relationships. In K. R. Wentzel & D. B. Miele (Eds.), *Handbook of motivation at school* (pp. 211–230). Routledge. <https://doi.org/10.4324/9781315773384-18>
- World Health Organization (WHO). (2020a, February 11). WHO director-general’s remarks at the media briefing on 2019-nCoV on 11 February 2020. <https://www.who.int/director-general/speeches/detail/who-director-general-s-remarks-at-the-media-briefing-on-2019-ncov-on-11-february-2020>
- World Health Organization (WHO). (2020b, March 11). WHO director-general’s opening remarks at the media briefing on COVID-19—11 March 2020. <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>
- World Health Organization (WHO). (2021, May 25). Weekly epidemiological update on COVID-19. <https://www.who.int/docs/default-source/coronaviruse/situation-reports/20210525-weekly-epi-update-41.pdf>
- Zahavi, D. (2018). *Phenomenology: The basics*. Routledge. <https://www.routledge.com/Phenomenology-The-Basics/Zahavi/p/book/9781138216709>
- Zahavi, D. (2019). Applied phenomenology: Why it is safe to ignore the epoché. *Continental Philosophy Review*, 54, 259–273. <https://doi.org/10.1007/s11007-019-09463-y>
- Zimer, A. F. D. O. S., da Silva, C. Q., Haag, P. E., Reis, M. E., Alves, T. K., & Raupp, L. M. W. (2020). A educação em tempos de pandemia: um olhar para as percepções de estudantes, professores e responsáveis de escolas do Vale do Paranhana—RS sobre os impactos nas práticas escolares [Education in times of pandemic: A look at the perceptions of students, teachers and school leaders in Vale do Paranhana—RS about the impacts on school practices]. *Form@ção de Professores em Revista-Faccat*, 1(2), 90–107. <http://seer.faccat.br/index.php/formacao/article/view/1917/1210>

