education sciences

MDPI

Article

Emotions of University Professors and Students in Times of Pandemic: An Analysis from the Perspective of Resilience in Chilean Higher Education

Enrique Riquelme [1,*], Verónica Villarroel [2], Ricardo García [1], Carlos Pérez [3] and Gerardo Fuentes [4]

[1] Education Faculty, Núcleo de Estudios Interétnicos e Interculturales (NEII), Centro de Desarrollo e Innovación de la Docencia (CeDID), Universidad Católica de Temuco, Temuco 4790084, Chile; rgarcia@uct.cl
[2] Psychology Faculty, Universidad del Desarrollo, Concepción 4070001, Chile; vvillarroel@udd.cl
[3] Instituto de Ciencias Sociales, University of O'Higgins, O'Higgins 2820000, Chile; carlos.perez@uoh.cl
[4] Education Faculty, Universidad Autónoma de Chile, Temuco 4780000, Chile; gerardo.fuentes2@cloud.uautonoma.cl
* Correspondence: eriquelme@uct.cl

Abstract: COVID-19 forced a change in the usual face-to-face teaching–learning process to remote modalities in a matter of weeks. An abrupt change, within the context of uncertainty surrounding the pandemic, significantly increased the stress experienced by professors, students, and their families. Black screens were also a sign of anxiety in the face of new emergency didactic interaction. It has been documented that emotions influence learning; however, few studies have analyzed learning during a pandemic from a resilience approach. The perceptions of the teaching–learning process of 654 professors and 1540 students from 34 Chilean universities were analyzed. Emotions experienced in remote education during the pandemic were studied in relation to professor empathy, respect in the virtual classroom, student/professor technological resources, didactic strategies, student participation, group work, tutoring, perception of learning, assessment, and perception of demand. The results show a direct relationship between professor and student positive emotions and the quality of perceived pedagogical practice and interaction.

Keywords: emotional experience; pandemic; learning experience; distance education

Citation: Riquelme, E.; Villarroel, V.; García, R.; Pérez, C.; Fuentes, G. Emotions of University Professors and Students in Times of Pandemic: An Analysis from the Perspective of Resilience in Chilean Higher Education. *Educ. Sci.* **2023**, *13*, 561. https://doi.org/10.3390/educsci13060561

Academic Editors: Victoria Lobatyuk, Elena S. Klochkova and Anna V. Rubtsova

Received: 30 March 2023
Revised: 13 May 2023
Accepted: 23 May 2023
Published: 30 May 2023

1. Introduction

The COVID-19 pandemic required adjustment from a traditional teaching–learning paradigm based on personal interaction towards remote education in a matter of weeks. Although this modality was not unknown in Chilean higher education, the percentage of students it took in was not more than 5% in the country [1]. On the other hand, the confinement required that professors, who were used to a face-to-face pedagogical style, adapt to a new modality for which they were neither trained nor necessarily met the requirements that the remote modality demanded.

Most universities did not have the appropriate platforms to facilitate the teaching–learning process in an online modality. The families of the students were not prepared for such a sudden and radical change as that experienced in the context of the pandemic. The short notice of the announcement of the change to remote education and the lack of experience with eLearning generated stress and anxiety among professors. They made efforts that allowed them to continue teaching, admitting that some expectations had to be adjusted while learning about this educational modality as they went along [2].

The stress experienced by professors, students, and their families had no precedent. Didactic interactions in this mode have been characterized by blank screens, shaded by anguish and anxiety as described by professors [3], and observed in students [4]. To the already complex technical scenario was added the collective suffering and uncertainty surrounding deaths associated with COVID-19.

Confinement, unemployment, and the demands of continuing with classes so as not to harm student education can have devastating physical and emotional results [5]. Considering the socio–emotional impact of confinement, Serrano Sarmiento et al. [6] studied its consequences on university students. The results showed generally high levels of resilience among university students, independent of sociodemographic variables. Furthermore, resilience was higher among male students and students over 25 years of age. By contrast, McLure et al. [7] compared the emotional climate and attitudes in the classroom during remote classes during COVID-19 confinement (fully online) with post-confinement (mixed-mode delivery). They found that women students had significantly more positive experiences than men during confinement-driven remote education.

The aftermath of the pandemic cannot be foreseen yet in the different areas in which it has been observed. This is the case not only in students but also in graduates. For example, graduates who experienced remote education during the pandemic have higher levels of anxiety and stress, as well as lower employment opportunities and lower job satisfaction [8]. Another study by Aucejo et al. [9] found that 13% of students delayed graduation, 40% lost a job, internship, or job offer, and 29% expect to earn less by the age of 35.

In the roughness of the described scenario, the emotional dimension plays a key role, particularly in the construction of a new online class dynamic. From a biological origin, emotions are socially built to respond to specific contexts, allowing adequate emotional regulation [10]. Emotional regulation is not only an individual element, but it makes sense in a determinate space, place, and situation. During this time of remote education, anguish, and anxiety have been evident in professors [11], highlighting a negative impact on their well-being. The same has happened from the point of view of the students [12], of which there is abundant evidence through studies that analyze the negative emotions experienced, but few have explored the impact of positive emotions on teaching [13].

2. Some Scopes of Emotion

Emotions have been historically involved in all teaching–learning processes; they mediate our memories and give meaning to relevant information. In addition, they are developed in a particular context that provides the guidelines for the deployment of a coherent feeling to the experience, i.e., the context provides keys to interpreting and regulating emotions. The COVID-19 pandemic changed the scenario of the educational process, going from the teaching of a curricular design that assumed a strong face-to-face component to a remote form of education that required new skills for the management of educational didactics from a computer platform.

The absence of the traditional educational stage, with known keys to regulate performance in the emotional plane, can affect student behavior and emotions toward education and class attendance [14]. It has been shown that the absence of faces during classes is associated with anxiety and frustration during the learning process [15]. The replacement of educational spaces with others more generally associated with the family implies a rearrangement of keys that allow the connection of these elements with a specific known feeling.

In classes, the so-called progress emotions [16] are also affected, having to be adjusted to a dynamic in which people's faces have commonly been replaced by blank screens. The exclusion of faces in emotional interaction situations, or the offset in this communicational interaction, generates high levels of stress for those giving classes. One of the most evident effects of this type of communicational interaction is the impossibility of visualizing non-verbal expressivity [17]. The need to generate non-verbal expressiveness triggered the use of emoticons or written expressions in an attempt to humanize this interaction, making it more emotionally close [18].

In general, the literature referring to teaching in COVID times has described emotions considered negative by both professors and students. Emotions such as sadness or anger are usually described within the framework of stress, anguish, or depression, mainly during

the first weeks of lockdown. Although the trend indicates that these levels increase along with the indicators of contagion [19].

The emotions of sadness, anger, and rage have sometimes been described as sources of motivation for self-defense, justice-seeking, and learning support [14]. However, when these emotions are experienced intensely and habitually, they are considered "negative" because they affect people's well-being and quality of life [20].

On the other hand, the emotions of joy, hope, and gratitude have been associated with better mental health in general. They are considered "positive" for students because they support their motivation, self-regulation, and the development of learning strategies [21]. They also facilitate the recovery of people who have experienced depressive symptoms [22]. In general, positive emotions have been associated with a resilient outlook in the face of adverse situations [23].

Some studies that analyze the emotional impact of the pandemic according to gender have presented contradictory results: some have shown that women present more severe symptoms of depression and anxiety compared to men [24,25]. Other studies that analyzed anxiety, depression symptoms, and sleep quality found that one in three people had anxiety disorders, but mood states were not different between men and women [26].

The following poses a scenario in which the personal tools, on the emotional level, from both professors and students, were demanded to the maximum. Professor communication competencies and affective interactions [27] become key performance factors in the teaching and learning processes.

The purpose of the study was to analyze how the emotions experienced by professors and students at Chilean universities during the pandemic might influence their own perceptions of the implementation of remote education during pandemics. We sought to measure key aspects that the literature highlights as part of the successful development of distance education, and to compare the evaluation that students and professors made of them considering their most frequent positive and negative emotions. The hypothesis underlying the study is based on the resilience perspective, which indicates that the recognition of positive emotions is associated with a more positive interpretation of reality. In this case, it is expected that the more positive emotions reported, the better professors' and students' evaluation of key aspects of remote emergency implementation in a pandemic.

3. Materials and Methods

A non-experimental quantitative design was used to analyze the perceptions of students and professors about the remote teaching and learning process and the emotions experienced during the pedagogical process. The methodological approach is a cross-sectional survey.

3.1. Participants and Data Collection

The sample consisted of university professors and students. The respondents were 654 professors (36% men and 64% women) and 1734 students (33% men and 67% women) were participants. Regarding the educational level of students, 44.9% of them were in the initial cycle (first and second year), 42.1% in the intermediate cycle (third and fourth year), and 13% in the final cycle (fifth year onwards). Professors and students belonged to careers in the areas of social sciences, biological sciences, arts, engineering, education, engineering, education, and health.

A non-probabilistic design was used to select the sample of professors and students. To ensure a wide heterogeneity of the study participants in both samples, 60% of the private and public universities in Chile were contacted. Contact was made through social science research teams. Online distribution of the questionnaires was requested at the institutional level. The final participation of 34 Chilean universities was achieved (11 of them public and 23 private, 21 of them regional and 13 from the capital).

3.2. Instruments

Consistent with the theoretical framework analyzed, two instruments with similar characteristics were designed to be applied online, one of them aimed at students and the other at professors. Four judges with experience in educational psychology and psychometric analysis evaluated the indicators derived from the literature review. The judges used an evaluation guideline that sought to analyze the relationship between each indicator and the theoretical variable associated with effective practices in distance education. In addition, they assessed comprehension, length, and formal aspects. For each indicator evaluated, the judges scored from 1 (low agreement) to 5 (high agreement) its relationship with the theoretical variable. The judges' evaluation reached an intra-class correlation index of 0.89.

The questionnaires applied in this study included a first section related to the disciplinary area of the degree being studied or taught as it corresponds to the student or professor surveyed.

The student questionnaire considered 65 items and the professor questionnaire 56 items. Both instruments included Likert-type items, graduated in five points (1 = never to 5 = always). The items of both instruments were designed to collect professor and student information about:

(a) Physical and technological resources, such as an internet connection or an adequate physical space to connect to classes, among others;
(b) Students' participation and dialogical interaction, whether the student asks questions, dialogues with professors, professors listen to opinions, and students participate;
(c) Group work, which asks whether professors organize and monitor group work through the available platforms, and the student perceptions of their learning through group work and their liking for this modality;
(d) Tutoring, asking about the availability of professors to resolve doubts or to deepen content through individual meetings or in small groups;
(e) Assessment for learning, where they should indicate whether students have had the opportunity to evaluate the performance of a classmate, evaluate his/her own performance, and whether he/she perceives that he/she has learned more when it is his/her turn to self-evaluate or evaluate others in online mode;
(f) Perception of demands, asks if students feel negative consequences of online learning, such as less time available, increased stress, and greater lack of concentration compared to face-to-face learning;
(g) Perception of learning, asks if students are learning adequately in their online classes, if they consider that attending classes is fundamental for their learning process, and if they feel that all the contents of the subjects can be learned online, among other aspects;
(h) Emotions experienced in distance education during the pandemic, we asked about a set of positive and negative emotions associated with emergency distance education. Professors and students were given a set of five positive emotions (happiness, optimism, confidence, serenity, and thankfulness), plus the options: other (where they had to complete with another positive emotion) and none (which involved not experiencing any positive emotion in remote education in the pandemic). On the other hand, five negative emotions were given (boredom, frustration, insecurity, discouragement, stress), plus the options "other" (where they had to complete with another negative emotion) and "none" (which involved not experiencing any negative emotion in remote education during the pandemic). In both cases, a maximum of three emotions (both positive and negative) were asked to be ticked.

In addition, the questionnaires considered four open-ended questions to provide qualitative aspects that could enrich the information.

In terms of internal consistency, both questionnaires presented adequate characteristics. Cronbach's Alpha was calculated for each of the ten questionnaire scales. In the case of the students, the reliability of the lowest Cronbach's Alpha score was 0.82, the maximum

0.91, and the average 0.89. For professors, the lowest Cronbach's Alpha score was 0.78, the maximum was 0.93, and the average was 0.88.

3.3. Procedure

Once the questionnaires had been constructed and validated by judges, they were submitted to the Ethics Committee of the Universidad del Desarrollo, which validated their compliance with ethical standards. Subsequently, contacts were made with researchers from 34 universities to formally request their collaboration in the online application of both surveys. These surveys were available for a period of two months (May and June 2020) to be answered at any time, so as not to compromise or prejudice the academic activities of the participants.

Response bias was controlled by methodological separation, which consisted of establishing a physical separation between the predictor variable (in this case perceived learning) and the criterion measures of the questionnaire. As stated by Podsakoff et al. [28], methodological separation is appropriate when the questionnaire is of sufficient length to separate the measures. This may decrease method bias by increasing the difficulty of responding stylistically, eliminating the relevance of any contextually provided retrieval cues and/or reducing the respondent's ability to use earlier responses to fill in gaps in recall or use earlier responses to answer late questions.

Regarding the emotions variable, once the survey had been completed, the responses to the "other/s" option were analyzed. These responses were coded to analyze whether they fell within the previous emotions questioned or formed a new category. We worked with three researchers who coded the new responses following a line of analysis. In the case of positive affective states, seven emotions were formed: (a) happiness/joy, (b) optimism/hope/enthusiasm, (c) confidence/security, (d) serenity/peace, (e) thankfulness/appreciation/acceptance, (f) motivation/challenge, (g) autonomy. In the case of the negative affective states, ten emotions were configured: (a) boredom/apathy/disappointment, (b) frustration/disappointment/disenchantment, (c) insecurity/disorientation/uncertainty; (d) anguish; (e) discouragement/sadness/grieving, (f) stress, (g) anger, (h) tiredness/exhaustion, (i) isolation/loneliness, (j) fear. The independent assessment of the three researchers was analyzed through the kappa coefficient. The evaluations of pairs of judges were analyzed, yielding three values—0.83, 0.80, and 0.85—for inter-rater reliability.

3.4. Data Analyses

The following statistical techniques were used to account for the objectives of the study: *t*-tests for independent samples and ANOVA analysis. The data were processed and analyzed using SPSS® 22 software.

4. Results

4.1. Recurring Positive and Negative Emotions in the Pandemic

The number of positive emotions experienced during remote education during the pandemic by professors ranged between 0 and 6 (M = 2.0, SD = 0.8), while for students, this amount ranged between 0 and 4 (M = 1.3; SD = 1.0). A descriptive analysis of emotions shows that the most recurrent positive emotions were confidence (73.4% professors, 48.1% students) and optimism (67.9% professors, 50.2% students) for professors and students. The least declared by professors were motivation (0.5%) and thankfulness (0.9%); while, for students, the less frequent were autonomy (0.2%) and motivation (0.4%). Additionally, 29.1% of the students expressed that they had not experienced any positive emotion (see Table 1).

When analyzing the distribution of positive emotions according to role (professor or student) (Table 1) and gender (Table 2). In general, there is a coincidence in the proportions of most emotions. The most frequent positive emotions were happiness, optimism, confidence, and serenity for professors, and optimism, confidence, serenity, and no positive emotions for students.

Table 1. Positive emotions reported by participants.

Positive Emotions	Professors		Students	
	N	%	*N*	%
Happiness	71	11.2	165	9.5
Optimism	432	67.9	871	50.2
Confidence	467	73.4	834	48.1
Serenity	352	55.3	520	30.0
Thankfulness	6	0.9	0	0
Motivation	3	0.5	7	0.4
Autonomy	0	0	3	0.2
No positive emotion	39	6.1	504	29.1

Table 2. Positive emotions reported by gender.

Positive Emotions	Gender	Professors		Students		Diff. %
		N	%	N	%	
Happiness	Male	20	8.8	45	8.0	0.8
	Female	51	12.5	120	10.4	2.1
Optimism	Male	148	64.9	286	50.9	14
	Female	283	69.5	578	49.9	19.6
Confidence	Male	167	73.2	250	44.5	28.7
	Female	299	73.5	576	49.7	23.8
Serenity	Male	142	62.3	196	34.9	27.4
	Female	209	51.4	320	27.6	23.8
Thankfulness	Male	2	0.9	0	0.0	0.9
	Female	4	1.0	0	0.0	1.0
Motivation	Male	0	0.0	2	0.4	−0.4
	Female	3	0.7	5	0.4	0.3
None	Male	16	7.0	168	29.9	−22.9
	Female	23	5.7	332	28.6	−22.9
Autonomy	Male	0	0.0	1	0.2	−0.2
	Female	0	0.0	2	0.2	−0.2

With respect to role, the frequency of all positive emotions was compared for professors through the Z-score, and there were significant differences between all of them. In the case of students, there are no significant differences between the following pairs of emotions: (a) confidence and optimism (Z = 1.26), (b) serenity and none of the emotions (Z = 0.60), and (c) motivation and autonomy (Z = 1.27).

On the other hand, professors show significantly more optimism (Chi^2 = 58.856 ***), confidence (Chi^2 = 120.586 ***), serenity (Chi^2 = 128.658 ***), and thankfulness (Chi^2 = 7.300 **) than students. In contrast, students responded significantly more frequently that they had not experienced any positive emotions (Chi^2 = 138.568 ***) than professors (*: $p < 0.05$; **: $p < 0.01$; ***: $p < 0.001$).

As for gender differences, these are observed in the emotions of confidence (Chi^2 = 4.12 *) in students and serenity in professors (Chi^2 = 7.06 **) and students (Chi^2 = 9.52 **). Female professors show significantly more confidence than male professors do. On the other hand, male professors and students express more serenity than female professors and students.

In the same way, the repertoire of negative emotions experienced during classes in remote modality was researched. In the group of professors, the number of negative emotions reported ranged between 0 and 6 (M = 2.1, SD = 0.9), while, in students, the number varied between 0 and 7 (M = 3.0; SD = 0.9). See Table 3.

The most frequent negative emotions indicated by the group of professors were stress (73%) and frustration (52.7%), coinciding with those expressed mostly by students (81.4% and 71.3%, respectively). In the same way, the two least recurring negative emotions were common for professors and students, corresponding to anger (0.2% professors, 0.4%

students) and fear (0.3% professors, 0.1% students). Table 3 summarizes the frequency with which the participants reported these negative emotions.

Table 3. Negative emotions reported by participants.

Negative Emotions	Professors		Students	
	N	%	*N*	%
Boredom	132	20.8	757	43.7
Frustration	335	52.7	1236	71.3
Insecurity	227	35.7	959	55.3
Anguish	189	29.7	821	47.3
Discouragement	2	0.3	7	0.4
Stress	464	73.0	1412	81.4
Anger	1	0.2	7	0.4
Tiredness	19	3.0	8	0.5
Isolation	2	0.3	0	0
Fear	2	0.3	1	0.1

The most frequent negative emotions were boredom, frustration, insecurity, anguish, and stress in professors and students. With respect to role, the frequency of all negative emotions was compared for professors through the Z-score, and there were significant differences between most of them, except (a) discouragement with anger (Z = 0.58) and isolation (Z = 0.00), (b) anger with isolation (Z = 0.58) and fear (Z = 0.58), (c) isolation with fear (Z = 0.00). In the case of students, there are no significant differences between the following emotions (a) discouragement and anger (Z = 0.00) and isolation (Z = 0.26), (b) tiredness and fear (Z = 0.00), (c) anger with isolation (Z = 0.26), and (d) tiredness with fear (Z = 0.00).

On the other hand, women (professors and students) experience more frustration (Chi^2 = 72.094 ***), insecurity (Chi^2 = 71.605 ***), anguish (Chi^2 = 59.144 ***), stress (Chi^2 = 20.253 ***) and tiredness (Chi^2 = 47.733 ***) than men (professors and students). In contrast, males (professors and students) report more boredom (Chi^2 = 104.119 ***) than females (professors and students).

As for gender differences, these are observed in professors and students in emotions such as boredom (Chi^2 = 14.38 ***; Chi^2 = 45.52 ***), anguish (Chi^2 = 5.41 *; Chi^2 = 28.07 ***), and stress (Chi^2 = 5.19 *; Chi^2 = 18.55 ***). Men (professors and students) report more boredom than women do. On the other hand, women (professors and students) experience more distress and stress than men do. In addition, there are significant gender differences in tiredness (Chi^2 = 7.99 **) and frustration (Chi^2 = 21.00 ***). Women (professors and students) express more tiredness and frustration than men (professors and students). See Table 4.

Table 4. Negative emotions reported by gender.

Negative Emotions	Gender	Professors		Students		Diff. %
		N	%	N	%	
Boredom	Male	66	73.9	440	58.6	−26.3
	Female	46	26.1	310	41.4	−21.8
Frustration	Male	109	36.4	360	29.3	−16.3
	Female	225	63.6	866	70.7	−19.4
Insecurity	Male	75	33.3	315	33.1	−23.1
	Female	152	66.7	635	66.9	−17.5
Anguish	Male	55	29.1	215	26.3	−14.2
	Female	134	70.9	601	73.7	−19.0
Discouragement	Male	0	0.0	1	14.2	−0.2
	Female	2	100	6	8.5.8	0.0

Table 4. *Cont.*

Negative Emotions	Gender	Professors		Students		Diff. %
		N	%	N	%	
Stress	Male	154	33.2	426	30.3	−8.3
	Female	309	66.8	978	69.7	−8.5
Anger	Male	0	0.0	3	42.8	−0.5
	Female	1	100	4	57.2	−0.1
Tiredness	Male	1	5.26	3	42.8	−0.1
	Female	18	94.7	4	57.2	4.1
Isolation	Male	1	50	0	0.0	0.4
	Female	1	50	0	0.0	0.2
Fear	Male	0	0.0	0	0.0	0.0
	Female	2	100	1	100	0.4

4.2. Relation between Emotional Repertoire and Pedagogical Practices

We investigate the degree of agreement or disagreement with a set of pedagogical practices implemented (by professors) or perceived (by students). Five aspects were studied. Empathy was conceptualized as the interest shown by professors in learning about the situation of students and their families in the context of the pandemic. Didactics was conceptualized as the responsible deployment of adequate pedagogical resources and mechanisms to adequately teach a subject. Group work was conceptualized as the set of instances organized by professors to carry out work among peers. Tutorials was conceptualized as those periods of time additional to classes, offered with the purpose of clarifying doubts or deepening content, either under individual or small group requirements, and self-evaluation was conceptualized as all instances implemented in the class for self-evaluation. The evaluation of peers and the perception of learning when participating in these evaluation mechanisms.

4.2.1. Confidence and Optimism on the Professors' Perception of Pedagogical Practice in Times of Pandemic

Among the group of positive emotions described, the most frequently positive emotions were confidence (73.4%) and optimism (67.9%). As seen in Table 5, people who recognized confidence emotions have higher scores in the perception in almost all dimensions of the pedagogical practice researched (empathy, didactics, group work, tutoring, and evaluation). Table 6 shows statistically significant differences in all of them, except for tutoring.

Table 5. Differences for groups of professors who do or do not report confidence within the repertoire of positive emotions and the dimensions of their pedagogical practice.

Pedagogical Practice	Confidence	*M*	*SD*
Empathy	Yes	4.214	0.865
	No	3.852	1.030
Didactic	Yes	4.554	0.446
	No	4.454	0.534
Group Work	Yes	3.708	0.976
	No	3.349	1.137
Tutoring	Yes	3.281	1.290
	No	3.130	1.340
Evaluation	Yes	2.506	1.099
	No	2.258	1.143

Table 6. *t*-Test for differences between groups of professors according to the presence or absence of confidence with respect to dimensions of their teaching practices.

Pedagogical Practice	*M* Differences	95% CI of the Difference		*t*
		Inf.	Sup.	
Empathy	0.361 **	0.187	0.536	4.07
Didactic	0.100 *	0.010	0.191	2.18
Group Work	0.359 **	0.165	0.553	3.65
Tutoring	0.151	−0.084	0.386	1.27
Evaluation	0.247 *	0.051	0.443	2.48

*: $p < 0.05$; **: $p < 0.001$.

On the other hand, regarding the optimism emotion, Table 7 shows the differences in scores of perceptions of pedagogical practice (empathy, didactics, group work, tutoring, and evaluation) between those groups of professors who report having experienced (Yes) or not experienced (No) the emotion. Again, according to Table 8, all the differences between professors who report experiencing (N = 431) or not experiencing (N = 204) this optimism turn out to be statistically significant, except for the evaluation dimension.

Table 7. Differences for groups of professors who do or do not report optimism within the repertoire of positive emotions regarding the dimensions of their pedagogical practice.

Pedagogical Practice	Optimism	*M*	SD
Empathy	Yes	4.169	0.882
	No	4.007	1.004
Didactic	Yes	4.562	0.463
	No	4.455	0.486
Group Work	Yes	3.740	0.963
	No	3.343	1.122
Tutoring	Yes	3.345	1.308
	No	3.022	1.271
Evaluation	Yes	2.450	1.117
	No	2.315	1.103

Table 8. *t*-Test for the differences between groups of professors according to the presence or absence of perceived optimism regarding the dimensions of their pedagogical practice.

Pedagogical Practice	*M* Difference	95% CI of the Difference		*t*
		Inf.	Sup.	
Empathy	0.162 *	0.008	2.066	2.066
Didactic	0.107 **	0.029	2.686	2.686
Group Work	0.397 ***	0.218	4.352	4.352
Tutoring	0.323 **	0.106	2.928	2.928
Evaluation	0.184	−0.002	1.940	1.940

*: $p < 0.05$; **: $p < 0.01$; ***: $p < 0.001$.

4.2.2. Influence of Optimism and Confidence on the Students' Perception of Pedagogical Practice and Their Learning in Times of Pandemic

The relationships between the preponderant positive emotions in students are analyzed with respect to the areas associated with the teaching practice, and with respect to other specific areas of their personal interaction during the academic obligations that this period of training in a pandemic means for them.

Table 9 shows the relationship between the group of students who recognized optimism experienced (N = 871, yes) or did not recognize (N = 863, no) within their emotional

repertoire, and the relationship with professors´ pedagogical practice. Students with optimism show significantly higher scores in the perception of professors' pedagogical work and their own performance (see Table 10).

Table 9. Differences for groups of students who report or do not report optimism within the repertoire of positive emotions and the dimensions of pedagogical practice and of their own performance.

Pedagogical Practice	Optimism	*M*	SD
Empathy	Yes	3.477	0.867
	No	3.087	0.865
Respect	Yes	4.708	0.472
	No	4.632	0.583
Resources	Yes	4.162	0.853
	No	3.927	0.946
Didactic	Yes	3.557	0.644
	No	3.238	0.696
Participation	Yes	3.735	0.713
	No	3.445	0.820
Group Work	Yes	3.390	0.817
	No	3.053	0.881
Tutoring	Yes	2.331	1.180
	No	2.125	1.106
Learning	Yes	3.288	0.762
	No	2.738	0.763
Evaluation	Yes	2.220	0.972
	No	2.011	0.959
Demand	Yes	3.668	0.866
	No	4.191	0.777

Table 10. *t*-test for groups of students that do or do not report optimism within the repertoire of positive emotions and the dimensions of pedagogical practice and performance itself.

Pedagogical Practice	*M* Difference	95% of CI of the Difference		*t*
		Inf.	Sup.	
Empathy	−0.390 **	−0.471	−0.308	−9.365
Respect	−0.076 *	−0.126	−0.026	−2.973
Resources	−0.235 **	−0.320	−0.150	−5.431
Didactic	−0.319 **	−0.382	−0.256	−9.915
Participation	−0.290 **	−0.363	−0.218	−7.871
Group Work	−0.337	−0.417	−0.257	−8.271
Tutoring	−0.206 **	−0.313	−0.098	−3.741
Learning	−0.549 **	−0.621	−0.478	−14.998
Evaluation	−0.210 **	−0.301	−0.119	−4.520
Demand	0.524 **	0.446	0.601	13.257

*: $p < 0.01$; **: $p < 0.001$.

The second most reported emotion in the students' repertoire was confidence. Table 11 shows the relationship between students who recognized confidence ($N = 834$, labeled with 1) or did not recognize confidence ($N = 900$, labeled with 0) and the relationship between the perception of professors' pedagogical practice and their own academic performance. The group of students who recognized confidence exhibited significantly higher scores (see Table 12).

Finally, Table 13 shows the differences that emerge between the groups of students who do not report any positive emotion ($N = 1222$, labeled with 0) versus those who report at least one positive emotion in their emotional repertoire ($N = 512$, labeled with 1). When comparing the averages of both groups, all dimensions researched, both those

related to pedagogical practice and the personal dimension, turn out to have statistically significant differences.

Table 11. Differences for groups of students who report or do not report confidence within the repertoire of positive emotions and the dimensions of pedagogical practice and performance itself.

Pedagogical Practice	Confidence	*M*	SD
Empathy	Yes	3.49	0.867
	No	3.09	0.864
Respect	Yes	4.73	0.482
	No	4.62	0.569
Resources	Yes	4.21	0.812
	No	3.90	0.965
Didactic	Yes	3.56	0.646
	No	3.24	0.692
Participation	Yes	3.76	0.712
	No	3.44	0.812
Group Work	Yes	3.38	0.841
	No	3.07	0.861
Tutoring	Yes	2.37	1.174
	No	2.09	1.176
Learning	Yes	3.28	0.735
	No	2.76	0.796
Evaluation	Yes	2.24	0.982
	No	1.99	0.945
Demand	Yes	3.68	0.860
	No	4.15	0.804

Table 12. *t*-Test for students who do or do not report confidence within the repertoire of positive emotions and the dimensions of pedagogical practice and performance itself.

Pedagogical Practice	*M* Difference	95% of CI of the Difference		*t*
		Inf.	Sup.	
Empathy	−0.395 *	−0.477	−0.314	−9.501
Respect	−0.108 *	−0.157	−0.058	−4.237
Resources	−0.312 *	−0.396	−0.228	−7.252
Didactic	−0.315 *	−0.378	−0.252	−9.774
Participation	−0.317 *	−0.389	−0.245	−8.617
Group Work	−0.315 *	−0.395	−0.234	−7.689
Tutoring	−0.279 *	−0.386	−0.171	−5.082
Learning	−0.525 *	−0.597	−0.453	−14.235
Evaluation	−0.255 *	−0.346	−0.164	−5.516
Demand	0.464 *	0.385	0.542	11.601

*: $p < 0.001$.

Table 13. Differences between students who report or do not report positive emotions within the proposed repertoire, and the dimensions of pedagogical practice and performance itself.

Pedagogical Practice	Positive Emotions	*M*	SD
Empathy	Yes	3.429	0.867
	No	2.932	0.836
Respect	Yes	4.705	0.488
	No	4.588	0.614
Resources	Yes	4.160	0.845
	No	3.771	0.989

Table 13. *Cont.*

Pedagogical Practice	Positive Emotions	*M*	SD
Didactic	Yes	3.525	0.646
	No	3.095	0.691
Participation	Yes	3.712	0.724
	No	3.300	0.835
Group Work	Yes	3.353	0.825
	No	2.907	0.878
Tutoring	Yes	2.320	1.170
	No	2.011	1.061
Learning	Yes	3.231	0.756
	No	2.496	0.691
Evaluation	Yes	2.201	0.976
	No	1.911	0.927
Demand	Yes	3.719	0.870
	No	4.425	0.604

4.2.3. Frustration and Stress on the Professors' Perception of Pedagogical Practice in Times of Pandemic

The most prevalent negative emotions in professors were analyzed, namely frustration and stress. The perception of professors who reported experiencing frustration was compared with those who did not in relation to variables associated with pedagogical practices. Tables 14 and 15 show that there are no significant differences between professors who did and did not experience frustration in remote education during pandemics.

The perception of professors who reported experiencing stress was compared with those who did not in relation to variables associated with pedagogical practices. Tables 16 and 17 show that there are no significant differences between professors who did and did not experience stress in remote education during pandemics.

Table 14. Differences for groups of professors who do or do not report frustration within the repertoire of negative emotions regarding the dimensions of their pedagogical practice.

Pedagogical Practice	Frustration	*M*	SD
Empathy	Yes	4.116	0.8932
	No	4.120	0.9595
Didactic	Yes	4.501	0.4746
	No	4.556	0.4691
Group Work	Yes	3.576	1.049
	No	3.656	1.014
Tutoring	Yes	3.307	1.270
	No	3.168	1.336
Evaluation	Yes	2.407	1.090
	No	2.471	1.142

Table 15. *t*-test for the differences between groups of professors according to the presence or absence of perceived frustration regarding the dimensions of their pedagogical practice.

Pedagogical Practice	*M* Difference	95% CI of the Difference		*t*
		Inf.	Sup.	
Empathy	−0.0032	−0.1480	0.1417	−0.043
Didactic	−0.0549	−0.1285	0.0185	−1.468
Group Work	−0.0805	−0.2413	0.0801	−0.984
Tutoring	0.1397	−0.0639	0.3433	1.347
Evaluation	−0.0704	−0.2448	0.1039	−0.793

Table 16. Differences for groups of professors who do or do not report stress within the repertoire of negative emotions regarding the dimensions of their pedagogical practice.

Pedagogical Practice	Stress	*M*	SD
Empathy	Yes	4.148	0.9105
	No	4.105	0.9310
Didactic	Yes	4.509	0.4915
	No	4.535	0.464
Group Work	Yes	3.620	1.050
	No	3.611	1.026
Tutoring	Yes	3.212	1.328
	No	3.254	1.293
Evaluation	Yes	2.499	1.051
	No	2.416	1.140

Table 17. *t*-test for the differences between groups of professors according to the presence or absence of perceived stress regarding the dimensions of their pedagogical practice.

Pedagogical Practice	*M* Difference	95% CI of the Difference		*t*
		Inf.	Sup.	
Empathy	0.0430	−0.1134	0.1994	0.541
Didactic	−0.0259	−0.1085	0.0565	−0.619
Group Work	0.0093	−0.1686	0.1873	0.103
Tutoring	−0.0423	−0.2672	0.1826	−0.370
Evaluation	0.0822	−0.1017	0.2663	0.879

4.2.4. The Influence of Frustration and Stress on the Students' Perception of Pedagogical Practice and Their Learning in Times of Pandemic

The most prevalent negative emotions in students were analyzed: frustration and stress. The perception of students who reported experiencing frustration was compared with those who did not in relation to variables associated with pedagogical practices and their learning performance.

Tables 18 and 19 show that there are significant differences between students who did and did not experience frustration in remote education during the pandemic in almost all variables, except respect in the classroom and learning assessment. This relationship is negative for seven of the eight significant variables, i.e., students who reported more frustration perceive less empathy from their professors, report having fewer physical and technological resources for remote education, perceive that their professors have fewer

didactic tools for virtual education, evaluate their participation in classes, group work and tutoring as lower and less frequent and consider that they learn less.

Table 18. Differences for groups of students who report or do not report frustration within the repertoire of negative emotions and the dimensions of pedagogical practice and of their own performance.

Pedagogical Practice	Frustration	*M*	SD
Empathy	Yes	3.228	0.894
	No	3.417	0.856
Respect	Yes	4.657	0.548
	No	4.704	0.486
Resources	Yes	3.979	0.931
	No	4.209	0.824
Didactic	Yes	3.355	0.693
	No	3.503	0.664
Participation	Yes	3.525	0.789
	No	3.753	0.738
Group Work	Yes	3.193	0.872
	No	3.292	0.843
Tutoring	Yes	2.166	1.129
	No	2.383	1.179
Learning	Yes	2.938	0.795
	No	3.203	0.816
Evaluation	Yes	2.113	0.967
	No	2.121	0.981
Demand	Yes	4.071	0.764
	No	3.572	0.983

Table 19. *t*-Test for groups of students that do or do not report frustration within the repertoire of negative emotions and the dimensions of pedagogical practice and performance itself.

Pedagogical Practice	*M* Difference	95% of CI of the Difference		*t*
		Inf.	Sup.	
Empathy	−0.1888 **	−0.2791	−0.0984	−4.102
Respect	−0.0473	−0.0998	0.0053	−1.764
Resources	−0.2301 **	−0.3194	−0.1409	−5.061
Didactic	−0.1480 **	−0.2181	−0.0779	−4.145
Participation	−0.2282 **	−0.3066	−0.1497	−5.709
Group Work	−0.0989 *	−0.1876	−0.0101	−2.187
Tutoring	−0.2163 **	−0.3377	−0.0948	−3.496
Learning	−0.2653 **	−0.3497	−0.1808	−6.166
Evaluation	−0.0080	−0.1098	0.0938	−0.154
Demand	0.4988 **	0.4023	0.5953	10.149

*: $p < 0.05$; **: $p < 0.001$.

The only variable with a positive and significant relationship is the perception of negative demand, i.e., students with more frustration felt more negatively demanding in pandemic remote education.

The perception of students who reported experiencing stress was compared with those who did not in relation to variables associated with pedagogical practices and their learning performance. Tables 20 and 21 show that there are no significant differences between students who did and did not experience stress in remote education during the pandemic in almost all variables, except demand. There is a positive and significant relationship between stress and the perception of negative demand, i.e., students with more stress felt more negatively demanding in pandemic remote education.

Table 20. Differences for groups of students who report or do not report stress within the repertoire of negative emotions and the dimensions of pedagogical practice and of their own performance.

Pedagogical Practice	Stress	*M*	SD
Empathy	Yes	3.247	0.9012
	No	3.314	0.8741
Respect	Yes	4.671	0.5321
	No	4.670	0.5310
Resources	Yes	4.012	0.9132
	No	4.074	0.9025
Didactic	Yes	3.409	0.6936
	No	3.388	0.6843
Participation	Yes	3.585	0.7946
	No	3.595	0.7700
Group Work	Yes	3.194	0.8808
	No	3.246	0.8513
Tutoring	Yes	2.213	1.1393
	No	2.243	1.1564
Learning	Yes	2.988	0.8173
	No	3.037	0.8040
Evaluation	Yes	2.153	0.9921
	No	2.082	0.9507
Demand	Yes	4.015	0.8213
	No	3.849	0.8924

Table 21. *t*-test for groups of students that do or do not report stress within the repertoire of negative emotions and the dimensions of pedagogical practice and performance itself.

Pedagogical Practice	*M* Difference	95% of CI of the Difference		*t*
		Inf.	Sup.	
Empathy	−0.0670	−0.1509	−1.570	0.0167
Respect	0.0008	−0.0494	0.029	0.0509
Resources	−0.0616	−0.1473	−1.412	0.0239
Didactic	0.0212	−0.0438	0.640	0.0862
Participation	−0.0105	−0.0844	−0.281	0.0633
Group Work	−0.0518	−0.1336	−1.243	0.0299
Tutoring	−0.0301	−0.1383	−0.545	0.0782
Learning	−0.0483	−0.1248	−1.239	0.0281
Evaluation	0.0709	−0.0208	1.517	0.1627
Demand	0.1658 *	0.0851	4.030	0.2465

*: $p < 0.001$.

5. Discussion

The dynamics of remote education caused by the pandemic implied a complete adjustment in all dimensions of educational work, which, added to the series of difficulties in the economic, family, and social spheres, made the teaching–learning process one of the most complex to carry out. This health crisis is likely to have long-term effects on education [29], and it will naturally be necessary to devise new ways of thinking about teaching and, consequently, become aware of the differences between the emotional dynamics that are generated in the professor and student interaction in both teaching modalities. For example, this experience could become an opportunity to rethink the curricular design of professional training plans, as well as the teaching–learning assessment processes and the development of student competencies, and the motivation for knowledge [30,31].

In brief terms, this study sought to explore the emotional repertoire indicated by both students and professors from different universities and their perceptions regarding different dimensions related to pedagogical practice and academic performance in remote education. The results show a high presence of negative emotions, such as stress and

frustration, insecurity, and anguish as part of the affective repertoire most frequently recognized by all study participants; these results did not surprise us. In addition, the student group reported more negative emotions than the professor group, and there were also differences by gender. Female professors and students experienced significantly more frustration, distress, stress, and happiness than males (students and professors). In contrast, male students and professors experienced more boredom and serenity than female professors and female students. Thus, there were gender differences in both negative and positive emotions.

Another interesting aspect was that, in parallel to these negative emotions, both professors and students recognize positive emotions, particularly confidence and optimism. This article looks at the relationship between these positive emotions and the perceived effectiveness of teaching and learning processes. Through the analysis carried out, it was possible to show positive correlations between the presence of positive emotions and the positive perception of the educational actions of professors, from the perspective of the students, as well as from the university professors themselves. In the opposite direction, the greater recurrence of negative emotions was associated with a less favorable perception of the different dimensions of the remote educational process.

Positive emotions can help us on the path to general well-being, and in particular for stress reduction [32,33]. This last point is particularly important when we are facing a context with the aforementioned difficulties. In the face of adversity, these positive emotions can support affective regulation in ways that our actions can translate into positive change at different educational levels [34,35]. In the university educational context, becoming aware of this positive emotional repertoire can support the professor to maintain, restore and develop their well-being as well as that of their students [36].

From a resilience perspective, we could then associate the recurrence of positive emotions—both in professors and students—with a particular perspective on the development of remote education. The results obtained in this study are consistent in various aspects with the reviewed literature regarding the presence of positive emotions in the teaching and learning processes. Specifically, regarding the presence of a virtuous circle regarding the direct relationship between the high frequency of positive emotions in professors and students and the link between emotional expression, mastery of emotional competencies, and academic performance as interdependent aspects [37,38].

From the perspective of teaching didactics, it is possible to find similar results. The presence of high levels of confidence and optimism in professors about the teaching and learning process is directly related to the promotion of a positive classroom atmosphere, associated with stimulating and healthy learning environments [39,40]. This relationship between didactics and emotions also allows professors to make adjustment decisions regarding teaching strategies, the selection of specific contents, or lesson planning according to the professor's concern about the well-being of their students [41,42].

From the student perspective, the presence of positive emotions, in particular confidence and optimism, are attuned to the ability to reinforce the processes of knowledge construction and self-regulation of learning [43]. In addition, positive emotions are related to online interactivity and group work, which facilitates the development of metacognition [44] and is related to a better pace of learning [45].

The findings of this study showed that all students and professors expressed negative emotions during remote education during the pandemic. However, when comparing those who reported only negative emotions (no positive emotions) and those who recognized both emotions (positive and negative), statistically significant differences were observed in the perception of the different dimensions of distance education. Thus, those students and professors who indicate no positive emotions perceive education more negatively than those who indicate both positive and negative emotions.

The presence of negative emotions in teaching and learning processes has various implications for academic work [46–48]. Specifically, considering the high levels of stress involved in teaching in this remote emergency setting, it highlights the need to develop

emotional competencies in professors [49]. In the case of negative emotions in students, it is necessary to continue studying their predictive potential in coping with stressful educational situations in the teaching and learning process [50].

Finally, in terms of projections of the study, it is necessary to investigate institutional aspects related to the experience of positive and negative emotions in the teaching and learning process. This is because the institutional support regarding tutoring programs, release time, technical support, and training in the use of platforms and technological systems show significant differences regarding the feeling of general satisfaction of professors in terms of support for the changes they face [51]. Thus, direct accompaniment and support programs for university professors focused on confidence and reciprocity with technical teams for online teaching, such as the delivery of careful support in terms of progressive implementations, would make it possible to generate support and positive emotional backing for the transformation that follows post-pandemic in higher education [49,52].

Among the limitations of the study, we can mention that this article discusses results from the first application of the instrument in 2020. This is important, as over time it is likely that professors will have become more proficient in virtual education and will have received feedback from students to improve remote pedagogical practices. Another limitation is related to the type of sampling used (non-probabilistic and non-random), which prevents us from inferring some of these conclusions as faithfully representative of Chilean higher education.

Within ongoing and future work, the team is implementing new applications of the instrument to analyze possible dynamic components of this relationship, as well as expanding the sample to be able to perform other types of analysis with greater perspective, such as structural or hierarchical equation models, which show joint interaction dynamics between the different factors studied with respect to other cognitive domain variables.

We believe we have contributed to the exploration of affective dynamics in distance education, in particular on the relationship of emotions in the interpretation of pedagogical processes and academic performance. From a resilience framework, the experience of positive emotions allows us to regulate emotions in times of crisis. The experience of emotions related to confidence, hope, and serenity, even in adversity, allows for progress in quality educational processes.

From this perspective, it is suggested that an institutional concern for the socio–emotional development of students and professors be integrated into the educational process in higher education. As Levine et al. [53] suggest, it is possible to stimulate social-emotional learning (SEL) through appropriate teaching and institutional practices, e.g., by creating routines and predictability, avoiding anxiety and uncertainty in the educational process. It is also important to create spaces to identify and share feelings at certain moments in the classroom, e.g., expressing fears about assessment and error. Innovating methodological strategies that incorporate movement (e.g., active pauses), mindfulness, and play activities is also important. However, undoubtedly, most importantly, the environment must seek to establish a healthy, humane, and respectful professor–student interaction, stimulating student participation through dialogue and the generation of open questions that encourage discussion and reflection, taking care of the classroom climate, encouraging collaboration rather than competition, and recognizing and valuing diversity.

The implications of this research can be both practical and theoretical. In the first area, it sheds light on the importance of emotions in the interpretation of the teaching–learning process in remote education in pandemics. From these findings, there should be a concern on the part of the educational institution and professors to maintain a positive and empathetic virtual classroom climate, developing pedagogical competencies and incorporating methodologies that allow students and professors themselves to experience optimism and confidence. This will allow them to perceive more satisfaction with didactic, assessment demands, participation, and other pedagogical practices.

Regarding the second point, the study motivates further research and the construction of theoretical explanations regarding the differential impact of positive versus negative

emotions, the positive ones being more relevant in the educational experience. It also encourages further research into gender differences in the most prevalent positive and negative emotions, which transcend the role of students and professors, and which respond to the experiences of men and women in emergency remote education. The study also opens a door to inquire about the expectations of success in different areas of the educational process of both teachers and students that, as we have been able to observe, are mediated by the emotions that surround a particular educational setting.

6. Conclusions

Emotions are worth considering not only from the point of view of well-being but also because of their impact on professors' and pupils' perception of the educational process, which also affects their performance as professors and pupils. In this article, a significant relationship is observed between positive emotions and a better perception of the educational process during the pandemic, both in professors and students, i.e., the higher the report of positive emotions, especially confidence and optimism, the better the perception of the teaching and learning process in remote education. The relevance of this is that it occurs in conditions of adversity such as the pandemic. Positive emotions are equally strong for professors and students.

On the contrary, negative emotions were more present in students than in professors. The most prevalent for both were frustration and stress. However, none of these negative emotions had an impact on professors' perceptions of the educational process. In contrast, for students, frustration was significantly and negatively related to most of the teaching process variables studied, i.e., the greater the frustration experienced by students, the lower the perception of quality they had about remote education during the pandemic.

Finally, there were gender differences in both negative and positive emotions. Female professors and pupils experienced significantly more frustration, anguish, stress, and happiness than males (pupils and professors). In contrast, male pupils and professors experienced more boredom and serenity than female professors and pupils. These findings raise the question of what makes women react with more active and intense emotions (frustration, anguish, stress, and happiness) than men (boredom and serenity) in the face of adversity.

Author Contributions: Methodology, E.R. and C.P.; Formal analysis, E.R. and R.G.; Investigation, R.G.; Data curation, C.P.; Writing—original draft, E.R.; Writing—review and editing, E.R., V.V., R.G., C.P. and G.F.; Visualization, C.P.; Supervision, V.V.; Project administration, V.V.; Funding acquisition, V.V. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by FONDECYT REGULAR grant number 1191956, and by Dirección de Investigación UDD; The APC was funded by Universidad Católica de Temuco.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Ethics Committee of the Del Desarrollo University (protocol code 10/11, 10 November 2020).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data is unavailable due to ethical restrictions.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Servicio de Información de Educación Superior (SIES). Subsecretaría de Educación Superior. Available online: https://www.mifuturo.cl/wp-content/uploads/2020/04/Informe-Matricula2019_SIES.pdf (accessed on 30 April 2023).
2. Müller, A.M.; Goh, C.; Lim, L.Z.; Gao, X. COVID-19 Emergency eLearning and Beyond: Experiences and Perspectives of University Educators. *Educ. Sci.* **2021**, *11*, 19. [CrossRef]
3. MacIntyre, P.D.; Gregersen, T.; Mercer, S. Language Teachers' Coping Strategies During the Covid-19 Conversion to Online Teaching: Correlations with Stress, Wellbeing and Negative Emotions. *System* **2020**, *94*, 102352. [CrossRef]

4. Marelli, S.; Castelnuovo, A.; Somma, A.; Castronovo, V.; Mombelli, S.; Bottoni, D.; Leitner, C.; Fossati, A.; Ferini-Strambi, L. Impact of COVID-19 Lockdown on Sleep Quality in University Students and Administration Staff. *J. Neurol.* **2021**, *268*, 8–15. [CrossRef] [PubMed]
5. Aperribai, L.; Cortabarria, L.; Aguirre, T.; Verche, E.; Borges, A. Teacher's Physical Activity and Mental Health During Lockdown Due to the COVID-2019 Pandemic. *Front. Psychol.* **2020**, *11*, 577886. [CrossRef] [PubMed]
6. Serrano Sarmiento, Á.; Sanz Ponce, R.; González Bertolín, A. Resilience and COVID-19. An Analysis in University Students during Confinement. *Educ. Sci.* **2021**, *11*, 533. [CrossRef]
7. McLure, F.I.; Koul, R.B.; Fraser, B.J. University Students' Classroom Emotional Climate and Attitudes during and after COVID-19 Lockdown. *Educ. Sci.* **2022**, *12*, 31. [CrossRef]
8. Alomyan, H. The Impact of Distance Learning on the Psychology and Learning of University Students during the COVID-19 Pandemic. *Int. J. Instr.* **2021**, *14*, 585–606. [CrossRef]
9. Aucejo, E.M.; French, J.; Araya, M.; Zafar, B. The Impact of COVID-19 on Student Experiences and Expectations: Evidence from a Survey. *J. Public Econ.* **2020**, *191*, 104271. [CrossRef]
10. Zembylas, M. Emotions and Teacher Identity: A Poststructural Perspective. *Teach. Teach.* **2003**, *9*, 213–238. [CrossRef]
11. Malinen, S.; Hatton, T.; Naswall, K.; Kuntz, J. Strategies to Enhance Employee Well-being and Organisational Performance in a Post-crisis Environment: A case study. *JCCM* **2019**, *27*, 79–86. [CrossRef]
12. Browning, M.; Larson, L.; Sharaievska, I.; Rigolon, A.; McAnirlir, O.; Mullenbach, L.; Cloutier, S.; Vu, T.; Thomsen, J.; Reigner, N.; et al. Psychological Impacts from COVID-19 Among University Students: Risk Factors Across Seven States in the United States. *PLoS ONE* **2021**, *16*, e0245327. [CrossRef] [PubMed]
13. Román, F.; Fores, A.; Calandri, I.; Gautreaux, R.; Antúnez, A.; Ordehi, D.; Calle, L.; Poenitz, V.; Pérez, K.L.C.; Torresi, S.; et al. Resiliencia en Docentes en Distanciamiento Social Preventivo Obligatorio Durante la Pandemia de COVID-19. *JONED* **2020**, *1*, 76–87. [CrossRef]
14. Mirahmadizadeh, A.; Ranjbar, K.; Shahriarirad, R.; Erfani, A.; Ghaem, H.; Jafari, K.; Rahimi, T. Evaluation of Students' Attitude and Emotions Towards the Sudden Closure of Schools During the COVID-19 Pandemic: A Cross-sectional study. *BMC Psychol.* **2020**, *8*, 134. [CrossRef] [PubMed]
15. Marchand, G.C.; Gutierrez, A.P. The Role of Emotion in the Learning Process: Comparisons Between Online and Face-to-face Learning Settings. *Internet High. Educ.* **2012**, *15*, 150–160. [CrossRef]
16. Pekrun, R.; Goetz, T.; Frenzel, A.; Barchfeld, P.; Perry, R. Measuring Emotions in Students' Learning and Performance: The Achievement Emotions Questionnaire (AEQ). *Contemp. Educ. Psychol.* **2011**, *36*, 36–48. [CrossRef]
17. Cuadrado, I.; Martín-Mora, G.; Fernández, I. La Expresión de las Emociones en la Comunicación Virtual: El Ciberhabla. *Icono* **2015**, *14*, 180–207. [CrossRef]
18. Kalman, Y.; Gergle, D. Letter Repetitions in Computer-mediated Communication: A Unique Link Between Spoken and Online Language. *Comput. Hum. Behav.* **2014**, *34*, 187–193. [CrossRef]
19. Rodríguez-Rey, R.; Garrido-Hernansaiz, H.; Collado, S. Psychological Impact and Associated Factors During the Initial Stage of the Coronavirus (COVID-19) Pandemic Among the General Population in Spain. *Front. Psychol.* **2020**, *11*, 1540. [CrossRef]
20. Piqueras Rodríguez, J.A.; Ramos Linares, V.; Martínez González, A.E.; Oblitas Guadalupe, L.A. Emociones negativas y su impacto en la salud mental y física. *Suma Psicológica* **2009**, *16*, 85–112.
21. Pekrun, R.; Goetz, T.; Titz, W.; Perry, R.P. Academic Emotions in Students' Self-regulated Learning and Achievement: A Program of Qualitative and Quantitative Research. *Educ. Psychol.* **2002**, *37*, 91–105. [CrossRef]
22. Yamaguchi, K.; Ito, M.; Takebayashi, Y. Positive Emotion in Distress as a Potentially Effective Emotion Regulation Strategy for Depression: A Preliminary Investigation. *Psychol. Psychother.* **2018**, *91*, 509–525. [CrossRef]
23. Yamaguchi, K.; Takebayashi, Y.; Miyamae, M.; Komazawa, A.; Yokoyama, C.; Iito, M. Role of Focusing on the Positive Side During COVID-19 Outbreak: Mental Health Perspective from Positive Psychology. *Psychol. Trauma: Theory Res. Pract. Policy* **2020**, *12*, S49–S50. [CrossRef]
24. Lai, J.; Ma, S.; Wang, Y.; Cai, Z.; Hu, J.; Wei, N.; Wu, J.; Du, H.; Chen, T.; Li, R.; et al. Factors Associated with Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019. *JAMA Netw. Open.* **2020**, *3*, e203976. [CrossRef]
25. Liu, N.; Zhang, F.; Wei, C.; Jia, Y.; Shang, Z.; Sun, L.; Wu, L.; Sun, Z.; Zhou, Y.; Wang, Y.; et al. Prevalence and Predictors of PTSS during COVID-19 Outbreak in China Hardest-hit areas: Gender Differences Matter. *Psychiatry Res.* **2020**, *287*, 112921. [CrossRef] [PubMed]
26. Huang, Y.; Zhao, N. Generalized Anxiety Disorder, Depressive Symptoms and Sleep Quality During COVID-19 Outbreak in China: A Web-based Cross-sectional Survey. *Psychiatry Res.* **2020**, *288*, 112954. [CrossRef] [PubMed]
27. Siemens, G. Connectivism: A Learning Theory for the Digital Age. Available online: http://www.itdl.org/Journal/Jan_05/article01.htm (accessed on 1 May 2023).
28. Podsakoff, P.M.; MacKenzie, S.B.; Podsakoff, N.P. Sources of method bias in social science research and recommendations on how to control it. *Annu. Rev. Psychol.* **2012**, *63*, 539–569. [CrossRef] [PubMed]
29. Marinoni, G.; van't Land, H.; Jensen, T.; The Impact of Covid-19 on Higher Education Around the World. IAU Global Survey Report. *International Association of Universities (IAU) Global Survey Report*. 2020. Available online: https://www.iau-aiu.net/IMG/pdf/iau_covid19_and_he_survey_report_final_may_2020.pdf (accessed on 1 May 2023).
30. Daniel, S.J. Education and the COVID-19 pandemic. *Prospects* **2020**, *49*, 91–96. [CrossRef] [PubMed]

31. UNESCO. COVID-19: Rethinking Education as the World Moves Forward. Available online: https://education4resilience.iiep.unesco.org/en/news/2020-2020-11/covid-19-rethinking-education-world-moves-forward (accessed on 30 April 2023).
32. Condon, P.; Wilson-Mendenhall, C.; Barret, L.F. The psychological construction of positive emotion as a window into well-being. In *Positive Emotion: Integrating the Light Sides and Dark Sides*; Gruber, J., Moskowitz, J.T., Eds.; Oxford University Press: New York, NY, USA, 2014; pp. 11–33. [CrossRef]
33. Saslow, L.R.; Cohn, M.; Moskowitz, J.T. Positive affect interventions to reduce stress: Harnessing the benefit while avoiding the Pollyana. In *Positive Emotion: Integrating the Light Sides and Dark Sides*; Gruber, J., Moskowitz, J.T., Eds.; Oxford University Press: New York, NY, USA, 2014; pp. 515–532. [CrossRef]
34. Maggalinggam, A.; Ramlee, F. The Relationship between Positive Emotion and Resilience Among Undergraduate Students. *Int. J. Acad. Res.* **2021**, *11*, 27–35. [CrossRef]
35. Chou, M.J.; Lee, H.M.; Wu, H.T. Emotion, Psychological Resilience and Work Stress: A Study Among Preschool Teachers. *Eur. J. Psychol. Res.* **2016**, *3*, 8–15.
36. Haschert, T.; Beltman, S.; Mansfield, C. Teacher Wellbeing and Resilience: Towards an Integrative Model. *Educ. Res.* **2021**, *63*, 416–439. [CrossRef]
37. Billings, C.; Downey, L.; Lomas, J.; Lloyd, J.; Stough, L. Emotional Intelligence and Scholastic Achievement in Pre-adolescent Children. *Pers. Individ. Differ.* **2014**, *65*, 14–18. [CrossRef]
38. Costa, A.; Faria, L. The Impact of Emotional Intelligence on Academic Achievement: A Longitudinal Study in Portuguese Secondary School. *Learn. Individ. Differ.* **2015**, *37*, 38–47. [CrossRef]
39. Garner, P. Emotional Competence and its Influences on Teaching and Learning. *Educ. Psychol. Rev.* **2010**, *22*, 297–321. [CrossRef]
40. Jennings, P.; Greenberg, M. The Prosocial Classroom: Teacher Social and Emotional Competence in Relation to Student and Classroom Outcomes. *Rev. Educ. Res.* **2009**, *79*, 491–525. [CrossRef]
41. Bennet, L. Putting in More: Emotional Work in Adopting Online Tools in Teaching and Learning Practices. *Teach. High. Educ.* **2014**, *19*, 919–930. [CrossRef]
42. Hagenauer, G.; Volet, S. I Don't Think I Could, You Know, Just Teach Without any Emotion: Exploring the Nature and Origin of University Teachers' Emotions. *Res. Pap. Educ.* **2014**, *29*, 240–262. [CrossRef]
43. Vermunt, J.; Verloop, N. Congruence and Friction between Learning and Teaching. *Learn. Instr.* **1999**, *9*, 257–280. [CrossRef]
44. Schraw, G.; Crippen, K.; Hartley, K. Promoting Self-Regulation in Science Education: Metacognition as Part of a Broader Perspective on Learning. *Res. Sci. Educ.* **2006**, *36*, 111–139. [CrossRef]
45. Rytkönen, H.; Parpala, A.; Lindblom-Ylänne, S.; Virtanen, V.; Postareff, L. Factors Affecting Bioscience Students' Academic Achievement. *Instr. Sci.* **2012**, *40*, 241–256. [CrossRef]
46. Durlak, J.A.; Weissberg, R.P.; Dymnicki, A.B.; Taylor, R.D.; Schellinger, K.B. The Impact of Enhancing Students' Social and Emotional Learning: A Meta-analysis of School-based Universal Interventions. *Child Dev.* **2011**, *82*, 405–432. [CrossRef]
47. Johnson, S.; Cooper, C.; Cartwright, S.; Donald, I.; Taylor, P.; Millet, C. The Experience of Work-related Stress Across Occupations. *J. Manag. Psychol.* **2005**, *20*, 178–187. [CrossRef]
48. Sutton, R.E.; Wheatley, K.F. Teachers' Emotions and Teaching: A Review of the Literature and Directions for Future Research. *Educ. Psychol. Rev.* **2003**, *15*, 327–358. [CrossRef]
49. Naylor, D.; Nyanjom, J. Educators' Emotions Involved in the Transition to Online Teaching in Higher Education. *High. Educ. Res. Dev.* **2021**, *40*, 1236–1250. [CrossRef]
50. Extremera, N.; Durán, A.; Rey, L. Inteligencia Emocional y su Relación con los Niveles de Burnout, Engagement y Estrés en Estudiantes Universitarios. *Rev. Educ.* **2007**, *342*, 239–256.
51. Howe, D.L.; Chen, H.C.; Heitner, K.L.; Morgan, S.A. Differences in Nursing Faculty Satisfaction Teaching Online: A Comparative Descriptive Study. *J. Nurs. Educ.* **2018**, *57*, 536–543. [CrossRef]
52. Downing, J.J.; Dyment, J.E. Teacher Educators' Readiness, Preparation, and Perceptions of Preparing Preservice Teachers in a Fully Online Environment: An Exploratory Study. *Teach. Educ.* **2013**, *48*, 96–109. [CrossRef]
53. Levine, R.S.; Lim, R.J.; Bintliff, A.V. Social and Emotional Learning during Pandemic-Related Remote and Hybrid Instruction: Teacher Strategies in Response to Trauma. *Educ. Sci.* **2023**, *13*, 411. [CrossRef]