



Article

# Online Foreign Language Learning in Higher Education and Its Correlates during the COVID-19 Pandemic

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Abstract: During the COVID-19 pandemic, the online learning of foreign languages at higher education level has represented a way to adapt to the restrictions imposed worldwide. The aim of the present article is to analyse university students' behaviours, emotions and perceptions associated to online foreign language learning during the pandemic and their correlates by using a mixed approach. The research used the Foreign Language Enjoyment (FLE) scale and tools developed by the authors, focusing on task value, self-perceived foreign language proficiency, stressors and responses in online foreign language learning during the pandemic. Some of the results, such as the negative association between anxiety and FLE, are consistent with those revealed in studies conducted in normal times. Other results are novel, such as the protective role of retrospective enjoyment in trying times or the higher level of enjoyment with lower-achieving students. Reference is made to students' preferences for certain online resources during the pandemic (e.g., preference for PowerPoint presentations) and to their opinions regarding the use of entirely or partially online foreign language teaching in the post-COVID period. The quantitative results are fostered by the respondents' voices in the qualitative research. The consequences of these results are discussed with respect to the teacher-student relationship in the online environment and to the implications for sustainable online foreign language learning.

**Keywords:** foreign language; coping behaviour; COVID-19 pandemic; enjoyment; online learning; sustainable learning; university



Citation: Maican, M.-A.; Cocoradă, E. Online Foreign Language Learning in Higher Education and Its Correlates during the COVID-19 Pandemic. *Sustainability* **2021**, *13*, 781. https://doi.org/10.3390/su13020781

Received: 23 December 2020 Accepted: 11 January 2021 Published: 14 January 2021

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## 1. Introduction

The Coronavirus pandemic has spanned the world since the beginning of 2020 and has severely disrupted the normal functioning of the entire education sector. UNESCO statistics clearly show the extent of the impact on education: at the beginning of June, when important lockdown measures had already been lifted in many countries, nearly a billion learners worldwide were still affected, i.e., 55.2% of the learners enrolled in all education level. Schools and higher education institutions were still closed in 119 countries [1].

Since lockdowns were imposed, higher education institutions have had to cope with a dramatic change and find alternative methods for the teaching and learning process to continue. Most of them have resorted to "emergency education", with online learning being reckoned as the panacea of the period, no longer an option, but a necessity [2,3]. The period has been one of adaptive and transformative challenges, triggered by the abrupt shift to distance education, the lack of short- and long-term anticipation, the need for appropriate technical infrastructure, the need for both academics and students to have good digital literacy skills and for the former to be able to implement distance learning pedagogies [4].

At the time of the COVID-19 outbreak, online tuition had already long been present in many universities, mostly as part of blended learning, at all academic levels and forms of education, being more manifestly used in the case of distance-learning programs [5,6].

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Whether based on synchronous or asynchronous learning activities, the online courses offered by universities in the pre-COVID period ranged from those initiated and prepared by individual academics or institutions and delivered through conventional elearning platforms, to those relying more on massive open online courses (MOOCs) or virtual realtys laboratories [7–9]. Research shows that the advent of new technologies has decisively contributed to this, as it has entailed an innovation in education and made online courses accessible and affordable [2].

Apart from the restrictions or, more often than not, interdictions related to students' face-to-face congregating in classrooms, the confinement has also severely impacted the other campus activities and affected students and their families from several perspectives [4]. In addition, in this no-direct contact period, temporarily homebound students could experience stress, panic disorder, depression, loneliness and incertitude [10].

In order to ensure quality education, one of the 17 Sustainable Development Goals set by the United Nations in 2015 [11], governments have offered technical and financial support, and universities have taken contingency measures, with the aim of continuing their mission to educate and provide service to society at large [3]. Moreover, expert recommendations, guidelines and online learning resources have been issued by international bodies and universities to support teachers' activity, e.g., [12,13]. This is a proof that quality education is a goal for improving people's lives and increasing sustainable development, ensuring access for all to a fair education [14].

The concept of sustainable learning has been recently introduced and it refers to the learning which is retained after a learning experience and which can be subsequently transferred in other circumstances, being underpinned by a proactive attitude to learning and involving not only knowledge and skills, but also learning strategies [15]. The sustainable learning concept, similar to lifelong learning, allows connections with well-known ideas from pedagogy: education for life satisfaction [16] or learners' wellbeing, education for the future and learners' striving to continually improve themselves [15], active engagement [17], teaching to empower students' adaptive behaviour, the use of information and communication technologies in education [18].

Foreign language (FL) teaching at university was no exception from the difficulties involved in moving to online education, and teachers had to reposition themselves in an environment that did not use to prevail in their work. Especially at the beginning of the lockdown, the crisis-prompted language teaching offered teachers little time to redesign lessons, adapt materials and find engaging methods, so as to ensure efficient language learning and create a positive teaching and learning environment [19,20].

In Europe, foreign language learning has been central to the policies regarding education and training for more than two decades. Starting with the White Paper on Education and Training, important documents issued by the European Union institutions have promoted the development of the multilingual competence as part of lifelong learning, and emphasized the advantages it offers in the academic field, on the international job markets, for personal fulfilment, inter-cultural understanding and social inclusion [21,22]. In recent years, the upholding of quality standards and of sustainability in FL learning has translated into the promotion of innovative teaching methods and of digital and online tools, given the increasingly mobile and digital world [22].

In the global context of the COVID-19 pandemic, we considered that an analysis of the students' behaviours, emotions and perceptions during the entirely online FL classes can bring relevant information regarding sustainable FL learning by means of technology.

# 2. Literature Review

#### 2.1. Online Foreign Language Teaching and Learning in Higher Education

In line with the progress in other educational fields, the last decade has seen a significant expansion of online language courses, offered by educational institutions or by specialized platforms such as Mondly, Duolingo, Livemocha, Rosetta Stone [23]. The real efficacy and the perceived efficacy of computer-assisted language learning (CALL) in dif-

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ferent periods, either off-line or online, has represented the core of numerous studies. The research conducted has emphasised both the strengths and the weaknesses of integrating ICTs in language learning, e.g., [23–26]. Offering an overview of the studies conducted between 1981 and 2005 on the use of CALL in language learning at all education levels, a past study highlighted positive effects as regards the writing quality (fluency, spelling, register use, awareness of audience), reading and listening skills, as well as in connection with the students' involvement in the foreign language class and with their attitude towards ICT use, provided the technology stability and support are ensured [25].

In higher education, the benefits of implementing online FL teaching regard both distance education and face-to-face language teaching and learning in which ICT-based synchronous or asynchronous activities are introduced. In distance education for foreign languages, where students' communication with the teacher and among peers had been hindered for many years, the pioneering use of synchronous teaching methods immediately after the year 2000 offered a change in the paradigm for FL teaching and learning. Distance-learning students were offered the opportunity to practise and develop their speaking skills during the class, to communicate in writing, to benefit from immediate feedback from the teacher and to have enjoyable classes [24,26].

Some research focusing on full-time face-to-face education has pointed out that the online approach makes language teaching and learning more flexible and individualized, based on authentic materials, and that it may trigger an increase in attendance and engagement [20,25]. The benefits of online language education are obvious, but some studies show that its positive effects may be limited by technical and personal problems, such as students' and teachers' low self-efficacy for online learning or computer use [27], and by students' low active participation or dominant interventions [24].

Researchers have also referred to challenges connected to the selection of relevant activities and balanced integration of all language skills to evaluation procedures, as well as to the way in which teaching materials are used online [20]. Recent research conducted on online education shows that students' preferences during the pandemic go towards teaching materials which can be found on the elearning platform for a long time (e.g., prerecorded video lectures) and which students can use on their own and at their convenience, thus meeting individual needs, e.g., [28].

Other studies have emphasised that online teaching is based on knowledge transmission and that teachers more or less consciously try to replicate the old teaching and learning, e.g., [29]. In the current extreme conditions triggered by the COVID-19 pandemic, researchers highlight that the use of this approach in FL teaching may facilitate the compliance with the planned curriculum and the overcoming of the students' mixed feelings towards the new learning environment or the difficulties encountered, e.g., [19]. Nevertheless, the online teaching facilities that best benefit FL students or that are most favoured have yet to be identified, just like the congruity or incongruity in this respect between foreign languages and other school subjects. For instance, the video-conference was appreciated by FL students and fostered their language skills [30], but students in other subjects only partially admitted its benefits and also described it as uncomfortable and causing self-consciousness [31].

#### 2.2. Emotional Perspective in Foreign Language Learning

Although the cognitive perspective dominated research in applied linguistics in the 20th century [32], emotions, negative and positive, have permanently accompanied learning [33]. The control-value theory explains students' negative emotions by the valence associated with the task challenge: when the required skills are higher than the students' skills and students perceive the task as useful, they feel fear or anxiety [34,35]. In the case of face-to-face language learning at university, a study has indicated that higher anxiety is experienced by high-achieving students [36]. Negative emotions have been associated with reduced effort, lower performance, increased external regulation and decreased self-

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regulated learning strategies [37,38]. In contrast, for online learning, frustration, a negative activating emotion, is a positive predictor of adaptive strategies [39].

Positive emotions, such as enjoyment, hope and pride, have been positively associated with effort, self-regulation and more sophisticated strategies. These relationships are not universal, as achievement emotions are malleable and reflect the students' academic adjustment to their environment [40,41].

According to positive psychology, pleasant and unpleasant emotions influence the FL learners' experience [42]. The functions of positive emotions (and especially of enjoyment) in FL learning have been emphasized. Thus, being in a positive emotional state allows students to absorb the foreign language better and to erase the effects of negative emotions [32]. Several studies have shown that foreign language enjoyment (FLE) is higher in the case of high-achieving students [43] and female students [44].

Some findings have revealed a greater emotional reactivity and more frequent negative emotions with women compared to men, in normal times [45,46]. These results are in line with recent research undertaken during the current pandemic, in which Chinese women report higher psychological distress than men [10]. Nevertheless, the results of research are not consistent: in 2014, during the Ebola crisis, gender was not a predictor of psychological distress and functional impairment in an American sample [47].

### 2.3. Self-Perceived Task Value and Self-Perceived FL Proficiency

Defined as intrinsic value and usefulness of a task, task value is connected to closer or more remote aims, beyond one's immediate pleasure [48,49]. The self-perceived task value is associated with positive academic emotions [39,40,50], being involved in identifying the motivation for learning. A direct relationship between one's subjective task value and one's self-perceived FL proficiency was found with undergraduates [39].

A study involving Chinese university students has shown a significant positive connection between self-perceived task value and self-perceived FL proficiency, but a significant inverse relation between foreign language anxiety (FLCA) and self-perceived FL proficiency [50]. In the cited study, the self-perceived FL proficiency was predicted more by FLE in the low proficiency group, and more by FLCA in the medium and high proficiency groups.

## 2.4. Instructional Context

Students' perception of teacher's behaviours significantly affects FL learning: the more negative the students' perception is, the more anxious the students will be. On the other hand, the positive emotional atmosphere created by the teacher's interventions and friendliness contributes to higher FLE scores [51,52]. Participants in other research also report that it is the teacher who mostly shaped their FLE, and only to a lesser degree their peers [32].

In line with the sociocultural theory, virtual connections with peers may also offer a rich environment for sociocultural language exchange through the materials posted, the ideas shared and the media preferences [53,54]. Qualitative research focusing on adult learners involved in a blended learning environment has also pointed to virtual interactions as affecting participation, along with the instructor's voice, self-assessment activities during the course, session timing [55].

Previous research has shown that Social Sciences, Humanities and Arts (SSHA) programs are more ill-structured and soft, the content and methodologies employed are more idiosyncratic and with weak consensus. Conversely, the STEM field is well-structured and hard, and the consensus of knowledge is strong. The students' epistemological beliefs are consistent with the traits of the academic field and reinforced by the instructional context [56]. The instructional practices in STEM programs tend to be structure-oriented, and feelings, intuition, and cooperative learning are uncommon [57]. In SSHA programs, teaching is person-oriented [58] and linked with positive social relationships [59].

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#### 2.5. Cultural Context in Foreign Language Learning

Cultural patterns have also long been proven to impact academic settings, including foreign language learning [60]. Thus, students belonging to cultures which have higher scores for Uncertainty Avoidance (e.g., most of the former communist countries, Japan, Greece, Portugal, France etc.) exhibit certain behaviours: they are very likely to show higher levels of anxiety during the language classes, to feel uncomfortable and worried about what may happen in certain class situations and prefer to have a less active participation [61–63]. This is also valid for cultures scoring high for Collectivism (e.g., South-American and Asian countries, countries in the south-eastern part of Europe), which are "shame cultures", showing a higher level of conformity and a preoccupation with high FL accuracy [51,63–65]. The countries with low scores as regards Indulgence (e.g., former communist countries, China, India and Bangladesh) experience fewer positive emotions, foster various forms of negativism [63] and are therefore more unlikely to feel pleasure and excitement in classroom activities.

The impact of the cross-cultural differences on the attitude towards FL learning can be proven by an extensive study conducted in 2014, in which North American learners reported the highest level of FLE and the lowest level of FLCA, while Asian participants reported exactly the opposite [44]. Similarly, some other studies performed on Chinese and Japanese students have shown that high-achieving students score higher for anxiety than low academic achievers [66].

#### 3. Methods and Materials

The general objective of the present research was to analyse students' behaviours, emotions and perceptions as regards online learning and their antecedents during the entirely online FL classes in the current pandemic, within the large paradigm of sustainable learning. In order to attain this objective, a mixed approach was used. Our quantitative research is correlational and non-experimental, while the qualitative research is similar to little q research that uses an open-ended questionnaire. The qualitative research has a validation function for the quantitative research.

## 3.1. Research Context

This study was conducted in a Romanian comprehensive university with almost 20,000 students. According to Hofstede's model, the research cultural context is marked by high scores for Uncertainty Avoidance and Collectivism, and a low score for Indulgence, Romania being an ex-communist country, situated in South-Eastern Europe.

In our university, the technical infrastructure and pedagogical framework for distance education fortunately pre-existed the COVID-19 pandemic, but they had been used mainly for the distance-learning programmes. The platform was used especially for uploading documents, teaching materials, assignments, homework and sometimes for evaluation purposes.

During the pandemic, the closure of face-to face activities in the university, for all forms of education and at all levels, has prompted a total turn to online teaching. Just like in other universities, e.g., [20], extensive technical support has been offered by means of user manuals and videos, and communication guidelines and assessment rules have been established.

Foreign languages are a compulsory part of the curriculum in our institution at undergraduate level. In an attempt to keep pace with the swift changes, FL teachers in the university started transferring and adapting their materials for online teaching. Thus, real-time video-conferencing has been used, teaching materials have been uploaded on the institutional platform in the form of links to the Web, course books, PowerPoint presentations, audio/video materials, answer keys have been provided for the tasks, assignments set, and personalised or common feedback from the teacher provided, in line with the actions presented in other studies [67]. The chat and social forum facilities

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on the platform and the institutional email have continued to be used by both students and teachers.

## 3.2. Research Questions

The novelty of the local and global context did not allow us to formulate research hypotheses. Given the aforementioned situation, research questions were formulated:

RQ1: What are students' behaviours, emotions and perceptions as regards online FL teaching and learning during the pandemic and their relationships with some antecedents, such as FLE, self-perceived task value and self-perceived FL proficiency?

RQ2: Can the behaviours and emotions involved in FL learning be explained by the variables under consideration?

RQ3: What do respondents say about online FL learning during the pandemic crisis? The last question focuses on the students' voices, which were used with an explanatory function or to illustrate the results of the quantitative study.

#### 3.3. Participants

In the quantitative research, the sample was accidental, comprising 207 self-selected participants, female and male students, from different study programs and with different achievement levels in FL. In line with the quantitative study, for the qualitative approach 39 students have been selected using the socio-demographic criteria gender, study programs and FL achievement levels.

#### 3.4. Procedure

The data were collected in a period when teaching activities were entirely performed online, at the end of the second/spring semester of the academic year 2019–2020. The research was approved by the Research Ethics Committee of the University.

All the participants were recruited via e-mail, using the students' university ID, without financial or other compensations. The researchers sent an email to all undergraduate students in the university, in which they provided the address of an internal secured web site of the university where the survey tools were posted. After having accessed the link, the first step participants had to take consisted of reading the informed consent and accepting it; after the implicit consent, in the second step, students provided socio-demographic data and then filled in the research questionnaires. The questionnaires were anonymous.

The reference to the pandemic was explicitly required for two tools, which regard online resources, and stressors and reactions in online learning, and for the open-ended questions. For the antecedent variables (FLE, self-perceived task value and self-perceived FL proficiency), the reference to the pandemic was not mentioned. Consequently, it was supposed that students' answers focused on retrospective emotions, behaviours, characterising normal times.

The quantitative data were analysed using the SPSS software, version 26. The numerical description of the variables was carried out (means, standard deviations), comparisons of means with parametric and nonparametric tests and the Pearson correlation coefficients were calculated. Two hierarchical regression equations were run.

The qualitative data were collected via email, the most convenient means given the restrictions imposed by the pandemic. The language teachers considered six different study programs in the university and, during the online foreign language classes, they verbally launched the invitation for students to take part in the qualitative research. Students were asked to express their interest in participating, and 39 positive answers were received. These students were immediately sent the questionnaire with open questions via their institutional emails, with a specific deadline. The first part of the questionnaire informed the respondents about the confidential character of the answers and about the anonymization of the names and asked them to accept the informed consent before answering the questions. After the deadline, the process of data collection was stopped, as answers started to repeat (saturation point). The questionnaire with open questions is similar to little q [68].

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The thematic analysis was used for the qualitative data. After reading all the answers, themes/categories and subthemes were identified [69] in order to describe and interpret the respondents' experience with respect to online FL learning. The corpus was divided into meaning units, which are phrases, clauses or sentences, which were then associated with every subtheme. The thematic analysis was done by two coders, familiar with the objectives of the study.

## 3.5. Research Tools

The demographic questions requested information on age, gender, study program and year of study, foreign languages studied, grade obtained for the foreign language for the first semester of the corresponding academic year. Other tools used were the following:

- The Foreign Language Enjoyment questionnaire [44]. It was used with the authors' consent, in translated form. The tool has 29 items, with answers on a 5-point Likert scale, from 1—absolutely disagree to 5—strongly agree. The authors' description shows that 8 items are extracted from the Foreign Language Classroom Anxiety Scale—FLCAS [70] and measure foreign language anxiety. The other 21 items reflect enjoyment towards FL. We used the factors obtained by the authors: (1). Foreign Language Classroom Anxiety (Alpha Cronbach = 0.66), which expresses anxiety, fear, confusion, concern, physical manifestations of anxiety in the classroom; (2). Foreign Language Enjoyment-Social (10 items, Alpha Cronbach = 0.72), which expresses favourable atmosphere, positive presence of teacher and peers, their encouragement, and (3). Foreign Language Enjoyment-Private (11 items, Alpha Cronbach = 0.76), which expresses positive personal reactions to FL learning. The last two factors are computed in the Foreign Language Enjoyment-Total (21 items, Alpha Cronbach = 0.84).
- Five tools elaborated or adapted by the authors:
  - 1. Self-perceived task value has 19 items focused on the intrinsic task value (e.g., *I can improve my listening/reading/speaking/writing skills etc.*) and on the utility value (e.g., *I can have a better job, I can get a higher salary*), according to Eccles's approach [48]. In our research, the self-perceived task value was considered as an aggregated scale and its Alpha Cronbach is 0.81.
  - 2. Self-assessment grid from the Common European Framework of Reference for Languages, in adapted form, focusing on the students' self-perceived FL proficiency. The grid shows the five major categories of language use (Listening, Reading, Spoken interaction, Spoken production and Writing), for six levels (Basic user: A1 and A2, Independent user: B1 and B2, Proficient user: C1 and C2). Alpha Cronbach is very good (0.95).
  - 3. Stressors and reactions in online FL learning during the pandemic (PAN), with 9 items. The tool was developed for this research. This instrument has two factors. The first one is Stressors and coping behaviours-PAN with 6 items and alpha Cronbach 0.64. E.g., Online foreign language classes are more demanding than face-to-face ones, I ask questions to clarify things. The second factor is Negative emotions-PAN with 3 items and alpha Cronbach 0.60. E.g., I miss the direct interaction with my peers.
  - 4. Perceived usefulness of online resources during the pandemic comprises 10 items with Alpha Cronbach 0.87. E.g., Say how useful the following online resources are for you in the learning of foreign languages during the pandemic: Chat/Discussion forums/Audio resources/Video resources). There are two additional items which present the general attitudes towards online learning: (1). Elearning platforms should be used for certain activities in face-to-face education and (2). Elearning should totally replace face-to-face education, in the post-COVID period. An item is used to identify the general positive emotions in online FL learning: I enjoy attending the online FL class during the pandemic. The last three items were approached separately. All investigated variables in the tools above were measured on a 5-point Likert scale and higher scores show higher levels for

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the explored variables. All Alpha Cronbach coefficients were computed for our sample.

5. Questionnaire about FL learning during the pandemic, with 6 open-ended questions, focusing on the main obstacles faced by students with respect to the technology used in online learning, emotions in the FL class, problems connected to language learning and corrective behaviours proposed, reports on participation in the FL class and preferences for the types of support offered by the teacher. Students could add other important information if this was omitted from the previous questions. All responses were provided in writing.

The last three tools exclusively focus on the online learning during the pandemic.

#### 4. Results

The answers to the research questions will be presented after the sample description.

## 4.1. Sample Description

The quantitative research comprises 207 undergraduate students, 65.7% female and 34.3% male. The age average is 21.23 (SD = 4.2) and 94.2% of the students are aged below 24. The foreign languages studied by the participants are: English (71.0%), French (12.6%), German (11.6%) and Spanish (5.32%). Because only 5.8% of the students are aged over 24, the age criterion was not used in our analysis.

The respondents' average FL grade for the previous semester is 9.15 (SD = 1.6), ranging from 6 to 10, and with asymmetric distribution. In our country, assessment results may range from 1 to 10, the passing grade being 5.

For our analysis, several comparison groups were created. Depending on FL academic achievements, participants were grouped into three categories: low achievements (11.6% of students, grades: 5, 6 and 7), medium achievements (32.4%, grades: 8 and 9) and high achievements (56.0%, grade: 10). There are no statistically significant differences in the three sub-groups by male/female students (Chi Pearson = 3.722, p = 0.156) or by study program (Chi Pearson = 1.798, p = 0.407).

Starting from the study program, participants were grouped into two categories: (1). STEM, with students from engineering, computer science and mathematics programs (46.4% of the sample), and (2). Social Sciences, Humanities and Arts (SSHA), comprising students from education sciences, law school, music, economic sciences, medicine, psychology and sociology programs (53.6%). In the SSHA group, there are more female students than in STEM programs (Chi Pearson = 19.58, p < 0.001).

In the qualitative research, 20 answers were received, 13 students are from STEM and 7 from SSHA programs. The participants are 12 female and 8 male students, 13 high-achieving, 2 medium-achieving and 5 low-achieving.

4.2. RQ1: Students' Behaviours, Emotions and Perceptions as Regards Online FL Teaching and Learning during the Pandemic and Their Relationships with Antecedents

This research question regards: (1) students' perceptions with respect to the usefulness of the online resources offered on the elearning platform, (2) students' general attitudes towards the elearning platform and (3) their behaviours and emotions with respect to online FL learning. The second part of RQ1 focuses on the associations between the behaviours and emotions triggered by the online FL learning during the pandemic and some antecedents, such as FLE, self-perceived task value, self-perceived FL proficiency (4).

1. On the entire sample, the *Teacher's uploading of PowerPoint presentations* was preferred by students, while the *Individualized feedback from the teacher* received the lowest score (Table 1).

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**Table 1.** Descriptive statistics regarding the usefulness of the online resources offered on the platform during the pandemic for the entire sample.

Resources Offered on the Platform-PAN	Mean	Std. Dev.
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Teacher's uploading of PowerPoint presentations	3.00	1.34
Chat/Discussion forum	2.98	1.43
Teacher's uploading of suggestions for solving the tasks	2.93	1.21
Teacher's uploading of the course materials in full	2.92	1.31
News forum	2.87	1.45
Projects/homework set by the teacher	2.86	1.22
Teacher's uploading of audio/video resources	2.86	1.29
Audio/video-conferences	2.85	1.30
Self-assessment tests for students devised by the teacher	2.81	1.27
Individualized feedback from the teacher	2.66	1.18

n = 207.

With regard to these resources offered on the elearning platform, the t test for independent samples shows that there are no statistically significant gender-related differences. With reference to the study program, there is only a marginal statistically significant difference: the *audio-video conference* tends to be considered more useful by the students in SSHA ( $M_{\rm SSHA} = 2.98~\rm SD = 1.3; M_{\rm STEM} = 2.64, SD = 1.3; t = 1.82, p = 0.07$ ). Using on-way ANOVA, variations are similar in the three achievement groups, F being insignificant.

2. The general attitudes regarding the entirely or partially online FL learning are presented in Table 2. The paired sample test between the participants' options is significant (t = 3.37, p < 0.001), the total replacement of face-to-face education by the elearning platform is disfavoured.

**Table 2.** Students' general attitudes regarding the entirely or partially online foreign language (FL) learning in the post-COVID period.

Items	1. Elearning Platforms Should Be Used for Certain Activities in Face-to-Face Education.	2. Elearning Should Totally Replace Face-to-Face Education in the Post-Covid Period.		
<b>Likert Scale Points</b>	Points Percentage			
Not at all	12.6	55.6		
To a small extent	23.7	7.2		
To a moderate extent	31.9	18.4		
To a great extent	15.5	5.3		
To a significantly great extent	16.4	13.5		
Total	100.0	100.0		
Mean	3.00	2.14		
Std. Dev.	1.25	1.47		

There are no statistically significant differences for these two items by gender, study program and achievement level, and neither for the item *I enjoy attending the online FL class during the pandemic*.

3. The online FL learning registers stressors, coping behaviours (M = 17.05, SD = 5.21), as well as negative emotions (M = 8.04, SD = 3.01). Using the Independent-Samples Mann-Whitney U Test (two-sided), we found that the stressors and coping behaviours and the unpleasant emotions regarding online FL learning during the pandemic are not statistically different by gender. Only the negative emotions are stronger with students in SSHA compared to students in STEM (Mean Rank<sub>STEM</sub> = 95.21; Mean Rank<sub>SSHA</sub> = 111.60, U = 6171, p = 0.048), and with medium-achieving students, who tend to report the presence of negative emotions more than students with higher grades (one-way ANOVA with Games-Howell post hoc test, sig = 0.062).

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> 4. Relationships between the behaviours and emotions triggered by the online FL learning during the pandemic and some antecedents, such as FLE and anxiety, self-perceived task value and self-perceived FL proficiency, and sociodemographic variables.

> The descriptive statistics for the entire sample and the mean comparisons for gender and study program are shown in Table 3. Because the distribution of the variables is not normal, we used the nonparametric test Mann-Whitney for independent-samples.

		Resources Offered on the Platform- PAN	Self- Perceived FL Proficiency	Self- Perceived FL Task Value	FL Anxiety	FL Enjoyment- Private	FL Enjoyment- Social	FL Enjoyment- Total
Entire	Mean	28.72	18.23		26.56	32.02	28.98	61.0
sample	SD	9.24	7.17		6.04	8.65	7.69	14.91
Gender	F (mr)	106.07	100.47	95.9	95.55	100.31	107.20	103.89
	M (mr)	102.92	110.75	119.5	120.18	111.08	97.87	104.21
	U/p	4681/0.7	4348.5/0.2	3726/0.001	3679/0.005	4325.05/0.2	5263.05/0.3	4813/0.1
Study program	STEM (mr) SSHA (mr) U/p	95.73 111.15 6121/0.06	101 106.6 5614.5/0.5	108.2 100.4 4925/0.4	103.34 104.57 5391.5/0.9	112.01 97.07 4559/0.07	107.92 100.61 4951/0.4	110.59 98.3 4695/0.1

Table 3. Descriptive statistics and mean comparisons for the antecedent variables using Mann-Whitney test.

4925/0.4 n = 207. SD—standard deviation; mr—mean rank; U—independent-samples Mann-Whitney U test (2-sided test); p—significance level.

The mean ranks are higher for male students compared to female students as regards anxiety connected to FL learning and self-perceived task value. The distribution of the other variables is the same across the categories of gender and study program (Table 4).

The one-way ANOVA with Games-Howell post-test identified differences regarding FLE depending on the students' achievement level: FLE-Private is higher for students having the lowest academic results compared to students with medium and high achievements (sig. being 0.017 and 0.001, respectively), and for those with medium grades compared to students with higher grades (sig. = 0.024). A similar pattern was found for FLE-Social by students' achievement levels (sig. being 0.012, 0.001 and 0.067, 001, respectively), and for FLE-Total (sig. being 0.005, 0.001 and 0.019, respectively).

Conversely, high-achieving students score higher for language-related anxiety compared to students from the medium and low achievement groups (for two groups, sig. = 0.001). The self-perceived FL proficiency is statistically significant if the achievement criterion is used: students from the high and medium achievement groups have a higher self-perceived language proficiency compared to those from the low achievement group (sig. = 0.001 for two comparisons).

The associations regarding the main variables were tested using the Pearson correlation, two-tailed (Table 4). Stressors and coping behaviours and unpleasant emotions are positively and significantly correlated and correlate with other variables as follows: positively with the perception of the online resources, the general attitudes towards the platform, the subjective task value, and general positive attitude towards the online foreign language class during the pandemic (unique item), and negatively with the self-perceived FL proficiency, FLE-Social, FLE-Total and grades for FL

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**Table 4.** Pearson correlations between emotions and behaviours generated by the online FL learning during the pandemic and other variables.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Stressors and coping behaviours-PAN	1												
2. Negative emotions-PAN	0.448 **	1											
3. Resources offered on the platform-PAN	0.509 **	0.414 **	1										
4. Self-perceived FL proficiency	-0.245 **	-0.150*	-0.081	1									
5. FL task value	0.250 **	0.210 **	0.374 **	-135*	1								
6. FL Anxiety (FLCA)	-0.072	-0.114	0.027	0.390 **	-0.079	1							
7. FLE F3—Private	-0.102	0.008	-0.082	0.105	0.113	-0.158*	1						
8. FLE F2—Social	-0.182**	-0.083	-0.164*	-0.039	0.006	-0.088	0.666 **	1					
9. FLE -Total (F2 + F3)	-0.153*	-0.038	-0.132*	0.081	0.068	-0.137*	0.923 **	0.902 **	1				
10. Elearning platforms should be used for	0.251 **	0.229 **	0.196 **	0.069	0.142 *	0.007	0.044	-0.009	0.02	1			
certain activities in face-to-face education.	0.201	0.22)	0.170	0.007	0.112	0.007	0.011	0.007	0.02				
11. Elearning should totally replace face-to-face	0.151 *	0.068	0.077	-0.055	0.084	-0.024	0.042	0.108	0.080	-0.002	1		
education in the post-COVID period.													
12. Grades for FL (previous semester)	-0.051	-0.169 *	0.046	0.359 **	-0.012	0.395 **	-0.310 **	-0.291 **	-0.330 **	-0.069	-0.004	1	
13. I enjoy attending the online FL clas—PAN.	0.385 **	0.221 **	0.332 **	-0.038	0.218 **	0.045	-0.065	-0.087	-0.083	0.038	0.080	0.027	1

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed). \*. Correlation is significant at the 0.05 level (2-tailed).

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### 4.3. RQ2: Variables Explaining Stressors and Reactions in Online FL Learning

Starting from the correlations obtained (Table 4), we ran two hierarchical multiple regression equations on the entire sample, using the logarithmised (ln) *Stressors and coping behaviours-PAN*, and *Negative emotions-PAN* as dependent variables (Table 5) in three blocks. The third model we developed better explains the dependent variables, the perception of the resources offered on the platform during the pandemic having the greatest impact on the two variables (positive influence).

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lable 5 Variables explain	nna etroceare car	າາກແກ່ຍກ່ວນນາດາ	ire and negative em	otions in online	FL learning during the pandemic.
Table 3. Variables explain	mig oncoodio, cop	Jing Denavior	ars and negative ciri		Licarining during the paracinic.

Independent Variables	Stressors and Coping Behaviours-PAN (ln)	Negative Emotions-PAN (ln)			
	В	В	В	β	
(Constant)	10.795		3.970		
Resources offered on the platform-PAN	0.201	0.357 ***	0.133	0.395 **	
I enjoy attending the online FL class-PAN.	0.930	0.234 **	-	-	
Self-perceived FL proficiency	-0.142	-0.195 ***	-	-	
FLE F2-Social	-0.082	-0.121 *	-	-	
Elearning platforms should be used for certain activities in face-to-face education.	0.661	0.158 **	0.343	0.138 *	
Elearning should totally replace face-to-face education in the post-COVID period.	0.382	0.108 *	-	-	
Grades FL previous semester	-	-	-0.001	-0.188 **	
$\mathbb{R}^2$	0.40		0.23		
Adjusted R <sup>2</sup>	0.38		0.22		
F		22.0 ***	20.13 ***		

n = 207; \* p < 0.05, \*\*\* p < 0.01, \*\*\* p < 0.001, The variables without coefficients were not correlated with dependent variables and they did not enter the regression.

In order to avoid multicollinearity, only the FLE-Social scale was used. Our choice was supported by the size of the correlation coefficient and by the importance of the social factor during the pandemic. The influence of gender and of the study program was examined in preliminary analyses. Because these are not related to dependent variables, we did not include them in the regression models.

#### 4.4. RQ3: Voices of the Respondents about the Online FL Learning during the Pandemic Crisis

Because the number of respondents in the qualitative research is small, data were coded manually. The frequency and percentage were not calculated, not being relevant in this sample. Seven themes/categories and several subthemes have been identified. The subthemes are written in parentheses.

- Problems triggered by technology use (connection to the internet/to the elearning platform/the PC and audio input/output systems/absence of problems);
- Degree of participation in the online class, the most extensive theme, with subthemes (active participation/reduced participation/false participation/participation accompanied by individual work/active participation, but accompanied by certain frustrations);
- Interaction with peers (recollection and regret of face-to-face pleasant interaction/ enjoyment and subjective task value during the pandemic/fear of unfavourable appreciation from peers/regret for certain peers' low participation);
- Student-teacher interaction (recollection and regret of face-to-face pleasant interaction/enjoyment and subjective task value during the pandemic/favourable appreciation of student participation/unsatisfied needs with respect to teaching);
- Obstacles in online learning (lack of the pleasant atmosphere from face-to-face education/sound quality/lack of immediate feedback regarding pronunciation/disturbing factors at home);

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 Positive emotions (delight/satisfaction), negative emotions (shame/fear/tiredness), wishes for the future, and ambivalent emotions;

- Stress (stress influenced by the low language proficiency/stress with psycho-physiological problems/concern about the decreased interaction/regret of face-to-face education/not understood, not appreciated);
- Students' explanations and/or personal solutions associated to the main themes revealed.

Participants often emphasize the relationships between the themes identified.

#### 5. Discussion

The present study examines the stressors and reactions connected to online FL learning during the pandemic in a university setting, using a mixed approach. The antecedent variables were FL enjoyment and anxiety, self-perceived task value and self-perceived FL proficiency. Our results are partially consistent with past research, although the study was conducted in the context of the COVID-19 pandemic. The new findings regard (i) the coexistence of positive and negative emotions as far as the online FL learning during the pandemic is concerned; (ii) the protective role of retrospective enjoyment given the stressors triggered by online FL learning and, as a consequence, the inverse association with stressors and coping behaviours. Additional results are represented by (iii) the negative association between self-perceived FL task value and self-perceived FL proficiency, (iv) the high FL anxiety with high-achieving students, and (v) the lack of differentiations in the investigated variables by gender, study program and achievement level.

### 1. Perceived usefulness of online resources during the pandemic

In the analysed context, online FL teaching has used a complex, diverse and flexible set of practices, also mentioned in previous studies [20,26]. In our sample, PowerPoint presentations are more appreciated by students, which could be explained on the one hand by the students' familiarity with such resources during face-to-face education. On the other hand, this could be due to the students' preference for teaching materials that remain posted on the elearning platform for a long time [28]. Our participants' least favoured resource on the elearning platform is the *individualized feedback* received from the teacher, probably due to the generally more delayed response in the online environment compared to face-to-face education, where it can also be provided in different ways and supported by diverse means, verbal and non-verbal [71].

The usefulness of the *audio/video-conference* tends to be more appreciated by the students in SSHA, where more female students are enrolled, compared to their peers in STEM, partially supporting past studies, e.g., [30]. Past research shows that students used to be rather reluctant towards video-conferencing, and the even lesser appeal of video-conferencing for girls was attributed to their being less technologically minded [72]. However, female students' position with respect to technology use has significantly changed lately [73]. A recent study emphasizes that the video-conference, by broadly replicating face-to-face interaction, allows a more efficient communication than asynchronous teaching. The use of voice, webcam and sometimes chat during the classes, the tone, intonation, and turn-taking allow for real-time reactions and contributions and even for shades of meaning [74]. From our perspective, SSHA students generally rely on class debates and group discussions for more subjects than their STEM peers, and these facilities also comply very well with the female students' favouring interpersonal and face-to face interaction, as supported in previous studies, e.g., [75].

In line with other studies, our qualitative research shows that only few students (but more girls than boys) experience trouble in using technology, and this concerns the connection to the elearning platforms, the weak internet connection, the use of the PC, unavailable microphone. Some students suggest solutions for such situations: "It may happen that my laptop fails, … and then I have to immediately resort to the phone" (Female, SSHA, Grade: 10).

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The exclusive use of elearning platforms in the post-COVID period is rejected by more than half of the respondents, while blended learning is rejected by less than half. Female and male students, enrolled in both STEM and SSHA, have similar opinions on the exclusive or partial use of elearning platforms. The convergence in the respondents' attitude confirms the tendency for gender gap decrease, consistent with the findings in a previous study conducted in the same cultural environment [76]. However, it may also happen that the lack of alternatives contributes to the flattening of the perception. This possible interpretation can be fostered by a high-achieving student's answer: "Most of the times, given the context (online education during the pandemic- note added in proof), I'm delighted that we can still attend classes (emphasis added) and acquire knowledge which will surely help us in the future" (F, STEM, 10). These findings are in line with others from the COVID period, showing students' concern about their academic success, frustration of interpersonal relationships, or about their ability to learn entirely online [77]. In other words, the use of the elearning platform is appreciated by the participants as a sustainable resource during this crisis period, but blended learning is more appreciated than the exclusive use of elearning platforms for the post-COVID period.

The qualitative research has also revealed threat and poor self-efficacy in the case of low-achieving students, although the quantitative research did not show any differences in this respect. Here is the statement of a low-achieving female student, with a low self-perceived language proficiency: "I only rarely use the microphone mode, because I feel ashamed that I do not have good command of the English language, and I don't want to make a fool of myself and because I feel ashamed of the teacher, as I do not know the answers" (F, SSHA, 7). Thus, the differences associated with the achievement level also impact study strategies, the control of learning, and affect students' self-efficacy, as reported in several studies, e.g., [66,78].

# 2. Stressors and reactions in foreign language learning during the pandemic

In the online FL learning, many students report tasks to be more demanding compared to face-to-face education, they mention the existence of concepts, rules, and constraints which they do not always understand. These stressors are connected to coping behaviours. Thus, learning during the pandemic raises a threat and can be frustrating. Students also report positive emotions, enjoyment of attending the online FL classes.

**Negative emotions.** Students report negative emotions generated by the lack of interaction with peers and the teacher, as well as the feeling that the development of their language skills and knowledge could be endangered. The change in study habits is in line with the changes in people's day-to-day behaviour in a stressful period reported by other studies, e.g., [10]. The qualitative research supports the findings from our quantitative study. Thus, students report negative emotions such as: shyness or shame for their low proficiency, concern with respect to their progress. Many of them report stress, migraines and concentration or attention troubles, and the feeling of not being understood or listened to:

"I feel ashamed that I do not know how to pronounce words correctly" (F, SSHA, 7);

"I'm a little shy when it comes to speaking in front of others, but [ ... ] I try to get involved as much as I can" (F, SSHA, 10);

"Sincerely speaking, there are only few classes in which I really feel comfortable, understood, listened to and which allow me to have really positive acquisition" (F, SSHA, 10).

The lack of interaction with peers and the teacher, as well as the worries about their progress in FL learning, are sometimes associated with the perceived difficulty of this school subject, and especially of speaking (F, SSHA, 7), which has been often associated with anxiety, as previous research shows, e.g., [65,79]. The negative emotions triggered by the decreasing interaction during the pandemic are lower for the students with high self-perceived language proficiency, but they increase with the students with high task value and for those with medium grades. Because medium-achieving students associate the value of the activity with an overload, they are likely to feel more threatened. Probably they possess fewer cognitive resources to cope with the situation, compared to high-achieving students, as confirmed in other studies, e.g., [35], and as mentioned in our qualitative

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research by a student with a low grade: "I regret, but I have to tell you I don't succeed in learning this language ... I've tried hard and I'm still trying..." (F, SSHA, 7), hence their resorting to defensive strategies, as pointed out in different studies [80].

Negative emotions are experienced to a greater extent by SSHA students compared to the students in STEM programs. In line with the epistemological beliefs [56] and with the teaching practices specific to different domains [57,59], we suppose that SSHA students perceive the online environment as being more content-centred and so less socially appealing, in disagreement with the inherent features of their domain. Conversely, STEM students are already familiar with more structured practice, also present in face-to-face education, so they experience fewer unpleasant emotions in the online environment. The negative emotions cannot be differentiated by gender, which supports studies revealing that gender is not a predictor of psychological distress and functional impairment [47].

Coping behaviours. Students refer to coping behaviours which point to behavioural and cognitive engagement: they ask questions to clarify things, work with peers to solve tasks, and solve the tasks set by the teacher. Students also mention positive emotions, such as enjoyment in online learning, both in the quantitative and the qualitative research. The specifications are in accordance with the role played by enjoyment in FL learning [81].

"[I'm] delighted. During the English class, for example, we have to solve interactive exercises [....]. I am glad I can learn specialized words from economics" (Male, SSHA, Grade: 10); "I am passionate about learning foreign languages and foreign language classes are delightful. I like teacher-student interaction and the topics approached" (F, SSHA, 10).

The positive connection between the higher level of coping behaviours and the higher level of negative emotions is less clear. Past studies show that positive emotions can contribute to the decrease in the effects of negative emotional arousal and facilitate adaptation, as the online learning environment offers more opportunities for emotions regulation [82,83]. A student's answer seems to exemplify the emotional dynamics of the online FL learning during the pandemic:

"I try to adapt to this online environment and I also try to be actively involved as often as I can because I consider that this fact will help me understand the subject matter taught more easily. Even in those moments when I am not so sure about myself, I still try to interact and answer, whether I'm mistaken or not" (M, SSHA, 10).

On the other hand, coping behaviours negatively (but insignificantly in our sample) correlate with FL anxiety, in line with other studies [84].

**Mixed feeling.** Positive and negative emotions are directly associated in online FL learning during the pandemic. Our results are consistent with other studies which reveal that mixed feeling in L2 communication is detected in relation to specific events [85]. The pandemic is a traumatic event and online learning is a complex process, in which the chances to succeed or fail are present, but uncertain. Thus, mixed feelings represent a typical position, as other research shows [35,39].

Both types of emotions, pleasant and unpleasant, seem to support academic engagement during the pandemic. A male student precisely highlights the ambivalence of the situation: "Generally, I'm delighted with the foreign language class, because I will learn new things, but I have moments when I feel stressed: when I can't solve exercises or handle reading, given my lack of experience with this language" (M, SSHA, 10). These results confirm the ambivalence and malleability of emotions [40,41]. Our finding is in line with research focusing on the "stress paradox", which emphasises the role of individual interpretation of a certain situation, which may either hinder or challenge students, e.g., [86].

### 3. Antecedents of behaviours and emotions in online FL learning during the pandemic

**Enjoyment.** In our sample, female and male students cannot be differentiated as regards the enjoyment connected to FL learning, in contrast to other studies, e.g., [44]. Unexpectedly, the personal, social and total enjoyment are higher for lower-achieving students compared to those with higher performance, not supporting other research,

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e.g., [43]. We suppose that, for students with good academic results, the learning activities are less enjoyable because the learning tasks may not be challenging enough for their language level. It is to be noticed that the complexity of FL classes and the weight of foreign languages in the curriculum are lower than in most other subjects, for both STEM and SSHA students, as only two or three ECTS credits are allocated to them. In our sample, students with high FL proficiency experience high enjoyment, but the correlation is not significant, differently from other studies, e.g., [87].

Lower-achieving students, who report more negative emotions connected to interpersonal relationships, can be offered more support by the group and the teacher, while high-achieving students are probably more group-independent [84]. This interpretation is supported by the answers provided by several students with high achievements: "... when I can't manage things or face difficulties, I research, gather information and find answers on the internet, in books, or get it from acquaintances who work in the field, or I ask for the teacher's help in the case I couldn't find the necessary information anywhere else" (F, SSHA, 10).

FLE-Social and FLE-Total (Private + Social) negatively correlate with the coping behaviours and unpleasant emotions during the pandemic. Specifically, in our sample, stressors, negative emotions and, consecutively, adaptive behaviours are lower when students' enjoyment increases. It can be concluded that retrospective enjoyment acts as a protective factor in the online FL learning. This seems to be in accordance with previous studies highlighting the role of positive emotions in diminishing the effects of stressors and unpleasant emotions [32], in enlarging the thought-action repertoire and enhancing personal resources, both in face-to-face education [44] and in online learning [39].

**Anxiety.** In our sample, the negative correlation between FL anxiety and subjective task value was not so significant. Certain studies support and explain the lack of association by the students' possibility to choose other coping strategies in the online learning, e.g., [82].

In the present study, high-achieving students report a higher level of FL anxiety compared to medium- and low-achieving students, contrary to most studies, e.g., [43], but still in line with some others. A previous study conducted in Romania and two studies performed on Chinese and Japanese students have revealed that high-achieving students score higher for anxiety than low academic achievers [36,66]. The convergence of findings could be explained by certain cultural features (e.g., high scores for Collectivism and Restraint) which make students more prone to negative emotions, as well as by the very competitive academic system in all these cultural settings.

Other research also mentions the presence of lessening strategies which accompany anxiety with high achievers [44]. One of our respondents' answer points exactly in this direction: "Often, for the foreign language, I take a look at the course materials before the meeting for that course, in order for me to be able to facilitate interaction and save as much time as possible" (F, SSHA, 10). Additionally, in the Romanian academic context, for instance, grades are decisive for obtaining governmental grants and scholarship, some answers from the qualitative research supporting this latter interpretation: "I personally connect [to the platform] and answer the questions, because the teacher knows who is present and who is actively participating, taking this into account at the final exam" (M, STEM, 10). "I don't feel comfortable when I'm speaking . . . . I don't have such an advanced level and I'm afraid I could make mistakes and the teacher could have an unpleasant reaction" (F, STEM, 10). Additionally, this result can be an argument for the fact that language learning is not entirely enjoyment-or anxiety-provoking, and coping behaviours and pleasant emotions could intervene to diminish negative emotions [41,44].

#### 4. Explaining coping behaviours and emotions involved in online FL learning

Stressors and coping behaviours on the one hand, and negative emotions on the other hand, directly correlate, and they are partially explained in our sample through the same factors: the perception of the usefulness of the resources offered on the elearning platform during the pandemic, the self-perception of the FL proficiency, FLE-Social, enjoyment with online FL classes during the pandemic and the FL grade. These findings are partially consistent with recent research studies which mention that positive and negative emotions

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are correlated, though fundamentally different [41]. The favourable attitudes towards online learning resources, a common explanatory factor for the two variables, can increase coping strategies in the traumatic situation researched, being a "rescue solution".

The expected negative influence of grades on negative emotions is also supported by the qualitative data: all low-performing students state they are stressed, shy, and feel ashamed in front of the teacher or peers, experiencing difficulties in learning the language. Besides, stress and tiredness are also mentioned by high-achieving students. According to other studies [88], negative emotions can be conductive to positive motivation, can help people correct their behaviour and act as the situation requires.

The FL learning during the pandemic supposes an external situation in which the quality of life is impacted by the imperative of social distancing, loneliness and a low individual control, as distal antecedents, which are likely to enhance the negative perception of the online learning environment, where social interaction is weak: "The real problem is the online, this radical and simultaneously uncomfortable distancing. I prefer the physical presence much more, the genuine intellectual development cannot be achieved in the online environment. [...] I miss the interaction with my teachers and peers, face-to-face activities" (F, SSHA, 10).

The findings in our study should be regarded with caution. It is an exploratory, more descriptive study, the sample is accidental, gender is imbalanced. The students with top academic achievements prevail in our research. This situation should be further investigated, as it could point to several issues: the low and medium achievers' reluctance to participate in the research, students' overall high language proficiency, students' being generally awarded high grades for foreign languages. In addition, the moderate reliability coefficients for the two scales of our tool *Stressors and reactions in online FL learning during the pandemic* can affect the validity of the results; thus, in a future study, we intend to identify a more reliable version. Additionally, the high scores of lower-achieving students for task value and FL enjoyment can be influenced by social desirability.

The students' acceptance and use of technology, as a crucial condition of emotional experience in online learning, was not quantitatively researched. Nevertheless, the data in the qualitative research mention technical obstacles and problems related to the family environment where students conduct their online learning activities, but also drawbacks connected to online FL learning. Undoubtedly, there are also variables which we did not investigate, such as personality traits, which can probably also explain students' behaviours and emotions during the pandemic, as a period which changes study habits. Future research studies can focus on stressors and coping behaviours associated to online FL learning for other subjects in the curriculum, also considering personality features.

# 6. Conclusions

In the context researched, using the control-value theory and positive psychology as a framework within the paradigm of sustainable learning, our study has revealed that coping behaviours and positive and negative emotions, although different, are related and coexist in the online learning of foreign languages during the pandemic as far as undergraduates are concerned.

The greatest influence on stressors and coping behaviours is played by the online resources provided during the pandemic, followed by the FL retrospective enjoyment and general enjoyment of online learning and the use of information and communication technologies in blended systems. A part of these characteristics can be manipulated by the teacher and the designers of the online environment in order to ensure sustainable learning, to stimulate students' learning engagement and build a friendly online atmosphere.

Considering the literature review and our results, we can define the sustainable online learning of FL as the active and enjoyable learning of foreign languages by means of blended systems which can be adaptively used in possibly challenging situations in the future to foster language proficiency. In line with sustainable learning, teachers should develop cross-cutting competences [18], as students' ability to reflect on their own learning process, stimulate positive activating emotions and increase their wellbeing and resilience

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to distress in learning situations. The ability to learn effectively in various conditions remains a common goal of academics and university students, and the former should empower students' adaptive behaviour.

Low-achieving students can benefit from additional attention from the teacher, given their more intense negative emotions associated with online FL learning. For high-achieving students, with low task value, personalized learning can be a means to increase the task challenge and ensure progress.

Technologies must be accessible and usable, as they can reduce the stress connected to learning in a general traumatizing context. The use of breakout rooms, available in video-conferences, can support the needs for social relationships and enhance the pleasant atmosphere of FL learning. The use of online lectures, discussion questions, and email communication with teachers have been identified as online teaching strategies which engage students and reduce anxiety, while also increasing knowledge.

The teacher can get involved to encourage learning and reduce competition, by highlighting the positive effects of cooperation, to lessen the feeling of isolation and the loneliness in a context in which social distancing is a requirement in real life, too. The online connections with peers from the same or other cultural backgrounds has been recommended by previous studies, as not only do they enhance social networking and help students develop their language skills, but they also lead to their development more broadly speaking. The sustainable online learning of foreign languages for the future consequently requests active engagement from both teachers and students, extensive learning opportunities and an enjoyable learning atmosphere, the tackling of liaison problems, as well as the adaptive and purposeful use of various educational resources, including elearning platforms, in normal and challenging situations.

**Author Contributions:** Conceptualization, E.C. and M.-A.M.; methodology, E.C. and M.-A.M.; software, E.C. and M.-A.M.; validation, E.C.; formal analysis, E.C. and M.-A.M.; investigation, E.C. and M.-A.M.; resources, E.C. and M.-A.M.; writing—original draft preparation, E.C. and M.-A.M.; writing—review and editing, E.C. and M.-A.M. Both authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

**Institutional Review Board Statement:** The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by the Research Ethics Committee of the University.

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

Data Availability Statement: Not applicable.

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

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