

## *Students' Experience Two Years Into the Pandemic at a Bulgarian University*

Hoang Nam Tran, Tokushima University, Japan  
Katya Marinova, Veliko Tarnovo University, Bulgaria

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### **Abstract**

After the pandemic began in March 2020, universities in Bulgaria suspended in-person learning. In the current 2021-22 academic year, schools shut down again in areas of Bulgaria where COVID-19 infection rates spiked, returning students to online learning. This study investigates the experiences of undergraduate students at a Bulgarian university about the impacts of the pandemic on the classes, the satisfaction level with online learning, as well as their perceived impacts on daily life, economic situation, health condition, stress, and life planning. A questionnaire containing both Likert-style and open-ended questions was sent to a group of students at a university in Bulgaria. Data were analyzed both quantitatively and qualitatively. Half of the respondents reported that their taking class was impacted, while almost a fourth of them reported complete dissatisfaction with online classes, complaining about low efficiency, tediousness, and decreased motivation. In addition to physical and mental health impacts, more than half of the respondents reported worrying about the future. Some respondents couldn't compensate for the lost income and had to return to their hometowns. These findings imply the need to provide support to students not only to improve the academic quality of classes but also in the economical and mental health aspects.

Keywords: Bulgaria, Online Class, Pandemic, Impact, Satisfaction

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## Introduction

Bulgaria is one of the most impacted by COVID-19 countries in the world in terms of life expectancy decline (Kuehn, 2022), the high mortality rate (Ziakas et al., 2022), low vaccination coverage (Mitev & Nanov, 2022), and mental health decline (Lüdecke & von dem Knesebeck, 2022). Together with the above, the higher education sector of Bulgaria has also undergone changes during the transition process to online learning. These changes affected the teaching-learning and communication process between teachers and students (Filipova & Yuleva-Chuchulayna, 2022). Prolonged exposure to the internet and e-learning environment may decrease life satisfaction among Bulgarian students (Garvanova, 2022). Since the beginning of 2020, university students in Bulgaria are exposed to the impacts of the COVID-19 pandemic. Until early 2022, Bulgarian university students already have experienced five epidemic waves of COVID-19 (Figure 1). Since the first wave, certain anti-epidemic measures were introduced in campus classes that had to change to online. After two years into the pandemic, the online class has become a new normal standard of campus life. However, a study in Bulgaria reported that 80% of respondents expressed dissatisfaction with online classes and thought that this would have negative effects on their education (Avramova et al., 2021)

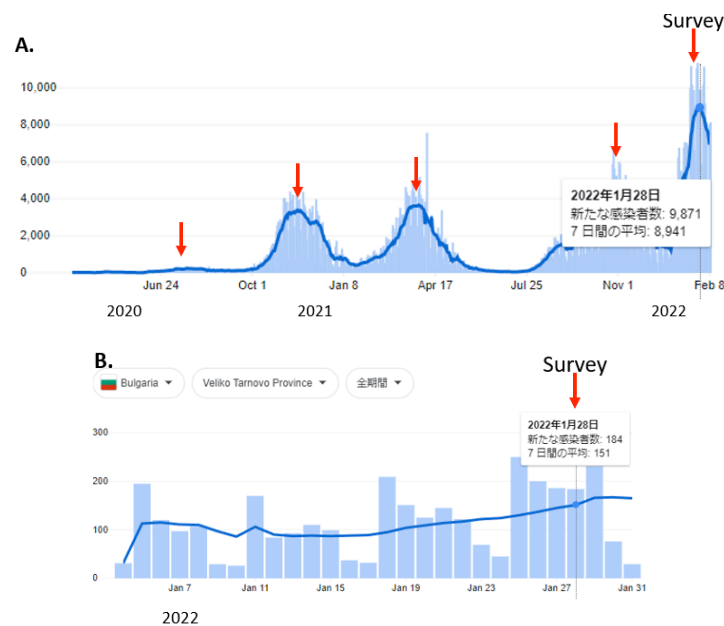


Figure 1: Pandemic waves in Bulgaria (A) and Veliko Tarnovo city (B)  
(Source: author adapted from JHU CSSE COVID-19 data)

Veliko Tarnovo University (VTU) is one of the major national universities in Bulgaria. Like other universities in Bulgaria, VTU must face the same challenges during the pandemic such as online classes, digital transformation, social distancing, and lockdown. However, little is known about the impacts of COVID-19 exposure on the academic and daily life of students at VTU and what is the students' satisfaction rate with online classes, and what are the need to be supported.

This paper aims to show: (1) the impacts of the pandemic on the academic and daily life of students; (2) the satisfaction level and attitude of students toward online classes; and (3) factors that may influence the impacts of the pandemic and students' acceptance of online learning.

## Method

A cross-sectional survey was designed using an online questionnaire using Google forms. The questionnaire included 4 level Likert-like questions for quantitative analysis and open-ended questions for qualitative analysis. The questionnaire was adapted from the questionnaire used in a previous study (Tran, 2022). Participants were recruited during January 2022 by the direct announcement to several classes of undergraduate students. Participants could choose to exit or join the survey by clicking on the link provided. Participation information was fully anonymous, as no data to identify the person were recorded. We made an analysis quantitatively and qualitatively of the data obtained. Quantitative data were analyzed by SPSS Statistics version 27.0 for Windows (IBM Corp., Armonk, NY, USA). Qualitative data were analyzed by content analysis.

## Results

### *Characteristics of respondents*

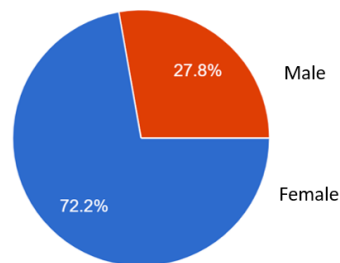


Figure 2: Gender of the respondents

Since the onset of the pandemic in 2020, the number of students available on campus had become slightly decreased. Since online classes had become the norm, a portion of students left for their hometowns while attending classes online. This survey was taken place about two years since the pandemic had been announced. Over two-thirds of the respondents were female (N=18) of the total number of students (Figure 2).

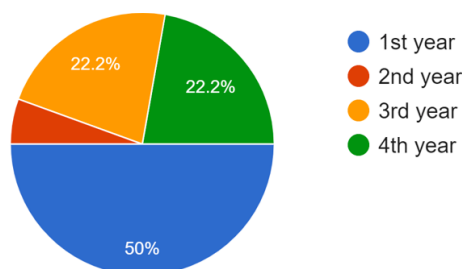


Figure 3: Academic year

Looking at the characteristics of respondents (Figure 3), while all of whom were enrolled as undergraduate students, half of them were in their first year. Taken together the first and the second-year students, over half of the respondents were experiencing their academic life fully under the COVID-19 pandemic, which also means that they had not experienced any academic life before the pandemic. The types of respondents also infer their common daily activities. Undergraduate students are the students who enrolled in a four-year bachelor's course, spending most of the time attending the lecture or practice sessions under the supervision of faculty staff.

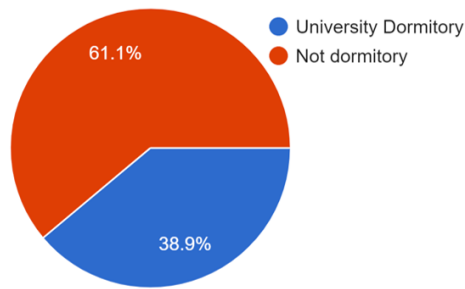


Figure 4. Living in dormitory

As shown in Figure 4, almost two-thirds of the total number of respondents had not been staying in the university dormitory. As reported, during the pandemic some of them left the dormitory for their hometown while keeping study online.

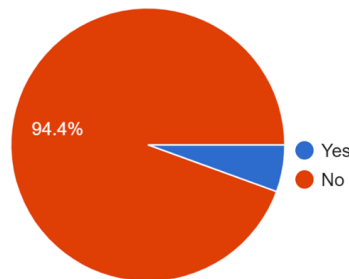


Figure 5: International student

Referring to the international student status (Figure 5), most of the respondents except one were domestic students.

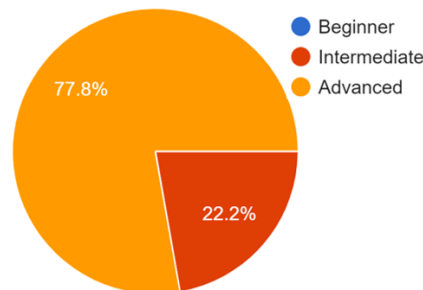


Figure 6: Self-reported English proficiency

For verifying questionnaire comprehension, respondents chose their corresponding level. Over two-thirds of them were at the advanced level and none were at the beginner level, which means that overall English proficiency was satisfied (Figure 6).

***Perceived pandemic impacts and satisfaction with taking the class online***

The perceived impacts of pandemics on certain aspects of students’ life are described in Table 1. The four-level scale ranged from not at all, not so much, some, and a lot. We investigated the seven items of perceived impact as listed in Table 1. To ensure the reliability of this seven-item scale, we calculated the Cronbach’s Alpha value was 0.794, which indicated a good internal consistency.

For categories of taking class, doing research, food, grocery supply, or health, the ‘not at all’ level of impact was chosen by the highest number of respondents. However, for taking class,

a third of respondents replied with ‘a lot impacted’. This phenomenon is interesting since the impacts tend to strongly polarize between no impact at all to a lot of impacts. The respondents reported no impact on research, as most of the respondents chose ‘not at all’ or ‘not so much’, which could be explained by the fact that undergraduate students are not yet required to do research work (Table 1).

Table 1. Perceived impacts

	Perceived Impact	Not at all		Not so much		Yes, some		Yes, a lot	
		N	%	N	%	N	%	N	%
1	Class	7	38.9	2	11.1	3	16.7	6	33.3
2	Research	11	6.1	4	22.2	3	16.7	0	0
3	Foods	10	55.6	6	33.3	2	11.1	0	0
4	Life	5	27.8	6	33.3	4	22.2	3	16.7
5	Health	6	33.3	4	22.2	4	22.2	4	22.2
6	Stress	3	16.7	7	38.9	4	22.2	4	22.2
7	Worry	1	5.6	5	27.8	2	11.1	10	55.6

Figure 7 shows the results of online satisfaction perceived by respondents. We found that over half of the total respondents had shown satisfaction, including 16.7% of respondents had shown “moderate satisfaction” and 38.9% of respondents had shown “a lot of satisfaction”. On the other hand, 22.2% of graduate students had shown “no satisfaction at all” and the same portion had shown “not so much” satisfaction. There was a moderate correlation between satisfaction mean scores of lower years students (first- and second-year students) and higher years students (Spearman correlation test,  $R_s=0.568$ ,  $p<0.05$ ), where senior students tend to perceive higher online satisfaction.

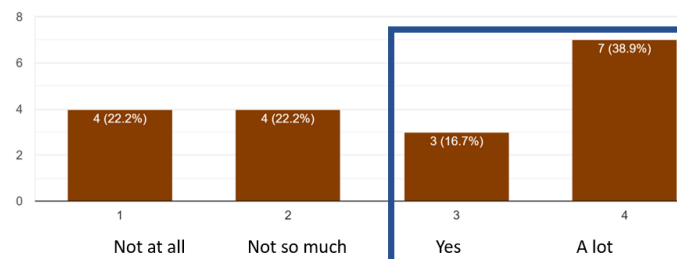


Figure 7. Satisfaction with taking the class online

In response to the question of what proportion of online classes could be acceptable for the future after the pandemic, Figure 8 shows the answers of respondents in which a third preferred full face-to-face classes, nearly a third preferred 20% online classes, while another third preferred full online class. It is interesting that the preference tend to go to extremities rather than a hybrid solution.

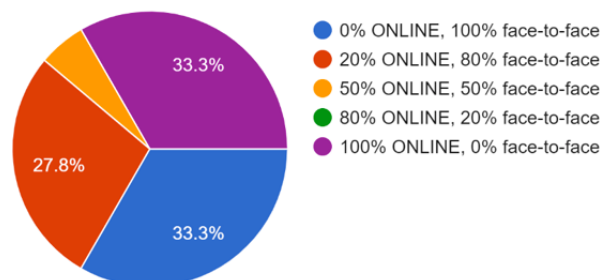


Figure 8. The preferred proportion of online class

Figure 9 shows the percentages of access to pandemic-related information as perceived by respondents. We found that about two-thirds of the total respondents showed “have enough access to information”, including 50% of respondents had shown “moderately well informed” and 16.7% of respondents had shown “very well informed”.

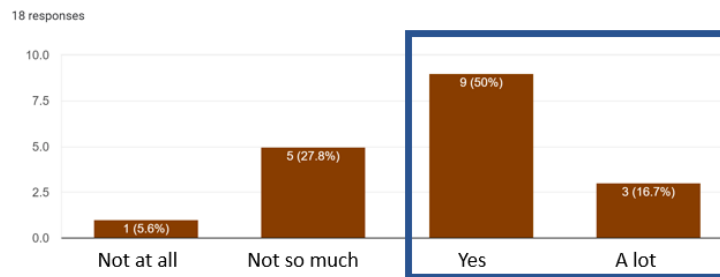


Figure 9. Self-evaluated access to pandemic related information

In Figure 10, respondents self-reported their income change during the pandemic period, which tended to be unchanged or decreased. From the qualitative data, we found that some respondents reported losing their part-time job. From correlation analysis, we did not find any significant association between income change and other variables.

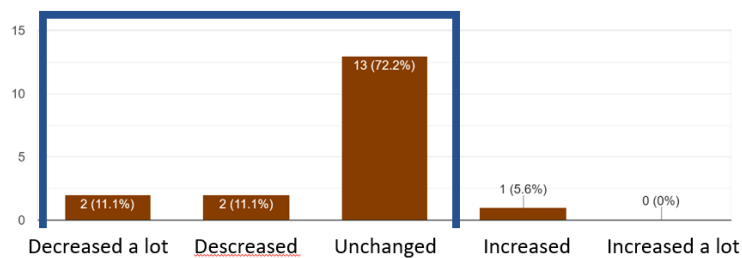


Figure 10. Self-reported income change

We investigated the correlation of independent variables including gender, years of enrollment (1-4), foreign student, English proficiency (beginner, intermediate and advanced), co-living with family members (no and yes), living in a dormitory (no and yes), and self-perceived dependent variables in four-level scale including perceived impact on taking classes, perceived satisfaction of online class, perceived impact on doing research, and perceived access to information. The results of the Spearman correlation test are shown in Table 2.

Table 2. Correlation between independent and dependent variables

		English proficiency	Living place	Life/career plan change	Access information
Taking classes	Rs	.475*	0.139	0.412	0.124
	p (2-tailed)	0.046	0.583	0.089	0.625
Meals and shopping	Rs	0.463	-.493*	0.234	-0.030
	p (2-tailed)	0.053	0.037	0.351	0.905
Health	Rs	0.373	0.318	.512*	0.012
	p (2-tailed)	0.127	0.198	0.030	0.964
Stress	Rs	0.269	0.161	.469*	-.500*
	p (2-tailed)	0.281	0.525	0.049	0.035
Worry	Rs	.716**	-0.073	.710**	0.151
	p (2-tailed)	0.001	0.773	0.001	0.551

It was found several significant associations among variables. Students with higher English proficiency tend to perceive more impact on taking the class ( $p < 0.05$ ). Students who live in dormitory tend to perceive less impact on food supply and shopping ( $p < 0.05$ ). Students who have more changes in life plans tend to perceive more impact on health ( $p < 0.05$ ). Students who have more changes in life plans and students who receive less access to information tend to perceive more stress ( $p < 0.05$ ). Students with higher English proficiency and with more changes in life plans tend to have more worry about the future ( $p < 0.01$ ). We did not find significant associations with other variables, namely gender, living alone, international student, and years of enrollment.

Table 3. Correlation between dependent variables

		Meals, shopping	Daily life	Health	Online Satisfaction	Income change
Taking classes	Rs	-0.176	.548*	0.410	-.557*	0.185
	p (2-tailed)	0.485	0.019	0.091	0.016	0.461
Daily life	Rs	0.265	1.000	.600**	-0.247	0.181
	p (2-tailed)	0.289		0.009	0.324	0.472
Stress	Rs	0.339	-0.034	0.296	0.040	0.003
	p (2-tailed)	0.169	0.893	0.234	0.873	0.991
Worries	Rs	.619**	0.467	.616**	-0.285	-0.229
	p (2-tailed)	0.006	0.051	0.007	0.251	0.360

Table 3 shows the results of the Spearman correlation test between dependent variables. We found that students who perceive more impact on taking class tend to perceive more impact on daily life and less satisfaction with online classes ( $p < 0.05$ ). There is also an association between the perceived impact on daily life and the perceived impact on health ( $p < 0.01$ ). Students who perceived more worries tend to perceive more impact on having meals and on health ( $p < 0.01$ ).

### ***Qualitative findings on the impacts of the pandemic***

The respondents were asked to explain how their taking classes had been affected by the pandemic. There are some positive responses such as *“I’m completely satisfied with online classes”*, *“It’s much more comfortable to be online”*, *“I sometimes enjoy the new and innovative ways some professors make lectures more interesting”*, and *“classes weren’t affected as they became online”*, *“I’m already ok with that, it’s not a problem”*, *“I am very satisfied with online classes, with the only exception being lacking human contact and creating sustainable relations”*.

However, there were more negative voices coming from students such as *“I find online lessons less effective”*, *“In online classes we could not learn efficiently”*, *“I feel like this online won’t end soon, which is sad”*, *“They became overwhelming, and I caught myself struggling to finish my homework’s by the deadline”*. The dissatisfaction expressed by students seemed not only caused by the online-only learning environment but also came from decreased motivation of students. As such, many respondents mentioned limited

communication with teachers or other students during online sessions, lack of concentration, and monotonous way of learning. We heard voices such as *“my motivation decreased dramatically. Online lessons have taken away the frankness and immediacy of lessons and consequently some of the fun. Essentially, I feel like I am repeating my high school senior year. Despite the excitement, I get from learning more about what I am passionate about I think the essence of it has subsided due to online classes. The full university experience has been buried behind colored screens and faceless voices.”*, *“Because face-to-face lessons are much more pleasant and have a good impact on the education that we receive. Online classes influenced our relationships with the professors and even the relations between the students”*, *“I find it difficult to concentrate while working online, as a result, I'm left with many gaps in my knowledge”*. There are also issues with an internet connection: *“We can't focus and there are always issues with connection”*, *“A lot of technical problems seem to arise and sometimes they are hard to be solved”*.

The respondents were asked to describe how their daily life had been affected by the pandemic. The negative and sad mood was *“Because my classes had been made online, it was not reasonable for me to stay in campus anymore and I returned to my hometown”*, *“I don't go out that much when I'm in my hometown, so right now it's kind of like the summer vacation. However, I went out a lot with friends while in campus and I even loved going to classes together, which is something we can't do anymore...”*, *“I lost my side job at a restaurant I very much liked”*, *“I don't live at the dormitory at the moment because I can't afford and I need to help my family at home”*, *“I became more distant with people around me, something that saddens and stresses me out. Building new relationships in university seems barely possible anymore. Embarrassingly enough sometimes I even fail to recall my colleagues' faces. Since I have only interacted with them face to face for around a month, bumping onto them by chance after a while, I can't help but notice how many faces I have forgotten”*, *“My daily life still is affected because all I do every day is wake up, sit in front of my computer, studying all day online (sometimes even all night) and then go to bed. And this is my routine for more than 2 years, with the exception: of when we had face-to-face classes for less than a month. I do not think this is normal for young people to spend so much time in front of computer screens. This is an even more unhealthy "solution" to the COVID-19 restrictions!”*, *“Forced to sit at home for online classes, low physical activity. Low motivation and drive.”*

The respondents also were asked to explain how their health had been affected by the pandemic. Some of the respondents reported being contracted by saying that *“I had COVID-19, my family had it, and most of my friends have also had it by now”*. Some others expressed loneliness such as *“Yes, my health got affected. I no longer go out with my classmates even if it is just for a walk or to the university”*.

Regarding the question about changes in life and worries about the future, some respondents reported that *“I am worried that this new lifestyle is going to be the beginning of the futuristic lifestyle of everyone and honestly it makes me sad to think everything is going to be online (classes, exams, etc.) and from home (job, shopping, etc.)”*. Some others described a frustration: *“Yes, my life changed. I was not ready to be sitting on a chair for more than 2 years. These should have been my best years in university, to make new and lifelong friendships, studying at the last minute for an exam, feeling many kinds of new emotions, etc., and instead of this, all I feel is back pain, anxiety, stress, and anger whenever I start doing my university duties, isolated from everyone and everything. This is depressing!”*. Some others worried about continuing education as *“I'm not sure I will have enough money to*



*continue my education*". Some respondents do not prefer to continue if the next course also will be online: "I was thinking about taking up a master's degree next year, but one of the reasons I'm leaning more towards not doing it now is because I don't want it to be online classes again". Some respondents expressed suspicion about the qualification they got by online education such as "Due to the low quality of classes I will most likely not be able to work in my field". The respondents also specified the need for support that they may expect. Many mentioned the need of financial support and mental health support.

## **Conclusion**

In this paper, the authors investigated the impacts of the pandemic on students' taking classes as well as other aspects of students' life. It had been conducted two years into the pandemic in Bulgaria when the students already had experienced four epidemic waves from 2020 through early 2022, while the fifth wave was still at its peak (Sofia News, 2022). During these two years, the students at the target university studied fully online except for about a month period when the campus was open temporarily for classes. More than half of the respondents were in their first and second year and have never experienced before-pandemic university student life. From the quantitative data analysis, the results showed about a half of students perceived an impact on taking class, and online class preference showed the extreme tendency of fully online or full face-to-face class rather than having a hybrid class. Almost a fourth of the respondents reported complete dissatisfaction with online classes, complaining about low efficiency, tediousness, and decreased motivation. In addition to physical and mental health impacts, more than half of the respondents reported worrying about the future. Some respondents could not compensate for the lost income and had to return to their hometowns.

The respondents had not felt short of information. Students who live in dormitory tend to perceive less impact on food supply. Students who have more changes in life plans tend to perceive more impact on health and perceive more stress. Students who perceive more impact on taking class tend to perceive more impact on daily life and less satisfaction with online classes. Students who perceive more impact on daily life also perceived impact on health. Students who perceived more worries tend to perceive more impact on having meals and on health. From the qualitative data, we found that some students prefer online classes, but more students showed reluctance toward online learning, associating it with boredom, lack of communication, low motivation, and inflexible teaching practice.

These findings imply the need to provide support to students not only to improve the academic quality of classes but also in the economical aspects such as providing tuition reduction, scholarships, and free COVID-19 testing. There is a need for providing mental health support to students. Nevertheless, improving the quality of online class by enhancing the communication efforts of the faculty staff also need to be put under consideration. These findings also demonstrated the need for further investigation on the future form of online learning, the factors that may predict the impact of pandemics on students, and the role of supportive factors in alleviating the impacts of the pandemic.

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**Contact email:** [tran@tokushima-u.ac.jp](mailto:tran@tokushima-u.ac.jp)