

## Sustainable Education System in the Face of the COVID-19 Pandemic

Mihaela - Gabriela Todrican (Rosca)

“Valahia” University of Târgoviște,

Doctoral School of Economics and Humanities /Management, Romania

[rosca1mihaela@yahoo.com](mailto:rosca1mihaela@yahoo.com)

Monica - Ioana Toader

„1st of December 1918” University of Alba Iulia, Doctoral School, Romania

[monica.ioana66@yahoo.com](mailto:monica.ioana66@yahoo.com)

Adriana – Ioana Filip (Croitoru)

„Valahia” University of Târgoviște, Doctoral School, România

[filipadrianaioana@yahoo.com](mailto:filipadrianaioana@yahoo.com)

### Abstract

*It is obvious that in this school, but certainly in the next one, the educational system is and will be affected by the evolution of the SARS-CoV-2 epidemic.*

*The reopening of school units and the resumption of the usual activities are, according to the scenarios and data currently available at national and international level, an unrealistic expectation. During the state of emergency, university education took place online.*

*In this paper we will analyze the impact that the spread of Coronavirus (SARS-CoV-2 virus) has on students in Bucharest during the period of emergency.*

**Key words:** education, economic, pandemic

**J.E.L. classification:** M10, M20, M21, M31

### 1. Introduction

The new coronavirus pandemic has challenged higher education and the need for rapid adaptation. Given the pandemic exercise, it is essential to learn from this period, to identify existing problems and solve them in a timely manner until the beginning of the new university (Romanian Ministry of Education, 2020).

Universities have demonstrated their major role in responding to the COVID-19 pandemic, and research, innovation and education are key to long-term strategic resilience. Investing in them by improving collective skills and knowledge will lead to lower costs in the face of a future crisis (European University Association, 2020).

### 2. Theoretical background or Literature review

The analysis of public policies as well as the recommendations we propose to the public debate have as a starting point the expression of a personal concern regarding the situation of the educational system in Romania, in the current context of measures to prevent the spread of SARS-CoV-21 (Florian & Sebastian Țoc, 2020).

The absence of a serious debate in the public space regarding the short-term (until the end of the school year), medium (school year 2020 - 2021) and long-term (period 2021 - 2027) plans, more than one month after the closure of the school units, is a serious cause for concern.

Recent events are exceptional and have affected all states equally, so the situation in Romania is not unique (Florian & Sebastian Țoc, 2020).

The distance learning exercise has shown in many courts how unprepared digitalisation is in terms of higher education. One of the main challenges of distance learning is to ensure the inclusion and equal access to quality distance learning for all beneficiaries. Some students, including teachers, may lack digital skills, access to electronic devices or internet connection or adequate space to study at home, which can be a major obstacle, especially for students from a disadvantaged socio-economic background, from a rural area or from an isolated area.

At the same time, students with audio and / or visual disabilities can be very affected, requiring additional counseling and support and resources adapted to the learning activity. Although the relocation of teaching activities to the online environment has allowed the learning process to continue, online teaching cannot fully replace the face-to-face teaching experience.

We appreciate that this change has taken place in an unexpected and fast way, without a smooth transition to online teaching, planned and adapted along the way. Some teachers have been put in the position of teaching online for the first time and in this context, it is expected that there will be problems and shortcomings, but the experience of online teaching so far has not developed the full potential of online teaching.

Respectively, since online teaching has been deficient in some cases, it is necessary to improve the problematic aspects and not to give up this method. Of course, there are disciplines that are difficult to transfer in the online environment such as the predominantly practical ones, especially in the field of technical sciences, health and vocational sciences.

On the other hand, when it comes to sweet students, they are less prepared in terms of digital skills compared to the younger generation, which can affect their opportunities for improvement and retraining (ANOSR Romania, 2020).

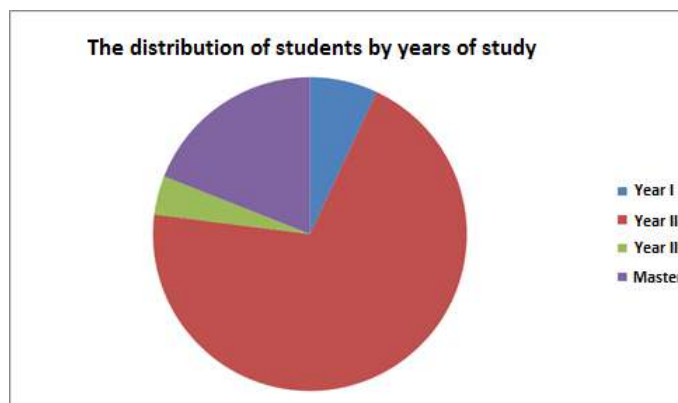
### 3. Research methodology

According to the way of collection and the nature of the information, this research is a qualitative one. The aim of the research is to discover the extent of the relationships between the variables, one dependent / explained and the other, and the other independence and explanatory.

The objective of the research was the impact that the spread of Coronavirus has on students in Bucharest, during the period of establishment of the state of emergency, in which it went from teaching in the classroom to online teaching, and the population was isolated at home.

The research was conducted on a representative sample of students from the Academy of Economic Studies in Bucharest, consisting of 102 respondents. The data collection was based on an online questionnaire conducted between 1-14 May 2020 (77 female and 24 male). Of these 7% are students in year I, 70% students in year II, 4% in year III and 19% in Master student), according to Figure 1.

Figure no. 1 – distribution of respondents per year of study



Source: Data resulting from the processing of questionnaires applied

#### 4. Findings

The average duration of application of a questionnaire was between 5 and 8 minutes. Following the completion of the questionnaire by the students, the following statistical data were obtained below and described accordingly. It was performed a study on students' perception of daily activities and learning during the isolation period May 2020.

How students have adapted to online learning conditions in the context of the COVID pandemic, the results are presented in Table 1.

*Table no. 1 Adapting students to online learning conditions*

Nothing	In some wise	To a large extent	To a great extent
11%	40%	28%	21%

*Source:* Data resulting from the processing of questionnaires applied

Forty percent of the students who answered the questionnaire consider that they have not been able to fully adapt to these learning conditions. However, a sample of 49% of those surveyed believe that they have managed, to a large and very large extent, to adapt to the new conditions of learning and interaction in the online environment.

The present research has aimed at identifying the feelings and thoughts that the students perceived during the period under study, for example if they perceive it as a holiday, if they wish it to end as soon as possible or to continue, how to communicate with friends and family (see Table 2).

*Table no. 2 Students' feelings and thoughts during the emergency state*

Answer	Nothing	Small measure	To some extent	To a large extent	To a great extent
I want this period to end sooner	4%	4%	9%	17%	66%
Although I wanted a vacation, I didn't imagine it would be like that	2%	9%	16%	18%	55%
I like this period, I would like it to last as long as possible	56%	26%	12%	3%	2%
Online courses are useful, but they are not as interesting as those organized face to face	9%	15%	28%	25%	23%
I miss the face-to-face interaction with teachers, colleagues, friends	4%	10%	9%	23%	54%
It's hard to stay home alone all the time	8%	10%	16%	22%	44%
I feel good only with my family at home, during this period	12%	14%	41%	18%	15%
I have more time at my disposal	8%	7%	23%	28%	34%

*Source:* Data resulting from the processing of questionnaires applied

During the state of emergency (March 16-May 14, 2020), young people faced different thoughts and experiences that changed, for many of them, their perception of life. 66% of the respondents expressed their desire to end this unpleasant period in everyone's life as soon as possible, just as 56% of them consider that they do not like this period and want it to end as soon as possible.

The vast majority of those surveyed consider (54%) that, to a large extent, they lack interaction with teachers, colleagues and friends, and that it is difficult to stay isolated at home (44%).

From the centralized answers, only 15% of the respondents largely agree that they feel good only in the interaction with the family, which justifies the 54% percentage of the lack of interaction with the social environment of which they are part.

The organization of the daily program of students in the context of online learning is presented in Table 3.

Table no. 3 Organization of the daily program of students

Answer	Nothing	Small measure	To some extent	To a large extent	To a great extent
I organize my daily schedule on my own	3%	13%	25%	32%	27%
It's easy for me to follow my schedule	2%	15%	46%	19%	18%
My program is organized according to online learning activities	10%	14%	18%	26%	32%
I often feel like I'm wasting my time	9%	16%	25%	25%	26%
I find it harder to concentrate	11%	22%	19%	30%	18%
I don't think I need organization during this time	30%	36%	19%	9%	6%

Source: Data resulting from the processing of questionnaires applied

The isolation period and the online teaching-learning activity are considered to be a challenge for students, in terms of time management. From the interpretation of the data collected, it appears that 76% of those surveyed (to some extent, large and very large), consider that, most of the time they waste time, and only 25% consider that they are efficient in the management of time and in organizing daily activities.

A quarter of the students consider that during this period, their ability to concentrate on the activities carried out is lower, 46% of them consider that they manage only to a certain extent to easily respect their program, while 37% succeed in large and very to a large extent its observance.

An important aspect of research was to identify the daily activities undertaken by students during the period of isolation at home and which had a positive impact on their overall well-being. The student responses, as well as the results of the interpretation of the questionnaires, are represented in Table 4.

Table no. 4 Daily activities performed by students during the period of isolation at home

Answer	Nothing	Small measure	To some extent	To a large extent	To a great extent
I talked to my parents about what is happening in the country and in the world	8%	18%	23%	36%	15%
I inquired about the measures of (self-protection)	3%	4%	20%	29%	44%
I did sports in the living space	16%	15%	15%	21%	33%
I communicated with colleagues and friends	1%	2%	25%	24%	44%
I participated in online learning activities with my colleagues	3%	6%	12%	30%	49%
I listened to music	6%	5%	14%	18%	57%
I saw movies	5%	10%	13%	25%	47%
I read what I wanted	11%	25%	29%	20%	15%
I did activities together with my family	11%	12%	38%	23%	16%

Source: Data resulting from the processing of questionnaires applied

The period of two months of emergency, determined the adaptation and limitation of social activities, which students performed in open space and in specialized places (cinemas, parks, libraries, gyms, participation in concerts, shows, outdoor activities , etc.), when limiting them only in the living space.

Thus, the vast majority of them responded that to a large extent they carried out the following activities in the home: sports, socializing with colleagues and friends, listening to music, watching movies, watching TV shows for news and debates.

What can be remembered from the interpretation of the results is that the largest share, of 29% of students, answered that only to a certain extent they read what they wanted, and 88% of them answered that only to some extent they carried out joint activities with the other members of the family.

One research objective was to identify to what extent the online learning activity was effective, well organized, demanding or considered to be an opportunity for students to use digital technology and online learning. The results obtained are centralized in Table 5.

*Table no. 5 The perception of online learning*

Answer	Nothing	Small measure	To some extent	To a large extent	To a great extent
Interesting	8%	19%	40%	27%	6%
Tiring	8%	19%	32%	28%	13%
Useful	8%	14%	41%	25%	12%
Well organized	12%	10%	54%	14%	10%
More demanding than the activities carried out at the faculty	11%	22%	26%	19	22%
A good opportunity to use digital technology (internet, applications, laptop, tablet, smartphone, etc.)	8%	17%	25%	23%	27%
Opportunity to discover new things about me	1%	18%	32%	32%	17%

*Source:* Data resulting from the processing of questionnaires applied

From the results of the interpretation of the questionnaires, it has been demonstrated that all respondents have at their disposal the technological and information equipment (computer, tablet, laptop, internet connection) needed for online learning. These results can be viewed in Table 6.

*Table no. 6 Technological equipment used by the students in online learning*

Answer	Nothing	Small measure	To some extent	To a large extent	To a great extent
I like to interact online with other participants (teachers, colleagues).	4	25	33%	30%	8
The teachers carried out interesting learning activities in the online environment.	10	27	37%	18%	8%
Online learning is less friendly than face-to-face learning.	9%	27%	19%	22%	23%
I am satisfied with the schedule of online classes.	13%	25%	40%	14%	8%
I feel ready to use digital technology (internet, applications, laptop, tablet, smartphone, etc.)	1%	9%	12%	20%	58%

*Source:* Data resulting from the processing of questionnaires applied

Another objective of research was to identify to what extent universities were prepared to manage the educational act effectively in the emergency.

Students were asked what learning methods and assessment tools were used in online teaching by their teachers. 91% (Table 7) of them said they were using in online teaching classes the educational platforms of "G suite Google Classroom", both audio and video.

*Table no. 7 Educational platforms and visual tools used in online learning*

Laptop, computer, tablets	Telephone	They have no equipment
96 people	92 people	0

*Source:* Data resulting from the processing of questionnaires applied

## 5. Conclusions

The way the students were satisfied with online teaching-learning-evaluation is reflected in the results achieved in Table 8.

Table no. 8 Degree of satisfaction of students in online learning

Written messages (email, WhatsApp, Google Classroom)	Audio/Video	Nothing
93	92	0

Source: Data resulting from the processing of questionnaires applied

From the results of the survey, the following can be concluded: 66% of respondents replied that they were largely excited about the online interaction with teachers and other colleagues, which means they adapted to the successful period of isolation at home, but still feel that online interaction is less user-friendly than face to face used in people-to-people relationships.

Most students replied that they were satisfied with the way teachers carried out their online teaching activities and that they were prepared in the future to use the new technology in their student work.

The efficiency of the quality of distance learning was perceived by students as being efficient and very effective in the education process, as shown in Table 9.

Table no. 9 Quality of distance learning

Answer	Very low	Low	Normal	Efficiency	Very efficient
Written messages (email, WhatsApp, Google Classroom)	2%	12%	34%	39%	13%
Audio/Video	3%	4%	24%	48%	21%

Source: Data resulting from the processing of questionnaires applied

Higher education institutions are invited to be as flexible and pragmatic as possible in order to help students achieve the results indicated in the study contracts, regardless of their geographical location (for example, it may be agreed to adopt the distance learning option, with the help of digital tools).

This flexibility will help students returning to their home country in particular to complete their courses at the host institution and obtain European Credit Transfer and Accumulation (ECTS) credits on the basis of fully recognized distance learning agreements (European Commission, 2020).

Accelerated change and existing challenges now require more than ever effective, efficient and sustainable strategies on the part of universities and the Government.

This fact is even more necessary under the pressure of limited financial resources that are poorly managed, they will only generate losses. We thus encourage universities to engage in the practice of exchange of experience with counterparts at national level and in other countries to ensure the most effective solutions.

A prepared Romania for future crises means a Romania in which Governments and universities assume adequate and sustainable funding to increase their contribution to a long-term recovery (Thomas Estermann, et al., 2020).

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