



## Perceptions of Students from Northwestern Romania on Online Education during the Pandemic COVID-19

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### Authors' contributions

This work was carried out in collaboration among all authors. Authors BVC and AL designed the study, performed the literature searches and wrote the first draft of the manuscript. Authors ML, MC and MM managed the analyses of the entire study. All authors read and approved the final manuscript.

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### ABSTRACT

The current spatio-temporal context, in which the didactic activities in our country (Romania) are still carried out, is, beyond its form of social experiment, a form devoid of spiritual content. In the transition from classical to modern, through multimedia technologies, the interactions based on the

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teaching-learning-assessment activity are severely widowed by the physical lack of those closely involved in the educational system. In such a context, considered to be still cloudy, unsettled, the level of perception of those trained is questioned. Thus, through this study, our emphasis and attention fall on how online education is received, accepted, or not among Romanian students; for the study being interviewed only the students from the third year of study, from various specializations (technical and non-technical), aged over 21-22 years. This study took place between November 2020 and February 2021, on a sample of 463 students. Only students with whom the teachers had contact, who actively participated in online courses, seminars, and laboratories (especially computer-assisted training seminars), participated and were interviewed. The whole debate focused on the students' report on the teaching activity carried out exclusively online. Their answers, under anonymity and voluntary commitment, being an overview, which we decided to present both descriptive (only fragments) and infographics (only a summary of answers).

*Keywords: Online education; pandemic boom; student perception; descriptive analysis.*

## 1. INTRODUCTION

In pedagogical thinking and contemporary educational practice, the idea has been and is being imposed that the modernization of the process and the education system is necessary 1 and that it must follow the development path of the society 2. In the literature, over the last 10-15 years, there has been talking of revolutionizing the education system; but only a little later, after the second half of 2019, the real revolution in the education system took place. And this, as a result of a sanitary pandemic crisis, affecting the world's population 3. We were all forced to be actors in a new form of education, distance learning, using digital multimedia.

The teacher was the one who had to analyze and put into practice the necessary ways, methods, and tools of distance teaching-learning-assessment, in an e-learning system 3,4. This analysis is part of a cognitive process of filtering, connecting, and interpreting the psycho-pedagogical knowledge accumulated, both in terms of academic studies and in terms of professional experience. The operative decisions of the teacher had to adapt depending on the situation, opting only for those factors of didactic configuration that allowed him to achieve the established didactic objectives.

The global closure of schools and colleges in recent months, in an attempt to slow the contagion, has affected more than a billion young people worldwide 5. If school closure were to be extended further, there would be significant potential for the loss of educational opportunities, along with a loss of human capital, beyond the economic opportunities that have been diminished in the long run.

Fortunately, the closed doors of the buildings did not stop the educational activity. It has only transformed and moved into the online environment, where it has inevitably gained new value 5,6. Rather, the closure of schools and colleges has not stopped education, although it has changed it, sometimes even more than expected. Thus, pupils, students, and teachers were put in a position to adapt to a new mode of instructive-educational activity, developed within online platforms 7. Modern (active-participatory) methods of teaching, learning, and assessment have shown that they can engage the trained person in the educational activities, their limits can not be overlooked, compared to the classical educational activity, carried out face to face.

Education has become a home school, somewhat another form of homeschooling, as pupils and students have been admitted to online courses and received electronic resources, of course, where possible, where there has been accessing to technology. Due to the current conditions, imposed by the pandemic, the Romanian school has gone through different phases of modernization 1. This modernization process was implemented quite suddenly, the teachers having to develop learning through discovery, the new methods and applications of the school not being available to everyone. Through an effort to accommodate collectively, both pupils, students, and other categories of educated people, as well as teachers have managed, to the greatest extent, to acquire skills for using new technologies.

The transition of education in the online environment has been a real challenge for both pupils and students, as well as for teachers 8-

10. Even if the online environment had been used for some years in some activities, it was at most at the level of additional and complementary activities, not the main or unique activities of teaching, consolidation, and/or verification 11. This new approach to education necessarily included a touch of self-education and on-the-go learning, both on the part of teachers and students 12, because no one was prepared for full learning in online.

The challenge itself is encountered in all stages from teaching to feedback; the most interesting assessment is related to the online evaluation process. It is very important whether the tasks and content of the assessment tests are interesting, challenging and change the rigid assessment into an exploratory experience 13. This is based on the fact that any act of assessment is also an act of learning. By providing information on how the training process took place, both the positive elements and the gaps or dysfunctions that disrupt it can be identified 13, and consequently, corrections and improvements can be made to determine its optimization and efficiency. Information on the responsiveness of those trained is also useful in exploiting new approaches to help them adapt more easily to requirements.

If in the beginning, the accommodation was slow, there are many unknowns, over time the benefits of online education began to be recognized by all those involved in the educational process 14. Moreover, the online teaching environment has allowed the teacher and his students to connect more easily with other students, from different backgrounds and cultures 15. Online teaching can thus take the teaching experience from a regional level to a national level and even further to an international level.

However, although technology provides a lot of information support, access to resources being very handy, it feels that it distances us 16. Through the daily preoccupations, diligently made by vocation, we spread knowledge, beauty, joy, delight, and enthusiasm in the society so tried these days, but we fail to maintain what we had in the face-to-face meetings. In the transition from agony to ecstasy 17, online education was in turn perceived as a challenge 11,16,18, a necessity 19, a social experiment 20, a stressful period 21, a pleasant experience 22,23, arousing many comments for and against. We will also focus on the last

aspect, in an attempt to present the perception of the students with whom we collaborated closely.

## 2. MATERIALS AND METHODS

The case study took place between November 2020 and February 2021, on a sample of 463 students, aged over 21-22 years, in the third year of study, the most active participants in our online educational activities. The vast majority of students are part of the cohort of active participants in computer-assisted training seminars, conducted exclusively online through the MS Teams® platform. At the beginning of the work sessions, the students were asked to give their opinion concerning the online classes. As such, they were presented with the idea of a mini questionnaire and the fact that we are only interested in their opinion. It was also announced each time, during the online working sessions, that personal data will not be taken into account. They were also informed that their responses, as a voluntary commitment, could be the subject of a synthetic study on the perception of online education.

The study involved both free discussions and answers to a set of key questions addressed to students participating in computer-assisted instructional classes. The form with the answer to the free choice of the respondent, around which the whole debate was centered, consisted of three questions, as follows:

- a) If you were to describe online education in 3 words/phrases, what would they be?
- b) What do you like/dislike about education conducted exclusively online?
- c) What would you propose if you could change something?

## 3. RESULTS AND DISCUSSION

Based on the answers offered by the students who remained anonymous during all this time, a situation was synthesized, through indexing, a situation representing their perception of the education carried out exclusively online, during the most severe period of the pandemic. At the same time, to record at a statistical-descriptive level the range of answers received, a series of infographics were made, in line with the theme of the study.

To the question "If you were to describe online education in 3 words/phrases, what would they be?" students responded without too much

hesitation; some of their answers are set out as follows (see also Fig. 1):

- "Confusion, hard work, comfort";
- "Challenging, beneficial in time, tiring";
- "Tiring, demanding, leaves you with no free time for yourself as a person";
- "Tiring, too much homework, but otherwise flexible";
- "Effective in time, exhausting for the eyes, little movement";
- "Demanding, difficult to understand, needs better organization";
- "Overwhelming, it turns the daily rhythm upside down, it's a bit unrealistic";
- "Communication is better, we have direct contact with teachers, very easy";
- "We have faster access to materials, we are given more homework, the evaluation is turned upside down";
- "Information is easier to access, time is gained between classes/seminars, more emphasis is placed on the individual study".

To the question **"What do you like/dislike about exclusively online education?"** the students answered evasively, the restraint being given by various prejudices. In general, their answers can be grouped into two segments of interpretation, namely the pro-e-learning variant and the opposite variant. Also, if we were to balance the answers received, the balance

would tilt in favor of e-learning (in response, see Fig. 2).

In the first phase, to more easily interpret the answers received, we decided to go in two directions of grouping the answers. The first direction, having as a point of reference the phrase **"I don't like that ..."**, is harmoniously completed by the fragments below:

- "I miss my colleagues, the contact with them";
- "the attitude of some teachers, who use the monologue";
- "the online schedule is no longer optimized, in the sense that those who recover the hours do them whenever they want, without taking into account our schedule and breaks";
- "organizing online teaching sessions spoils our schedule, we have either too busy days or too long breaks";
- "the time we gain between courses/seminars we lose later, because after we have far too much homework to do";
- "we have to sit too long in front of the computer and just listen, and sometimes I feel like it's worse than on TV";
- "I spend too much time on the computer, we have a lot of homework, and to solve them all we only have to work at night".

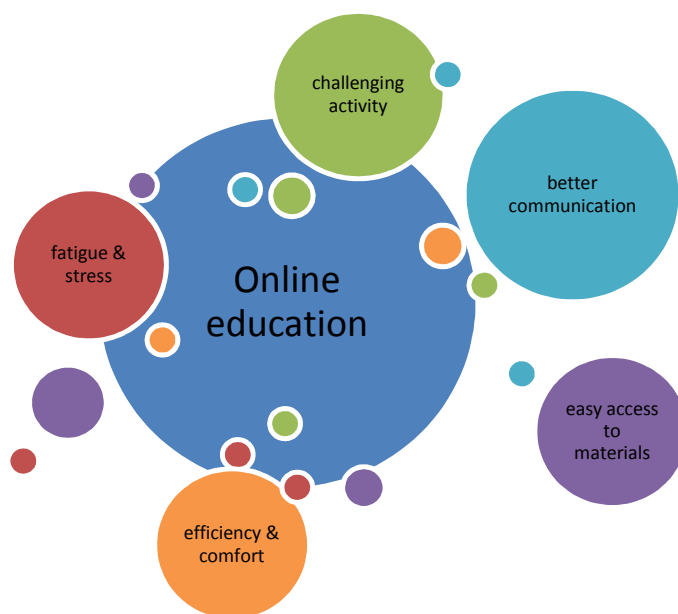
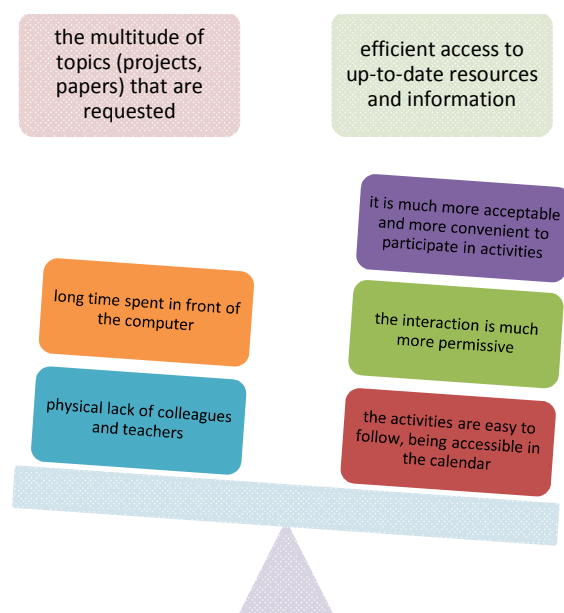


Fig. 1. A top 5 of the most common expressions in relation to online education



**Fig. 2. A balance of bivalent perceptions of online education**

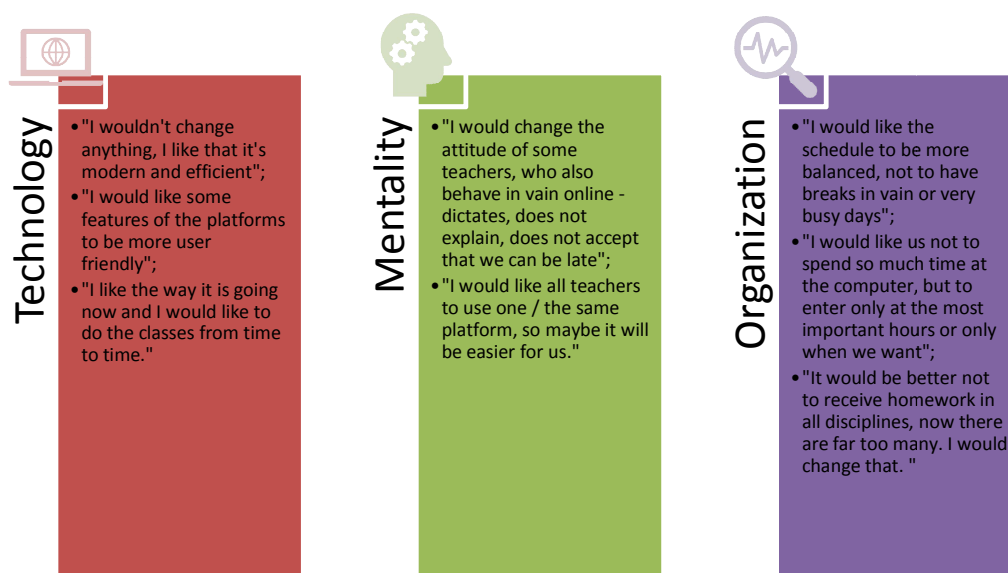
The second direction is outlined in the completion of the phrase "I like that ...", this time the answers being a bit more complex, respectively:

- "Finally we have a modern learning system, efficient and interesting in all respects";
- "Now, online, it is much easier to collaborate, and it seems much easier to follow everything; we can watch everything when we want, especially if it is recorded";
- "We are safer that way, and that we have a lot more time because we don't have to wake up earlier, we don't have to run after the bus, nor do we have to prepare as we did before";
- "We have the opportunity to interact much faster with the teacher, now we do not have to wait until the next meeting (in a week or two) to ask him something; we simply write in a group or a chat, and he sees and answers us";
- "It is much more convenient and acceptable to participate in the various activities we have; that's why I like it more because I don't have much time, I work and normally I can't get to classes".

To the question "What would you suggest if you could change something?" the answers were very well anchored in reality. It is very clear that students have understood what is possible and what is not online, but especially, they are aware that something can be improved, and they have great ideas in this regard.

If we were to analyze them, we mainly discuss answers on three levels - technology, mentality, and organization, in all three cases, inevitably resulting in a final position to e-learning. This positioning is limited to embracing the conservative perspective of the type "I would not change anything, because ...", respectively the innovative/renovating one of the types "I would change ..., because ...", as shown in Fig. 3.

Given these considerations, the design of online activities, on different platforms or even offline, but still remotely, choosing to distribute study materials in different locations (where internet access does not exist), will forever remain proof of educational potential. All these perceptions, on a subjective note, from individual to individual, are elements of the picture that make up the image of a system that promises not to stop training young minds, anytime and anywhere.



**Fig. 3. A triple anchor in embracing online education in terms of changing or accepting the current situation**

#### 4. CONCLUSION

Recently, the Romanian education system has faced a huge challenge - traditional educational activities, carried out in classrooms, face-to-face with students - have been suspended, and teachers have had to adapt quickly. They were forced by circumstances to find resources related to both their professional skills and digital tools to help them and replace the formal education with which teachers were accustomed.

This process, of the spontaneous transition from classical (on-site) education to the exclusive online one, was perceived as nuanced by the students. For example, all the comments of the students we collaborated with, as part of the process of investigation, knowledge, analysis, and improvement of the current situation, are well anchored in reality. Students saw in online education not only an easy experiment - with an emphasis on accessibility of resources, but also a challenge, a demanding activity, or even a necessity.

As a final remark, we did not intend to go on the path of statistical indexing of the answers offered, but only to offer a series of answers, the most frequently stated by students. In this sense, the limitations of the present study are also reflected. So, in its current form, not taking into

account any personal data, as we promised to those interviewed, this study concludes that it is extremely difficult to track or achieve at the statistical level a certain situation. The only aspect we can discuss is the actual response of the students, whom we thank for their voluntary commitment. Such an approach (indexing students' answers about online education) can be approached from a statistically descriptive perspective in the case of similar studies.

#### DISCLAIMER

We declared, as authors, that no competing and/or ethical interests exist. The study was conducted on a sample of students participating in active computer-assisted instruction classes. We are talking only about students over 21-22 years old (year 3 of study), active participants in computer-assisted training classes. By mutual agreement and under the auspices of anonymity, they also participated in a series of discussions on online education. We are therefore talking about a voluntary commitment assumed by both parties. In fact, each time, at the beginning of the discussion, they were informed and reminded that personal data will not be retained, but only the opinions for which they agreed to be a cumulative part and the subject of a possible scientific article.

## CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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