

EDU WORLD 2022**Edu World International Conference Education Facing Contemporary World Issues****UNIVERSITY STUDENTS' PERCEPTIONS ON ONLINE AND
ONSITE EDUCATION DURING COVID-19 PANDEMIC**

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andreea.stan@upit.ro**Abstract**

The COVID-19 pandemic has led to major changes in education. In a short time, both students and teachers had to make the transition from onsite to online education in the spring of 2020. This study aims to identify university students' perceptions on online and onsite education, in the context of COVID-19 pandemic, after returning to onsite education, in March 2022. 420 Bachelor and Master degree students from a medium sized state university took part in this survey. Our study investigated students' perceptions on teaching activities, on social interaction with teachers and colleagues, on time management and preference in online and onsite education. The results indicate students' preference for online learning. More than half of the students say that exams are easy to pass in online education, compared to onsite education, they feel relaxed during online classes and tired at the end of onsite classes and emphasize the advantage of online learning in terms of availability of materials and instruments needed for academic assignments. The majority of students consider that they manage their time more efficiently in online education and if they would have the power to decide on the format of academic activities, students would choose the online format.

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1. Introduction

The first case of COVID-19 in Romania was confirmed in February 2020. Since then, authorities have taken a number of measures in order to slow the spread of the virus. Among these measures was the closure of schools (in March 2020), which imposed a rapid transition from onsite to online learning. During the COVID-19 pandemic, universities offered students the opportunity to use platforms to facilitate online learning and implemented strategies for optimal online courses. At the same time, other online platforms (such as Skype, Zoom etc.) have offered free access to their services. Both teachers and students had to adapt to the new conditions of synchronous online learning (teachers and students at the computer at the same time).

The forced shift from onsite to online education was a sudden change for teachers and students, the majority of them unprepared for online teaching and learning. The lack of material resources (computer/Smartphone, Internet access) in some cases, the lack of digital skills in other cases, a different learning environment with many distracting stimuli, the lack of face-to-face interaction, increased workload, difficulty concentrating (Ciuhan et al., 2022; Fylos et al., 2021; Ionescu & Stan, 2021; Kaufmann & Vallade, 2020; Lemay et al., 2021) added to the stress experienced by both students and teachers due to the uncertainty of the general situation.

In March 2022, the Romanian government decided to end the state of alert imposed by COVID-19 pandemic. On a very short notice, all the schools and universities had to return to face-to-face learning, which for some students raised some problems like finding a place to live in the city where their university was, commuting or having to match education and job physical presence requirements, things that increased living costs and stress level for a part of university students.

1.1. Online learning

The rapid development of technology has also brought about changes in education. Distance learning has met the needs of a segment of the student population: married students who work full-time or have other responsibilities that prevent them from attending on-site courses, from places other than the one where the courses are held. Although the students' response to distance learning was favourable, it did not allow for interactive communication between teachers and students. With the development of technology, synchronous online learning has become possible, which also allows for teacher-student interaction (Hannay & Newvine, 2006). This interaction is important in creating meaningful learning experiences (Alawamleh et al., 2022).

Definitions given over time to online learning include a number of common elements: the use of technology to convey information and ensure interaction, the synchronous or asynchronous conduct of courses, student-teacher-technology interaction, physical distance (Singh & Thurman, 2019).

1.2. Online vs onsite learning

The growing popularity of online learning has aroused the interest of researchers in its effectiveness compared to traditional face-to-face learning. Dumford and Miller (2018) identified a lower level of collaborative learning in first-year students attending more online courses, fewer discussions with

various other colleagues, and poorer quality of interactions. On the other hand, they spend more time in quantitative reasoning activities (a skill required by the first year specific subjects) and they engaged to a greater extent in learning. In the case of senior students, negative correlations were obtained between the number of selected online courses and “students’ ratings of effective teaching practices, student-faculty interaction, discussions with divers others, quality of interactions, and collaborative learning” (Dumford & Miller, 2018, p. 458). With regard to these variables, face-to-face traditional education is more advantageous. Another study (Yen et al., 2018) did not identify a significant difference between face-to-face learning, online learning and blended teaching (combining face-to-face learning with online learning) in terms of academic outcomes such as results in various assessments and satisfaction with learning experiences. Hurlbut (2018) has reported similar results in a study of student performance in a pre-service teacher program. The author did not found sufficient evidence to indicate an advantage of onsite education.

1.3. Students’ perceptions on online learning

Another area of research was to investigate students' perceptions of online learning. The results indicate both strengths and limitations perceived by students.

Among the advantages of online learning are: the opportunity to study at home (more time to spend with the family, more comfort), quick access to information via the Internet, reduced costs (it eliminates expenses with accommodation, transportation and food), program flexibility (eliminating preparation time to go to school) (Thamrin et al., 2022). Students who prefer online learning say that it fits their lifestyle and those who choose hybrid classes highlight benefits such as flexibility and interaction with colleagues / teachers; graduate students (with more experience in the learning environment) associate online learning with a higher level of satisfaction and comfort (Clayton et al., 2018). In another study (Buzatu et al., 2020) conducted in April 2020, a period in which, according to restrictions, universities made the transition to online learning, students are in favour of online learning, but are not sure if its quality matches the quality of the traditional education.

Disadvantages of online learning include: difficulty accessing the Internet (poor connection), reduced computer skills, poorer interaction (with colleagues and teachers) compared to face-to-face learning, and comprehension problems (caused by difficulty connecting to internet), lack of favourable conditions for home learning and poor self-discipline (Thamrin et al., 2022). Clayton et al. (2018) have found that undergraduates and graduate students preferred traditional learning environments due to a higher level of interaction with colleagues and teachers. Preference for onsite courses is also reported by Alawamleh et al. (2022), students indicating a lack of motivation in the online learning environment, comprehension difficulties, a low level of teacher-student communication and a sense of isolation. Coman et al. (2020) conducted a study in the context of the pandemic crisis and noted the disadvantages of online learning perceived by the students: problems accessing the university platform or other platforms used by teachers, the lack of teachers’ technical skills and difficulties in adapting teaching methods to online learning, teachers’ lack of interest in improving their teaching skills in the online environment, too much theory or too many practical tasks, less free time because of increased workload, lack of support from teachers associated with a feeling of isolation. Students' responses indicate their preference for the

traditional way of education process or a combination between online and onsite courses, highlighting the fact that it is more difficult to concentrate during the course, to assimilate and process the information transmitted online and to present projects in practical courses.

Garris and Fleck (2022) investigated a sample of 435 students (69.5% of them having prior online learning experience) in a nationwide study in the U.S. and compared the face-to-face first half of a course to the online latter half of the same course. The authors found out that students evaluated their classes as less enjoyable, less interesting, instilling less learning, holding less attention and motivating less effort. On the other hand, courses were evaluated as becoming more flexible to student needs.

Education specialists propose a series of measures to reduce the vulnerabilities of online learning: “gamification”, namely adapting and applying the logic and mechanisms of games in the classroom environment (Hitchens & Tulloch, 2018), team projects and discussions between students (Dumford & Miller, 2018), feedback offered by the teacher (Hurlbut, 2018), the competent use of digital tools by the teacher, clear, focused, encouraging communication during classes, a safe and comfortable class climate, use of interactive tools such as video lectures, video conferences and small group discussions, student-student interaction / collaboration in learning (Van Wart et al., 2020).

2. Problem Statement

Compulsory online learning imposed by COVID-19 pandemic raised a number of issues, with many students being affected for different reasons (lack of a place dedicated to study, lack of digital competence, difficulties in relating and working with colleagues / teachers, Internet connection problems, difficulties in understanding the material taught etc.). Switching back from online to face-to-face education, after two years of online education raises other problems: students have to leave the comfort of their homes, some of them have to commute or find a place to live in another city, others have to accommodate family, work and school requirements. There are two main reasons to address this problem: a gap in the literature concerning students’ perceptions on face-to face education after experiencing online education for two years and authors’ observations of many students’ negative feedback related to returning to onsite learning.

3. Research Questions

Our study intends to answer two main questions:

- i. How do university students assess online and onsite education after two years of compulsory online learning?
- ii. Which is student’ preferred format (online or onsite) for future academic activities?

4. Purpose of the Study

The main practical objective of this study is to explore university students’ perceptions on online and onsite education after the transition from online education (imposed by the government in the effort to control COVID-19 pandemic, in spring 2020) to onsite education in spring 2022.

5. Research Methods

Measure

We designed a survey questionnaire including:

- 16 questions concerning perceptions on teaching activities (e.g. the level of interactivity, organization, effectiveness of teaching activities, the degree of students' understanding, motivation and attention related to academic education etc.);
- 8 questions about students' perceptions on social interaction with teachers and colleagues;
- 3 questions about time management;
- 1 question about their preference for online or onsite education: If I could decide the format of academic activities, I would chose: (a) the online format, (b) the onsite format, (c) either of them.
- Socio-demographic data (gender, age, year of study, study program, study degree, employment status).

The questions regarding perceptions on teaching activities, on social interaction and time management were closed-ended, with three response options: Rather in online education, Rather in onsite education, and In both forms (online or onsite.)

The data were collected online, using Google forms, in May 2022, two months after returning to onsite education. The students received the invitation link to the survey through online discussion groups. Surveys were completed on a voluntary basis and were anonymous.

Participants

Our sample includes 420 students from a medium sized, state university, 76 (18.1%) male and 344 (81.9%) female participants, with ages varying from 18 to 60 years ($M=28.83$, $\sigma=10.63$). 307 (73.1%) are Bachelor degree students and 112 (26.9%) are Master degree students.

More than half of the participants study Social Sciences. 30.48% are Psychology students, 24.05% are Social Work students, 10% are Human Resources students, 8.09% are Foreign Languages students, 7.14% are Engineering students and the rest study Occupational therapy (4.05%), Physical Therapy (2.14%), Law (1.9%), Economics (1.9%), Physical Education (1.66%). 3.1% didn't declared a study program. 250 (59.5%) participants are currently employed and 170 (40.5%) are unemployed.

6. Findings

Students' perceptions on online and onsite education are summarised in table 1.

Regarding various aspects related to teaching activities, students consider the online form of education to be more effective than the onsite form. 63.7% of the respondents consider the exams to be easy to pass in online education. 60.8% feel tired during onsite classes and 61.3% feel relaxed during online education. 47.7% say they are motivated to do their assignments in online education and 57.7% of the students say that they have in online education all of materials or instruments needed for course assignments. More than half of the respondents say that in both forms of education (online and onsite) teachers are able to adequately explain the course material (55.3%) and pay enough attention to the students so they can understand the course (52.3%).

Regarding social interaction, more students say that onsite education helps them to get to know their colleagues (41.6%). 42.5% of the respondents say that in online education it is easier for them to work in a team during practical activities and more than half (54.2%) consider the class atmosphere to be relaxed.

Table 1. Students' Perceptions on Online and Onsite Education

Questions	Rather in online education (%)	Rather in onsite education (%)	In both forms (online or onsite) (%)
Teaching activities			
I understand the teaching content.	37.1	15.9	47
I am developing my competences for each course.	41.1	23	35.9
Teachers are able to adequately explain the course material.	29.5	15.2	55.3
I ask teachers questions when I don't understand something.	41.8	18.1	40.1
Teachers pay enough attention to me so I can understand the course.	31.4	16.4	52.3
I can maintain my attention focused throughout the whole course/ practical activity.	40.1	25.2	34.7
I feel motivated to do my assignments.	47.7	15	37.3
I feel tired at the end of the class.	18.3	60.8	20.9
I feel relaxed during the courses.	61.3	9.3	29.5
I have at my disposal all the materials/instruments I need in order to do my academic assignments.	57.7	9.5	32.8
I have the opportunity to show what I have learnt/understood or what I know.	36.6	16.2	47.3
Teaching activities are interactive.	40.6	22.6	36.8
Teaching activities are interesting.	37.3	19.2	43.5
Teaching activities are well organised.	43.5	12.1	44.4
Teaching activities are efficient.	39	17.8	43.2
The exams are easy to pass.	63.7	5.7	30.6
Social interaction			
I got to know my colleagues well enough.	27.8	41.6	30.6
I got to know my teachers well enough.	36.1	29.5	34.4
It's easy for me to work in a team during practical activities.	42.5	26.8	30.6
It's easy for me to interact with my colleagues.	29.7	35.2	35.2
It's easy for me to interact with my teachers.	37.8	25.2	37.1
It's easy for me to make a joke with my teachers during the courses.	35.9	25.9	38.2
The atmosphere during classes is relaxed.	54.2	13.3	32.5
I can count on my colleagues' help.	36.8	17.6	45.6
I truly feel that I belong to the students' group.	28.5	28	43.5
Time management			
I can organise my activities very well.	72.7	9.7	17.6
My daily program is flexible.	83.1	5.5	11.4
I have enough time to do my academic assignments and my personal activities.	81.9	5.5	12.6

The majority of the students (more than 70%) consider all three aspects related to time management to be more effective in online education. If they would have the power to decide on the format of academic activities, 71.5% of the students would choose the online format and only 18.8% say they would choose the onsite format.

7. Conclusions

This study investigated university students' perceptions on online and onsite education shortly after returning to face-to-face education, in the context of COVID-19 pandemic. The results show favourable students' perceptions on online education compared to onsite education.

Perceptions on teaching activities. More than half of the students say that exams are easy to pass in online education, compared to onsite education, due to the lack of proctoring (Reedy et al., 2021), the opportunity to communicate with classmates, the availability of course material or easy access to online informational resources without being penalized since it is almost impossible to prove online cheating (Bilen & Matros, 2021), the opportunity to obtain a better grade (Abdelrahim, 2021; Dendir & Maxwell, 2020).

More than 60% of students say they feel relaxed during online classes and tired at the end of onsite classes and almost half of them (47.7%) feel motivated to do their assignments in online education. Some of these results are consistent with other research findings. Fyllos et al. (2021) found out that, although students expressed dissatisfaction with the quality of online classes and had significantly more trouble concentrating during online classes, they felt less stressed attending lectures from home.

The first weeks after returning to onsite education required an adaptation effort from both teachers and students. Face-to-face interaction means that you have to be present in class not just physically, but also psychologically, because teachers can observe nonverbal behavior indicating that the students are not focused on the class activities. Online education, often without the video camera on, meant less supervision and more freedom for students to engage in activities unrelated to their courses. In the classroom, the learning environment does not provide the same comfort as the home environment, the latter being identified by students as an advantage of online education (Lin et al., 2021).

More students say teaching activities are interactive, interesting, well organized and efficient in online education compared to those saying that this is the case for onsite education, although these aspects are present in both forms of education for an important percentage of students (ranging from 36.8% to 44.4%). Another favorable aspect of online education is the availability of materials and instruments needed for academic assignments, aspect also identified in previous research (Bączek et al., 2021).

Perceptions on Social Interaction. Regarding social interaction and climate, more than half of the students considered the atmosphere during classes to be relaxed in online learning, which is similar to previous research findings. Investigating faculty's and students' perceptions of online learning in Jordan, during COVID-19, Almahasees et al. (2021) showed that according to students, online learning is a relaxed and productive source of knowledge.

There are more students (42.5%) reporting that it is easy for them to work in a team during practical activities in online education compared to onsite education (26.8%). Compared to online education, onsite education seems to favor only one aspect of social interaction, namely colleagues'

interpersonal knowledge. This result seems to be different from other results in the literature. Previous research shows that social interaction is a main disadvantage of online learning (Al-Mawee et al., 2021; Lemay et al., 2021; Rizun & Strzelecki, 2020). Alexa (2021) found out that students reported positive experience related to teaching, learning and evaluation, although direct interaction with teachers and colleagues was affected the most. Our survey investigated students' perception after the end of the state of alert. Prior to this moment, the government already lifted many restrictions regarding social distancing. This allowed students to meet with their colleagues in informal contexts, decreasing the intensity of psycho-social needs (face-to-face communication, affiliation), as they were not longer limited by legal restrictions.

Perceptions on time management. By far, the main differences in responses regarding online and onsite education are related to time management. More than 70% of the respondents say that in online education, they can organize very well their activities, they have a flexible schedule and enough time for academic and personal activities. This is in line with other research study indicating students' positive perceptions about the location and time flexibility in distance learning (Al-Mawee et al., 2021), which is associated with less commuting time and costs, time management, more time to spend with family, more time to rest (Armstrong-Mensah et al., 2020).

The majority of the students (71.5%) would choose the online format and only 18.8% say they would choose the onsite format, if given the possibility to choose one of them in the future. This indicates a very clear preference for online learning after a two year experience of online education.

Study Limitations. The main limitation of the study is related to the sample size which is not representative compared to the total number of students enrolled in the university. Although some study programs, like Psychology and Social Work, are well represented, the sample did not include students from all study domains, which does not allow us to generalize the results to the student body.

Practical implication and future research. The originality and the main contribution of our study consist in investigating students' perceptions on online and onsite education two months after the transition from online education, imposed by COVID-19 pandemic, to face-to-face education. Our literature research did not return similar research so far, given the novelty of the circumstances. Students' positive assessment of online education is important for university decision makers and policy makers in the education system, in considering the inclusion of online learning in future formats of academic activities. Future research should take into account students' real academic progress in online learning.

Conclusions. Students' positive assessment of online education compared to onsite education, after two years of online learning in the context of COVID-19 pandemic indicates a clear preference for this type of learning format, which has practical implications for top management in the university and for other important stakeholders in the education system.

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