

STUDY ON THE STUDENT-TEACHER RELATIONSHIP IN THE CONTEXT OF ONLINE TEACHING, ACCORDING TO THE STUDENTS OF THE FACULTY OF ENGINEERING, LUCIAN BLAGA UNIVERSITY OF SIBIU

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Abstract: The purpose of our study is to highlight the main challenges and difficulties brought with it by the transition to the online teaching-learning environment, as they were perceived by the students of the Engineering Faculty of the "Lucian Blaga" University of Sibiu during the online classes held during the COVID-19 pandemic. 116 students from all specializations of the faculty and all years of study (I-IV) answered the questions in a questionnaire in the period June 2022 - June 2023. The main objective of the study was to identify the student-teacher relationship in the context of online teaching described by: the degree of participation of students in the online activities and their level of satisfaction in relation to this type of activities; difficulties related to communication and to the quality of interpersonal relationships; the level of involvement of teaching staff in online activities.

Keywords: online teaching, student-teacher relationship, motivation in learning

1 INTRODUCTION

The transition to online work environment represented a great challenge for all those involved in the didactic activity. Most of the involved actors (teachers and students) had no experience, at that time, in using the online teaching platforms or videoconferencing systems, which allowed teaching activities in real time. Moreover, some teachers did not

have prepared teaching options adapted to the online environment, nor did they have the skills to do so. As a result, everything that happened during the years 2020 - 2022 represented a major challenge for the entire education system, and the influence of external factors, which determined these major changes, extremely forced both the creativity of the teaching staff and the resilience of the students accustomed to the classical teaching systems.

It is true that there are many aspects that can be studied regarding these developments in the teaching activity in higher education; that is why in this study we limited ourselves to seeing the effects of the transition to online teaching on the relationship between students and teaching staff, within our Faculty of Engineering, an environment in which, anyway, communication has some characteristic and specific aspects, precisely because of the technical profile, which does not encourage so much the openness to communication and the open conveying of ideas.

The major changes that took place in a totally unexpected way, forced the academic environment to an extremely fast accommodation, in order to be able to continue the teaching activities. Due to this situation, which had not been encountered before, among the students (as well as the teaching staff) who continued their activity in the online environment, a series of major difficulties appeared, which left their mark on the psychological profile of the students. Some of these problems were not necessarily new; they were taken from what was already happening in the usual face-to-face teaching environment and transferred to the online teaching environment, but being amplified or even exacerbated, which led to new situations, difficult to anticipate until that moment. Some of the problems that appeared or were just transferred to the online environment were the following (Negara C., 2021):

- Lack of effective communication in the online environment, both in terms of the student-teacher relationship and of the student-student one. Non-verbal communication was missing in the online environment because the students usually turned on the video camera only at the teacher's request, being thus very difficult or rather impossible for the teacher to observe the students' reactions. The emphasis was on oral communication, but sometimes even this one

was difficult to achieve due to poor internet connection;

- Low student motivation due to factors such as: low flexibility, high levels of stress and depression, lack of interaction with colleagues and teachers. It is worth emphasizing that this is one of the problems that was taken over from the classical teaching environment, but amplified in its effects in the online environment due to a multitude of factors, many of them being related to poor communication and the teacher-student relationship, which in the online environment was difficult for both sides to manage;

- Insufficient digital skills of the teaching staff, which often made the conveyed information being not clear or attractive;

- Weak connection to the Internet network, which often made the content presented by the teacher difficult to understand, the information becoming truncated, often losing the thread of the discussion;

- The presence of disruptive factors in the environment from which the student connected to participate in online teaching activities (music, television, communication with family, activities at work, etc.);

- Health problems such as back pain, eye pain or headaches from sitting too long at the desk, eating problems, obesity, low energy, stress, anxiety or depression;

- Lack of resources for study. Each student needed a device to be connected to an internet source in order to be able to participate in online activities.

On the other hand, even the teaching staff was not very prepared for this step. An OECD report from 2020 (OECD, 2020), quoted by the *panorama.ro* website (Mîndruțescu M., 2021) shows, based on an analysis made in the 37 OECD countries, that Romanian teachers were among the most stressed ones during the teaching activities carried out online.

Taking into account all these elements, it is obvious that the relationship between students

and teachers and the way they have adapted to online activities are essential elements for the overall quality of the teaching activity carried out in this atypical context.

Based on these aspects, we carried out this research regarding the level of satisfaction of students from the Faculty of Engineering of the "Lucian Blaga" University in Sibiu related to learning in the online environment. The group of students that was the subject of our study has a significant relevance for those who are involved in studying at technical faculties, because within our faculty there are 16 study programs in various fields of engineering (industrial engineering, mechanical engineering, environmental engineering, mechatronics, robotics, computers, electrical engineering, etc.). Thus, the answers received can represent a state of fact that can be extrapolated to other learning environments in higher engineering education, being able to generate potential solutions and examples of good practices.

2 PURPOSE OF THE RESEARCH

The purpose of our study is to highlight the main challenges and difficulties brought with it by the transition to the online teaching-learning environment, as they were perceived by the students of the Engineering Faculty of the Lucian Blaga University of Sibiu during the online classes held during the COVID-19 pandemic.

3 METHODOLOGY

The study has a descriptive character.

The main objective of the study was to identify the student-teacher relationship in the context of online teaching.

The specific objectives taken into account are:

1. The degree of participation of students in the online activities and their level of

satisfaction in relation to this type of activities;

2. Difficulties related to communication and to the quality of interpersonal relationships;
3. The level of involvement of teaching staff in online activities.

The hypotheses made in relation to the above objectives were:

- It was quite difficult for teachers and students to adapt to the online teaching-learning environment because they had never faced a similar situation before;
- Workload was not different in the two work environments: the classic one (face-to-face) and the online;
- The technical or health problems that hindered communication between students and teachers were overcome by appropriate additional efforts on the part of teachers (provision of additional materials, videos, consultations etc.).

The data collection was carried out using a questionnaire created in Google Forms, the survey management software included as part of the Google Docs Editors suite.

3.1 Participants

116 students from all specializations of the faculty and all years of study (I-IV) answered the questions in the questionnaire in the period June 2022 - June 2023. Only 115 answers were received for some questions.

3.2 Procedures

For our research we used as a data collection tool a questionnaire distributed to the students of the Faculty of Engineering of the Lucian Blaga University in Sibiu through social networks (via the link to the questionnaire in Google Forms).

All participants were informed about the purpose of the research and about the confidentiality of the data provided.

4 RESULTS AND DISCUSSION

The study has a descriptive character.

The main objective of the study was to identify the student-teacher relationship in the context of online teaching.

4.1 Adaptation to online teaching activities

Most of the students stated that they adapted to the online teaching activities without difficulty. Thus, 81 of the respondents (69.83%) admitted that they easily or very easily adapted to online teaching activities (see figure 1).

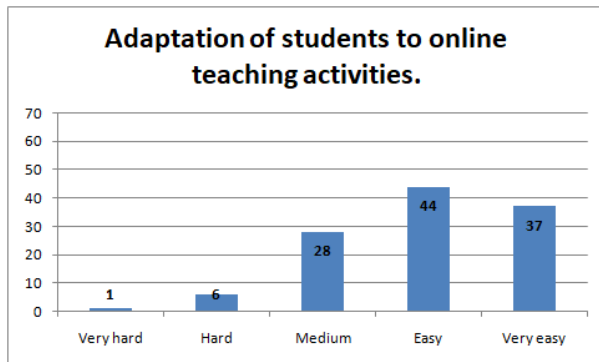


Figure 1

Unlike the previous situation, only 45 of the respondents (39.13%) appreciated that the teaching staff also demonstrated an easy or very easy adaptation to online teaching activities (see figure 2).

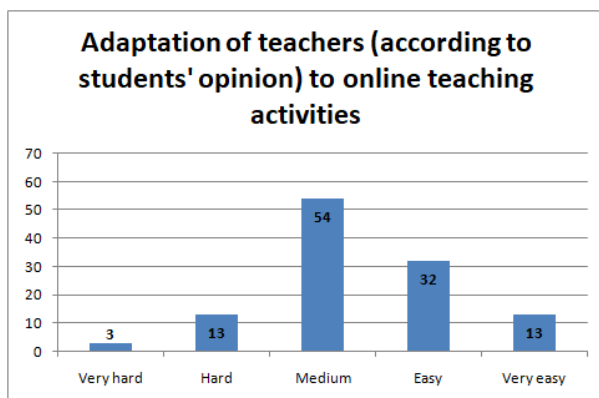


Figure 2

4.2 Lack of interaction with teachers and colleagues

Regarding the interaction with teachers and colleagues, 44 (38.26%) of the respondents considered that they missed it a lot or very much, another 33 (28.7%) of the respondents experiencing this fact only to a medium extent (see figure 3).

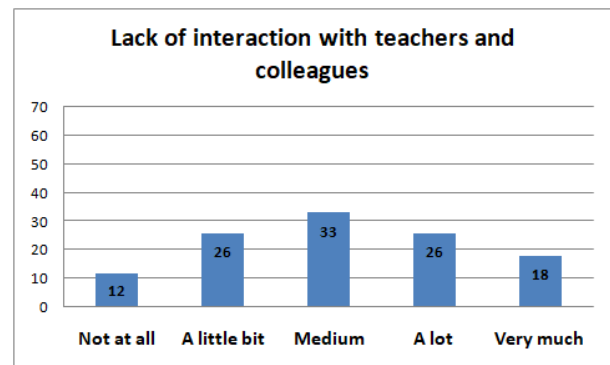


Figure 3

71 of the respondents (61.74%) appreciated a lot or very much that the volume of homework and projects was a large one (see figure 4).

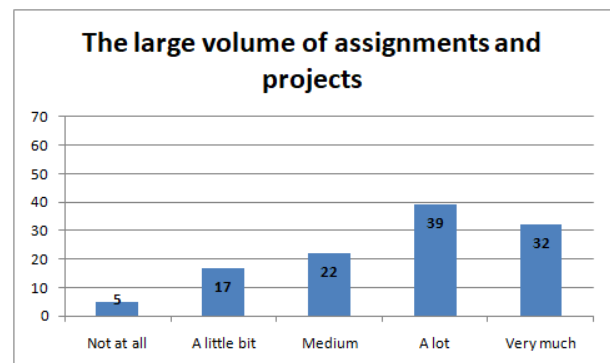


Figure 4

61 of the respondents (53.04%) appreciated to a great or very great extent that they had difficulty understanding some courses (see figure 5).

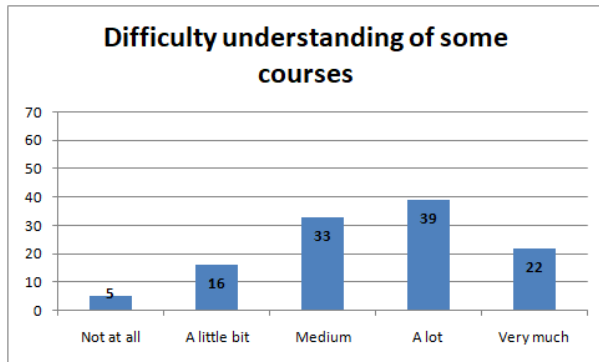


Figure 5

However, the number of those who confessed that they felt a lot or very much the lack of individual discussions with teachers to clarify some problems related to courses is lower, i.e. 56 respondents (48.7%) (see figure 6).

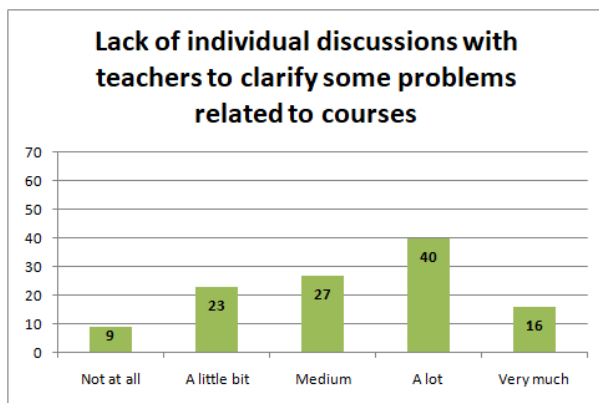


Figure 6

69 respondents (59.48%) rated the support or help provided by teachers when classes were held online during the pandemic with grades of 4 or 5 (see figure 7).

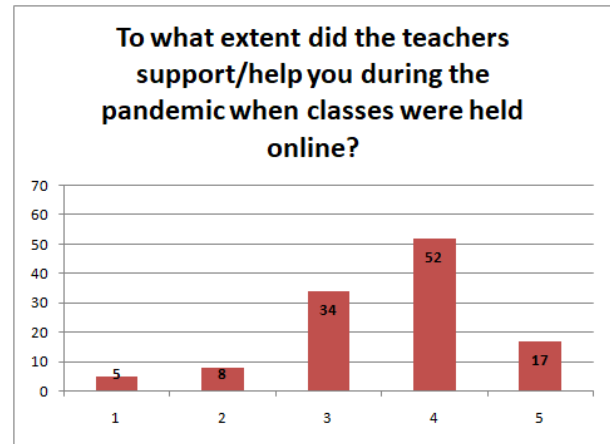


Figure 7

Interestingly, the level of satisfaction regarding the support received from teachers is even slightly higher: 71 of the respondents (61.21%) gave grades 4 and 5 (see figure 8).

We believe that it can be considered very important that when clarifications or feedback were needed regarding courses / assignments / projects, they were requested more from colleagues or were obtained from the Internet than from teachers who had taught the courses / assignments / projects (see figure 9).

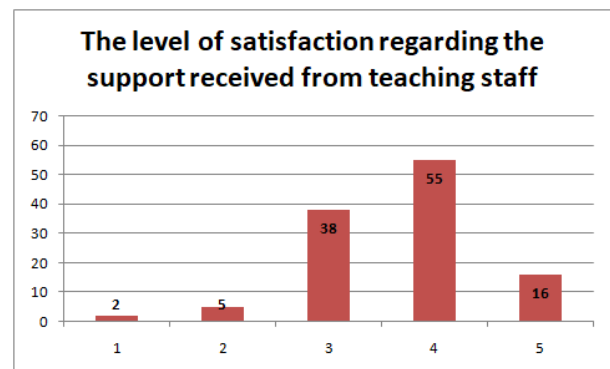


Figure 8

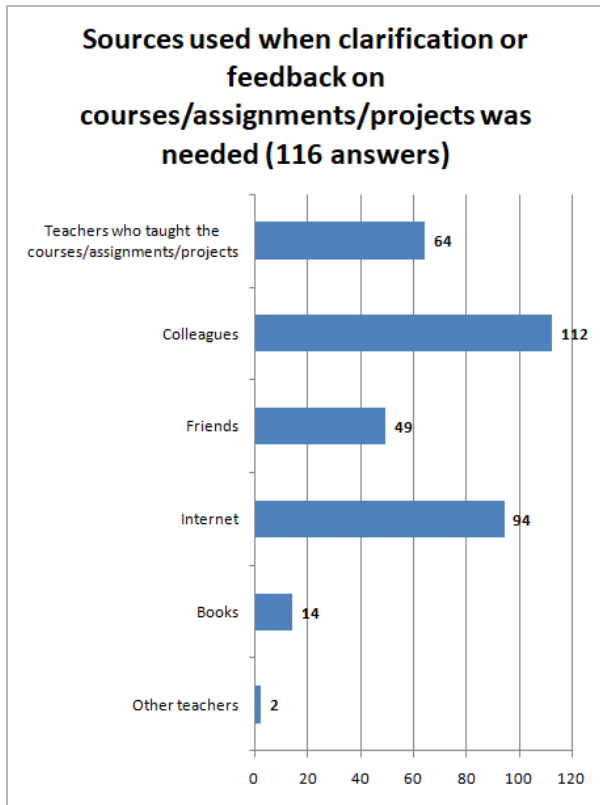


Figure 9

It should be noted that a very large percentage (86.21%) of respondents believe that the difficulty in understanding some courses was caused by the lack of communication between students and teachers (see figure 10).

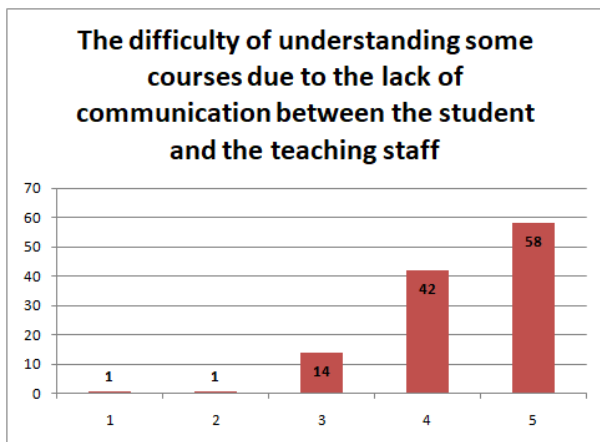


Figure 10

An equally high percentage of respondents (with an increase in those opting for the maximum mark) believed that open communication between teachers and students influences students' motivation to learn (see figure 11).

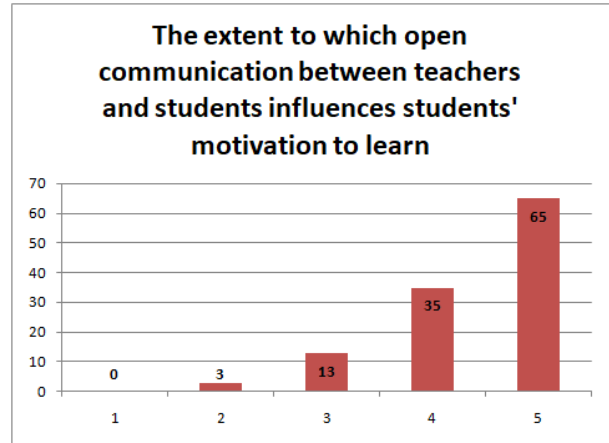


Figure 11

4.3 The extent to which the lack of face-to-face interaction was felt

Respondents were primarily affected by the lack of face-to-face interaction with their colleagues. Significantly less they felt the lack of face-to-face interaction with their teaching staff.

Thus, the percentage of those affected a lot or very much by this lack was 69.57% (80 from a total of 115 respondents) when it comes to colleagues and only 39.13% (45 from a total of 115 respondents) when it comes to teaching staff (see figures 12 and 13).

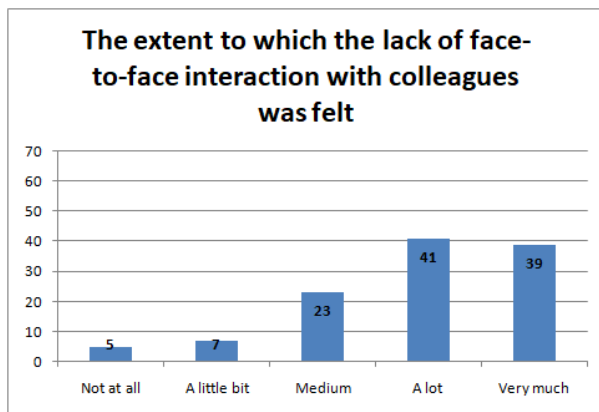


Figure 12

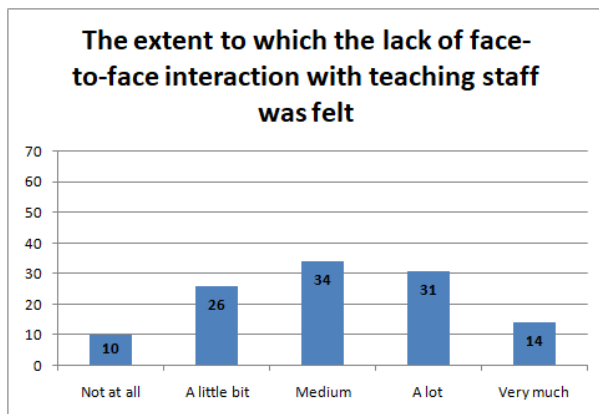


Figure 13

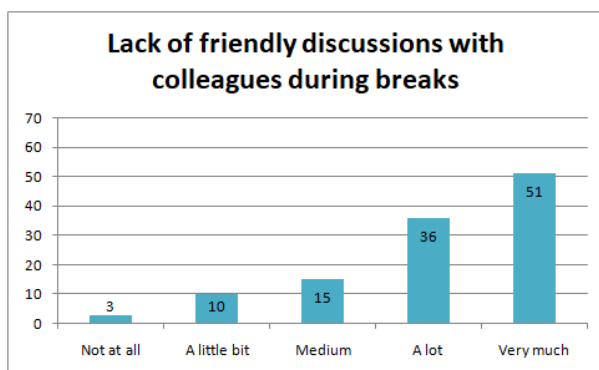


Figure 14

To an even greater extent, respondents stated that they missed friendly discussions with colleagues during breaks (87 of the 115 respondents, i.e. 75.65%) (see figure 14).

4.4 The degree of (active) participation to the online courses

Only 35.34% of respondents stated that they attended all the online courses (see figure 15).

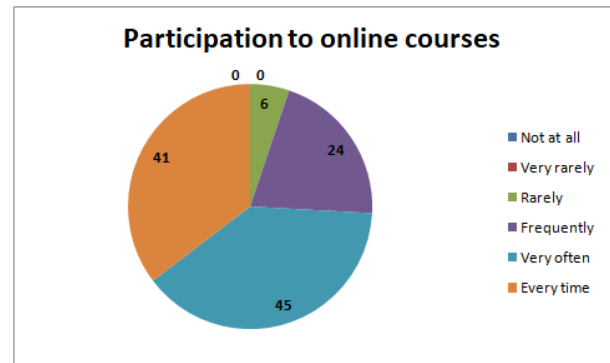


Figure 15

Even more interesting results were obtained regarding the degree of *active* participation (open web camera, participation in discussions, asking questions, attempts to provide additional examples at the request of the teaching staff, etc.) in online courses, on a scale from 1 to 5.

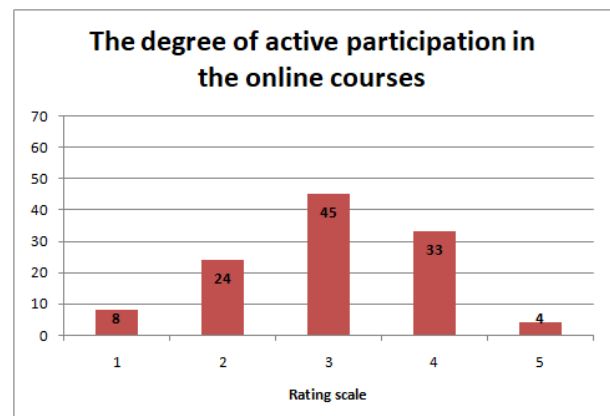


Figure 16

45 respondents (39.47%) noted their participation only with the average mark (3). Only 37 students (32.46%) gave themselves a rating of 4 or 5 in this regard. It should be noted

that there were also 2 refusals to answer this question (see figure 16).

Similarly, in many cases the lack of attention to the teacher's explanations was recognized: only 39.66% of the respondents declared that they paid fully attention to the explanations given by the teacher during the online courses (see figure 17).

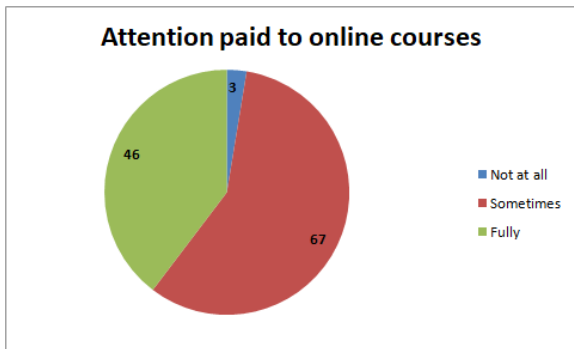


Figure 17

4.5 Consultation sessions organized during the online courses held during the COVID19 pandemic

To the question "Were consultation sessions organized during the online courses held during the COVID19 pandemic?" half of the responses were affirmative, only 20.7% were negative and, notably, 29.3% of respondents said they did not know if this had happened (see figure 18).

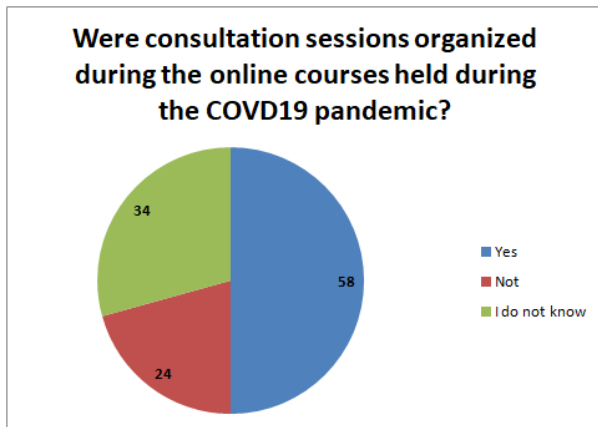


Figure 18

Only 41 of the respondents (35.34%) stated that they participated in the consultation sessions organized during the COVID-19 pandemic. Most of the respondents admitted that they did not participate in these consultation sessions (64, i.e. 55.17%) (see figure 19).

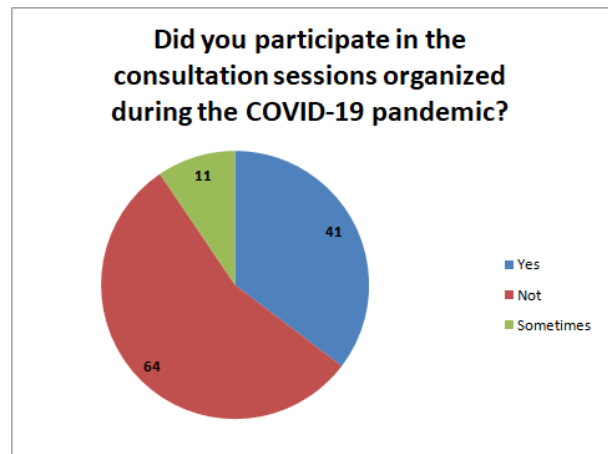


Figure 19

Besides, when they were asked in what way they were helped / supported by the teaching staff, only 32 respondents (27.6%) indicated the variant consisting in the organization of consultation sessions (see figure 20).

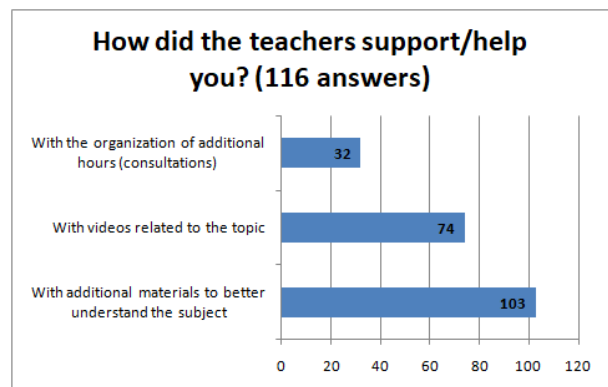


Figure 20

It is worth noting that, as we have seen, although many respondents felt the lack of individual discussions to clarify some issues

related to the courses, the interest in organized online consultation sessions was rather low.

5 CONCLUSIONS AND DISCUSSIONS

Our study has only a descriptive character. However, from the results of our study, we can draw some interesting conclusions that can provide some important clues about how the interaction in the online environment between students and teachers should be from the perspective of those directly concerned by the educational act.

At a first analysis of the received answers, we are tempted to state that all three initial hypotheses are totally or partially infirmed.

The first hypothesis, which started from the idea that adapting to the new situation was difficult for both students and teaching staff, was confirmed in the answers regarding only the teaching staff. However, a deeper analysis of the answers received for the subsequent questions related to this topic, demonstrates the opposite for the students participating in the study. The lack of face-to-face interactions was a difficult handicap for the young people to overcome, and the feeling of loneliness was deeper in the relationship with colleagues, and also at a fairly high level in the relationship with the teachers. There were generations of students who did not get to know each other, starting from the first year until the third year when they returned to the classical face-to-face system. Further, participation in online activities was also quite small, only about a third of respondents participating in them and about the same proportion paying attention to the information transmitted through this type of activities. All this leads, in the end, to a partial confirmation of this first hypothesis in the case of students as well. Even if at the declarative level it seems that everything was fine, the detailed analysis shows that their adaptation came in fact with many problems, including stress, maladjustment, loneliness, lack of motivation or loss of meaning.

To the second hypothesis, the one related to the burden of tasks in the online environment, the answer was resolute, the respondents' perception being that the amount of work received was clearly higher (61.74%) compared to face-to-face activities (the views of those who as students experienced face-to-face activities before March 2020 and who then experienced the two years of online activity are very relevant here). The fact that students from an engineering faculty were subjected to our study represented an advantage due to the longer study cycle, such that students with multiple experiences could be questioned, both with a switch from the classic to online and then back to the classic.

There are more factors for this resolute answer and we have identified some of them:

- From the point of view of the teaching staff, there was a tendency to try to justify the activity through a multitude of homework and other requirements from the students;

- From the perspective of the students, who suddenly found themselves on their own in the activities carried out, without colleagues and without teachers nearby, the tasks received seemed much more difficult and this made, psychologically, the workload seeming greater;

- The fact that many activities were received in the working groups on the online platforms, where resolute deadlines were scheduled without the possibility to be negotiated, led again to the same perception of overload.

Thus, we believe that the refutation of the hypothesis is based both on the idea that the teaching staff tried to increase the workload to justify the activities, and on the idea that the image of this volume was amplified based on perceptions and psychological mechanisms.

The third hypothesis is also controversial in the analysis: on the one hand many of the responding students stated declaratively the fact that they received support from the teaching staff to solve the various problems

arising in the online activity, but on the other hand when they were questioned about the sources of support to resolve the ambiguities of courses, colleagues and the Internet were mentioned as the main sources of support, and not those who provided them with information, namely teachers. Moreover, although the majority of respondents stated that consultation activities were carried out during the online activities to clarify issues of courses, more half of the respondents did not participate in them.

We are aware of the limitations of this research, both due to the sample and the way the questionnaires were distributed, but we can still openly state that the answers received represent a mirror of the activities transferred online (both synchronously and asynchronously), through the eyes of the beneficiaries of the educational act.

It is clear that the most of existing problems in the classic face-to-face activity have been transferred online and, more than that, they have become more acute. The problems were also accentuated due to the fact that the transfer was made extremely fast and forced, not even some of the actors of this transfer being prepared for such a thing. In another train of thoughts, the transition to online was not a consented and prepared one, coming together with many other restrictions aimed at physical and social distancing, an element that accentuated insecurity, loneliness, the breaking of classic communication networks, leading to psychological trauma of those who participated in this experience.

As the main recommendations and lessons related to the results of this study, we can highlight some important elements:

- the online environment is a learning environment that has important values and offers some significant advantages, if a solid communication bridge is built between the student and the teaching staff;

- using of methods that stimulate the creativity and involvement of those who participate in such courses will lead to increased motivation and active participation in the knowledge transfer process;

- the pertinent analysis of the volume of work, without an unjustified increase of it, by creating teams to carry out projects and to collaborate in the virtual environment, will make the perception of overload lower;

- co-opting students into knowledge cogeneration networks and creating a real partnership with them, taking them as partners in knowledge transfer and using of those who are open as supporting elements in the generation of information, would lead to a more active participation of them in the educational act.

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