

Face-to-Face versus Online or Hybrid: How Students Perceive the Educational Framework

Ioana Pleșcău
Cătălin Drob

“Vasile Alecsandri” University of Bacău, Faculty of Engineering, Romania

ioana.plescau@ub.ro

catad@ub.ro

Abstract

In the aftermath of the recent pandemic, it became more and more important for the educational system to account for the necessity of designing courses that could be delivered both in an onsite environment and in an online framework. The aim of our study is to investigate perceptions of students about the face-to-face, online and hybrid learning. We conduct a survey to explore the way students perceive the educational frameworks. Our survey is conducted on a sample of students enrolled in the third and fourth year of study at the Faculty of Engineering from Vasile Alecsandri University of Bacau. From 126 respondents, 53% would choose hybrid framework. Moreover, 45% of them would choose to have the possibility of online courses and face-to-face seminars. Furthermore, 77% of the students work and they perceive blended/hybrid learning as a higher chance to participate to courses, without the necessity to physically attend the them.

Key words: online course; distance education; face-to-face learning; hybrid learning; higher education

J.E.L. classification: I21, I23

1. Introduction

In the light of the recent pandemic, many domains have been put under question and one of the domains that have suffered a lot in the pandemic was the educational system. The institutions that provide educational services have sought different solutions to continue their activity and to diminish as possible the negative effects of the crisis. One of the best solutions that came up in this context was organizing online lectures. Although online education was not new as a framework of delivering lectures, it become more and more important in the context of the pandemic. Since the outbreak of the pandemic, universities have implemented the online system, as well as the blended system and the traditional one. To analyze the extent to which universities may include in their curricula the online framework of courses, we consider that it is of interest to investigate the effects of adopting the online course during the Covid pandemic and the impact of this change on the students' results.

The aim of our study is to analyze the perception of students regarding these three educational frameworks in the light of the discussion regarding the digitalization and the changes that happened in the last decade with respect to the students' market (increased number of students that are working during the university studies).

2. Literature review

The purpose of this paper is to evaluate online learning in comparison to face-to-face learning and analyze the perceptions of students regarding the advantages and disadvantages of these educational frameworks.

The body of literature that studies the educational frameworks, face-to-face, online or blended learning, can be divided into papers that analyze this topic before the Covid-19 pandemic and papers that analyze it after the pandemic and take into account the implementation of online or hybrid learning as a measure to tackle the medical crisis and support the measures to maintain physical distance.

Allen and Seaman (2013) analyze the online learning over ten years of implementing it in the higher education from United States through the Massive Open Online Courses. They define online learning as a framework where at least 80% of the content is delivered online, while the blended framework has a proportion between 30% and 80% of the content delivered online. The authors applied the survey annually, from 2003, and their results showed that in 2013, compared to 2003, the percentage of students enrolled at online courses has increased. However, what the survey revealed is that online courses are more demanding for the faculty professors and staff and that one important barrier to the implementation and adoption of online learning by the students is related to the fact that this educational framework requires more self-discipline.

Atchley, Wingenbach and Akers (2013) make a comparative analysis between course completion and student performance in online and face-to-face educational frameworks, also for U.S., and their results show that there are significant differences between the two and that the difference depends on the course discipline that is considered. Moreover, Fischer et al. (2020) conduct a quantitative study about the effects of online courses, compared to face-to-face learning for summer courses and their findings illustrate that, although the participation to online courses is higher due to the degree of flexibility, the students' performance is better in face-to-face setting than in the online one.

For the purpose of our study, it is of high importance the literature that appeared after the covid crisis. For example, Ghasem and Ghannam (2021) study the effects of distance learning on students enrolled at chemical engineering and found that internet connectivity problems is one important disadvantage of online learning, together with the lower mental concentration of students in online courses than in the traditional ones. Furthermore, Asfour and Alkharoubi (2023) found that the sense of isolation is an important disadvantage of online learning identified by the students and the authors consider that, at least for their study sample, which is formed by students enrolled in architecture courses, a form of blended learning could be more suitable than online learning. Regarding the advantages of online learning, Hofer, Nistor and Scheibenzuber (2021) discuss the possibility of many students to benefit from courses at very good universities and that the pandemic was a starting point regarding the development of digitalization and online delivery of academic courses.

One of the aims of our survey is to assess the students' perceptions regarding the results obtained in the online setting, compared to the face-to-face one. Existing evidence suggest that there is a small difference between the results obtained in the online learning versus the ones obtained in the onsite learning. Kabashi et al. (2022) conducted an empirical study to analyze if there are significant differences between the results obtained in the two educational frameworks for higher education in mathematics and found that students' results were better in the online setting than in the face-to-face one.

An important topic for our research is related to the blended or hybrid learning. Huizinga et al. (2022) illustrate that the hybrid framework could be a good solution in order to attract students and enhance the flexibility of university studies. Moreover, higher flexibility is documented in the study of Mushtaha et al. (2022) who found that this is the most important advantage of online courses. However, their study shows that lack of socialization and the sense of isolation are important disadvantages of this educational framework. The effects of the online learning adopted as an urgent measure at the beginning of the pandemic are investigated are also investigated in Roman and Ploeanu (2021) for the economics universities in Romania and their results show that there are some factors that made the online studies to be seen as less effective by students, like connectivity problems, anxiety regarding the effects of the pandemic or insufficient working time and space at home.

Based on the related studies and the existing literature, the aim of our research is to investigate the advantages and disadvantages of online learning, compared to the face-to-face learning and to assess students' perception regarding the results obtained in the two educational frameworks.

3. Research methodology

The aim of the study is to analyze the perceptions of students regarding the online courses versus the face-to-face courses or blended courses. Our study sample consists of students from the Faculty of Engineering of the „Vasile Alecsandri” University of Bacau, enrolled in the 3rd and 4th year of study. We have chosen this sample because the 3rd year students enrolled in summer 2020, in the middle of the pandemic, while the 4th year students enrolled in summer 2019, before the pandemic. We consider that this sample is representative for our analysis because the students from the sample experienced face-to-face learning, as well as online or blended learning.

The methodology we use to analyze the students’ perceptions about the three educational frameworks (face-to-face, online or hybrid/blended) is a survey that we create in order to investigate their perceptions. The questionnaire consists of 11 open-ended questions regarding the educational system they would prefer, the advantages and disadvantages of both face-to-face and online/hybrid learning, the suitable ratio between face-to-face and online/hybrid learning in case of a mixt educational system, or the level of preparation of professors for the online/hybrid courses.

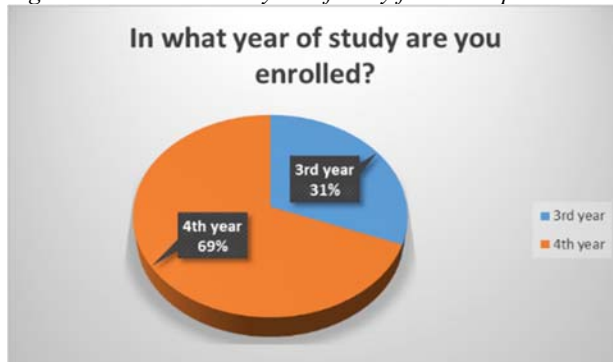
We have created and applied the survey online, through the Microsoft Forms platform, because all the students in the sample have university accounts on this platform. We obtained 126 responses and all the respondents have responded to all 11 questions. Further on, we analyze the responses by calculating, for each question and for each choice, the response rate, which we illustrate using pie charts or bar charts, depending on which is the most appropriate. Also, we constantly use a comparative approach, in order to emphasize the differences between face-to-face and online/hybrid educational frameworks.

4. Findings

The aim of the study is to explore how students perceived the lectures before and after the pandemic, in the onsite or the online experiences. In this section we present and analyze the results of the survey.

The first question of the survey has the purpose of establishing in what year of study is the respondent enrolled. The results are represented in Figure 1, and they show that 31% of the respondents are enrolled in the 3rd year of study, while 69% of them are enrolled in the 4th year of study.

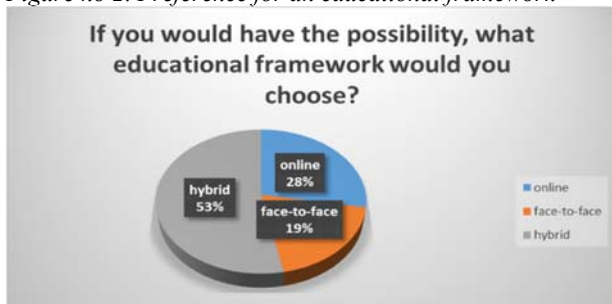
Figure no. 1. Enrollment year of study for the respondents



Source: author' computations

According to the participants’ responses to the question about what educational framework they would choose if they had the possibility, only 19% of the respondents would prefer the face-to-face framework, whereas 28% of the respondents would choose the online framework and the majority of 53% would prefer a blended educational framework. These results are illustrated in Figure 2.

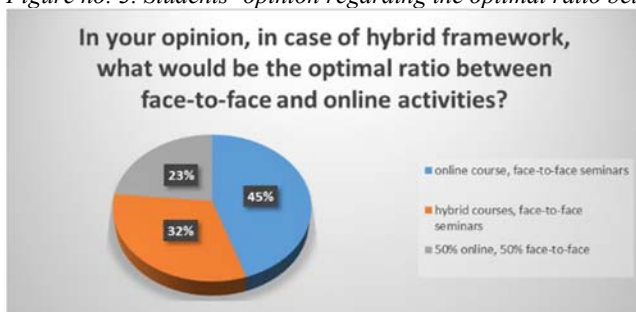
Figure no 2. Preference for an educational framework



Source: author's computations

Question related to students' opinion regarding the optimal ratio between face-to-face and online activities revealed that 45% of the respondents consider that courses should be online, while seminars should be face-to-face. Also, 32% of the respondents are in favor of hybrid courses and face-to-face seminars, whereas 23% of them chose the option with 50% online courses and 50% face-to-face seminars. We consider that the majority of the survey's participants would prefer the online framework for courses and face-to-face framework for practical activities (seminars) because this option would give them a higher level of flexibility when it comes to cope with both faculty and job responsibilities. The results related to this question are presented in Figure 3.

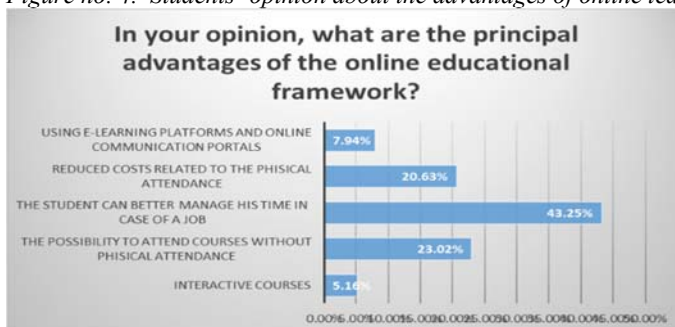
Figure no. 3. Students' opinion regarding the optimal ratio between face-to-face and online activities



Source: author's computations

When students evaluate the advantages of online learning, 43.25 of them consider that the principal advantage is that they can better manage their time in case of a job, while 23.02% of the respondents rated the possibility to attend the courses without physical attendance as the main advantage of the online educational framework. Also, 20.63% of respondents consider that the main advantage regards the reduced costs related to the physical attendance, whereas 7.94% of respondents underlined the use of e-learning platforms and online communication portals as the principal advantage of online learning and 5.16% of respondents highlight the fact that courses are more interactive as the main advantage. The results are illustrated in Figure 4.

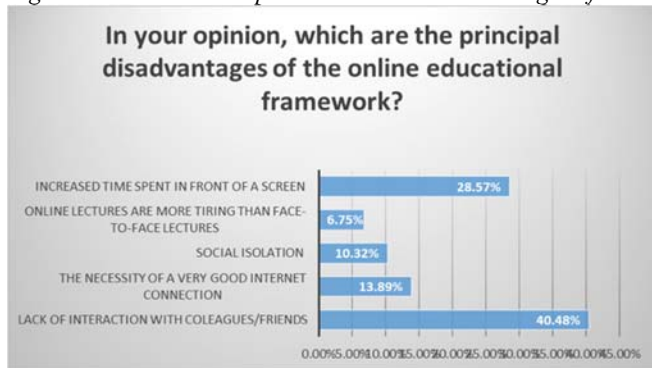
Figure no. 4. Students' opinion about the advantages of online learning



Source: author's computations

Based on the data collected, regarding the disadvantages of online learning, 40.48% of the participants to the survey consider that the main disadvantage is the lack of interaction with colleagues/friends, while 28.57% of them underline the increased time spent in front of a screen. Also, 13.89% of the students chose the necessity of a very good internet connection as an important disadvantage of the online educational framework, whereas 10.32% of them rated social isolation as a principal disadvantage and 6.75% believe that online lectures are more tiring than face-to face lectures. Results are exhibited in Figure 5.

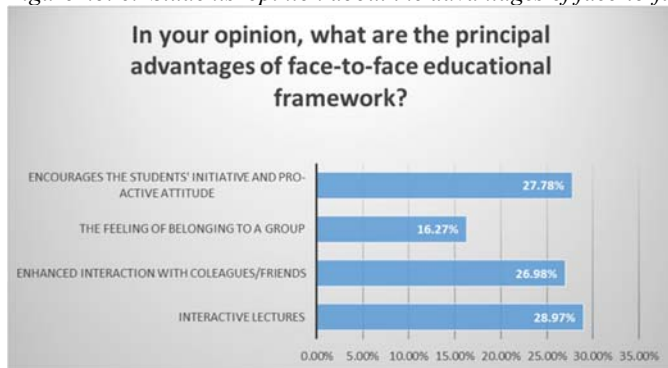
Figure no. 5. Students' opinion about the disadvantages of the online learning



Source: author's computations

When it comes to the advantages of face-to-face learning, most of the respondents consider that it is interactive (28.97%), that it encourages the students' initiative and pro-active attitude (27.78%) and that it enhances the interaction with colleagues/friends. Also, 16.27% of the surveyed students underlined that the main advantage is related to the feeling of belonging to a group. These results are illustrated in Figure 6.

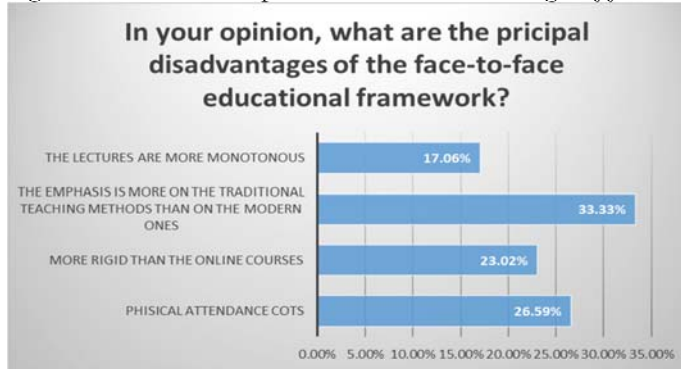
Figure no. 6. Students' opinion about the advantages of face-to-face learning



Source: author's computations

The responses to the question related to the disadvantages of face-to-face learning revealed that 33.33% of the students consider that in the face-to-face framework the emphasis is more on the traditional teaching methods than on the modern ones and they believe that this is the main disadvantage. Also, another disadvantage that obtained 26.59% of the responses relates to the physical attendance costs. Moreover, 23.02% of the participants chose as the main disadvantage the fact that face-to-face learning is more rigid than the online learning, while 17.06% of the students believe that the main disadvantage is related to the monotony of the face-to-face educational framework. The results are exhibited in Figure 7.

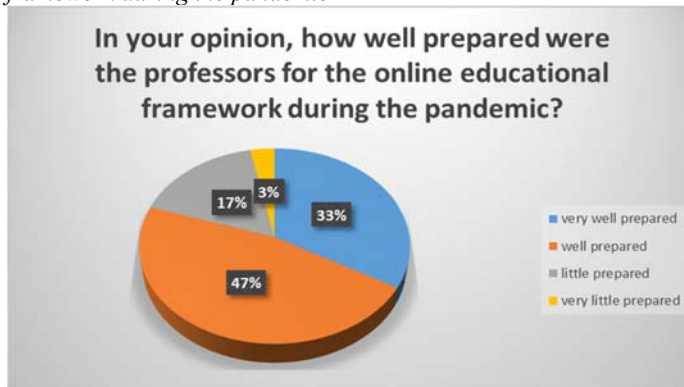
Figure no. 7. Students' opinion about the disadvantages of face-to-face learning



Source: author's computations

Participants in this research highlighted that the professors were well prepared for the online educational framework, 47% of the responses confirming this result. Moreover, 33% of the students consider that they were very well prepared, while 17% of them believe that they were little prepared and only 3% consider that they were very little prepared, as illustrated in Figure 8.

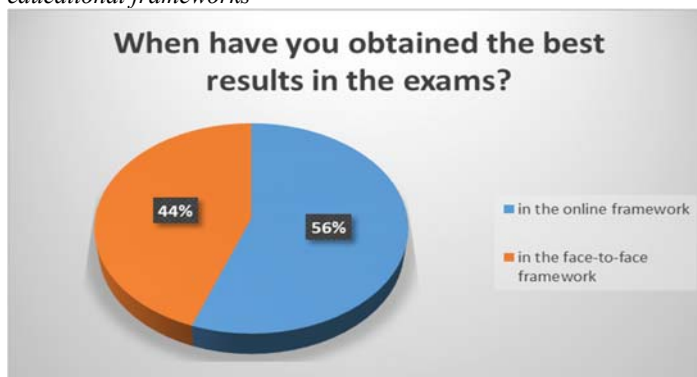
Figure no. 8. Students' opinion about the level of preparations of professors for the online educational framework during the pandemic



Source: author's computations

In terms of when they have obtained the best results at the exams, 56% of the students responded that in the online framework and 44% of them in the online educational framework, as illustrated in Figure 9. Our results are in line with Kabashi et al. (2022).

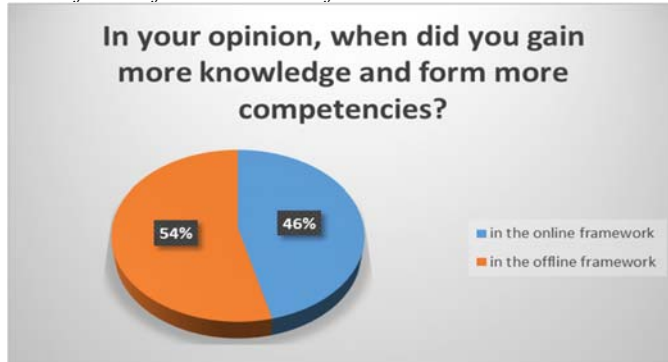
Figure no. 9. Students' opinion about academic results obtained in the online versus face-to-face educational frameworks



Source: author's computations

According to the participants’ responses to the question about when they gained more knowledge and form more competencies, 54% of the students consider that the face-to-face framework allowed them to achieve these results, while 46% of the participants chose the online educational framework. The results are presented in Figure 10.

Figure no. 10. Students’ opinion about the level of knowledge and competencies gained in the online versus face-to-face educational frameworks

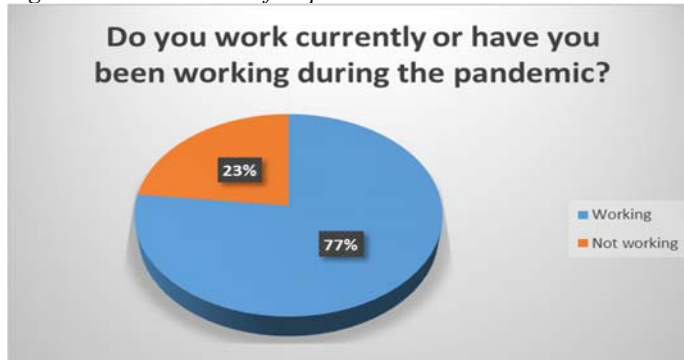


Source: author’s computations

The question regarding the employment status of the participants revealed that the significant majority of participants, 77% of them, were working during the pandemic or were working at the moment of the survey, while the rest of 23% of them were not working. This result is very important when analyzing and discussing the results obtained based on the data collected. The reason for this is that students who are working consider that the online educational framework can offer them a higher degree of flexibility to cope with both university and work.

Our results are in line with Huizinga et al. (2022) and Mushtaha et al. (2022) who illustrate that higher degree of flexibility is an important factor that students perceive as advantage for the online educational framework. This result is important for the educational policymakers who are interested in assessing the effects of online or blended learning in order to design the most suitable university programmes and adapt the curricula to meet the students’ requirements. Also, our results represent a contribution to the literature in the light of the discussion about digitalization.

Figure no. 11. The level of respondents’ that work or have been working during the pandemic



Source: author’s computations

5. Conclusions

The aim of this study is to assess the perception of students regarding the three educational frameworks: face-to-face learning, online learning, and blended learning. Our findings suggest that most of the participants to our survey would embrace the existence of a form of blended learning, that could give them the possibility to participate online at the courses, having a more flexible schedule in which they could take care of the work responsibilities. However, this result is influenced

by the fact that the students included in our sample are enrolled in the 3rd and 4th year of study and, as Figure 11 illustrates, most of them are working.

Turning to the results on the comparative analysis of the advantages and disadvantages of face-to-face and online learning, our results show that the most important advantages of face-to-face educational framework are related to the fact that they are interactive, and they encourage students' initiative and pro-active attitudes. However, in students' opinion, face-to-face learning has the principal disadvantage of using more the traditional teaching methods than modern ones and being more rigid than online learning. Moreover, based on the data collected, our results show that the participants in the survey consider that the most important advantage of online learning is that students can better manage their time in case of a job. In our opinion, this is because nowadays we witness a shift in the students' market with respect to their employment status during university studies, with more and more students that are part-time or even full-time working during their studies.

Based on the data collected and the results obtained, we consider that an important topic for future research would be the analysis of the effects of the pandemic on the academic results of the students, by extending this study in two directions. Firstly, it would be of interest to this analysis to extend the methodology by considering an econometric model and, secondly, we could extend the sample and conduct an econometric analysis by including in the sample more students from technical universities in Romania, as Roman and Plopeanu (2021) did for higher education in economics in Romania.

Our results contribute to the literature that analyze the effects of the pandemic on the educational system, but they also offer some insights regarding the discussion about digitalization that was even more promoted after the outbreak of the Covid pandemic.

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