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Evaluation of educational platforms in Turkish universities post COVID-19

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Abstract

As a result of the decrease in the number of infected people and the low level of risk of Covid-19 in Turkey due to the increase in the number of vaccinated people, the concerned authorities allowed the opening of universities and the return of face-to-face education. Specific conditions were taken as a matter of fact to ensure the safety of students, teaching, and administrative staff. Therefore, most universities in Turkey have combined different education platforms, including the hybrid educational system, to reduce the spread of the disease. In this study, a questionnaire was distributed to teachers in some Turkish universities via e-mail to seek their opinions about the effectiveness of this system and its pros and cons. After collecting the results, they were analyzed using Excel and SPSS. The results showed that most of the teachers (86.4%) had taught hybrid classes the last semester. 61.3% of the teachers considered the hybrid educational system acceptable or good, with a preference for face-to-face education to hybrid education and online education. 56.8% of teachers considered that the best advantage of hybrid education is to reduce the number of students inside the hall and inside the university, which provides a safer environment. While 31.8% of the teachers considered that limited participation and competition among students are the most negative aspects of this type of education. 65.9% of teachers prefer to move to face-to-face education in the coming period, but the hybrid platform may continue, so we recommend avoiding its negatives as well as improving the quality of education.

Keywords: Turkey, hybrid, online, face-to-face, teachers.

1. Introduction

The emergence of COVID-19 at the end of 2019 led to closure of all sectors, including educational institutions, as these institutions suspended face-to-face education and switched to online education. Online platform was a way to overcome the crisis and continue educational institutions in their work despite the presence of some negatives. With the start of the emergence of the COVID-19 vaccine and the increase in the number of those who received the vaccine, most countries have eased the measures taken at the beginning of the crisis to prevent the spread of the disease. These countries, including Turkey, have allowed the opening of educational institutions and the start of face-to-face education again [1]. In Turkey, the Scientific Committee of Universities allowed the combination of face-to-face education with other types of education, according to the pandemic status of the region in which the university is located [1]. Therefore, most universities have tried to reduce student density within the university campus and in the classrooms by allowing only science departments that contain practical laboratories to conduct classes via face-to-face education. Students had a choice of attending lectures face-to-face or online, and this situation continued until the end of the semester. During hybrid education, the teacher gives the lecture in front of the student attendees and at the same time transmits the lecture via the Internet to the rest of the students. Some universities record lectures directly and upload them on their websites to give students the opportunity to watch them later whenever they want [2].

Educational platforms managed to show the capabilities and creative capacities of the young generation and exposed them to many modern methods of learning where students have the ability to view the academic content and instruction anytime and anywhere. This gives them more time to absorb and understand with flexibility and without any pressure anytime anywhere. They also now have more time to discuss the course content in the lecture hall after watching short but useful videos instead of spending a lot of time in the classroom following books and study aids [3-5].

There is no doubt that e-learning has many advantages. However, one of its most alleged shortcomings is that it creates in students a feeling of isolation and lack of belonging [6-8]. Therefore, it is important for students to have a dedicated time in the classroom, where communication between the lecturer and students takes place face to face. Moreover, the classroom time is devoted only to discussions, presentation of various projects, and the demonstration of student creativity. Thus, the lectures are more enjoyable for the students, because it is not just about having a lecturer speaking and students listening to him but it relies more on participation and discussion [6, 9, 10].

Hybrid education in universities helps to save time and effort for faculty members and maintains student presence in the classroom [11]. Modern apps have places for students to submit assignments and projects to the lecturer. Each student has his own account that contains all the information related to the assignments, projects, and tests that he undertakes. Moreover, the assessment of the level of each student is easy and more organized for the faculty. With the use of these applications also, the lecturer has the ability to respond to students' messages anytime and anywhere. Instead of spending more time on campus marking up, the lecturer can use

electronic marking. He can also upload the educational content on the educational platform at any time and without any pressure or effort. Hybrid education in universities makes lecturers know more about the educational level of students. With the use of modern electronic applications, the lecturer has the ability to assess the level of each student and identify his strengths and weaknesses. It can also provide each student with what they need to develop academically [11-15].

Furthermore, the use of blended learning provides the opportunity for students to explore themselves and develop their time management skills. It gives them greater responsibility, which helps them in their future and prepares them for their careers and as such they learn self-reliance, commitment, and responsibility. Research emphasized the importance of using blended learning to suit the different learning styles and areas of interest of students. Blended learning is specifically designed to suit the learner's knowledge base, preferences, and different learning styles [16-18].

1.1 Increasing students' interaction and creativity

The use of hybrid education in universities allows the student more freedom to browse and view, and thus show his strengths. When the student feels that he is participating in the development of the academic content or that he has the ability to learn in the way that suits him, this will increase his feeling of confidence and thus show his skills with ease [19, 20].

The ability of the current generation to use the Internet in all aspects of their lives has given them the ability to learn and innovate more than previous generations. Therefore, the use of traditional learning methods, where the lecturer is dominating and controlling the teaching method, made students' activities useless. It is obvious students need someone to listen to their opinions and suggestions, which increases their desire to learn [21, 22].

Universities clarified the plans for hybrid education for the new academic year and implemented the use of hybrid education so that the campus is dedicated to attending meetings and laboratories and carrying out activities that need tools that are only available on campus. Hybrid platforms entails using online education in the rest of the lectures that only need research and discussion [2, 15] which is more suitable for faculties of scientific subjects such as dentistry, pharmacology, and others. Thus, we achieve a mixture of face-to-face, video lectures and electronic lectures.

1.2 Challenges that can impede the continuation of hybrid education in universities

- Students may lose their enthusiasm for learning if there is no easy means of communication between the student and his lecturers.
- Blended or hybrid education can lose its values if there is no permanent development in its use.
- There must be proper planning on the part of the faculty members for the success of this new system. It is necessary to take sufficient time to prepare the academic content before the beginning of the year and to prepare the appropriate references and resources for students to suit their thinking and needs. It is also necessary to clarify the form of the tests that the students will undergo from the beginning. Therefore, the lecturer has to set specific goals before the beginning of the year and follow their development and it is possible to modify these goals if necessary.
- It is also necessary to select student activities that are compatible with distance education and face-to-face education.
- The lecturer should direct the students on how to manage time and be more self-reliant [15, 18, 23].

In this study, the hybrid educational platform was evaluated after the end of Fall 2021 semester by developing a survey distributed to teachers at Istanbul Gelisim University and some other Turkish universities. The survey focused on the hybrid platform and how far it was a success, its most important pros and cons, and how this system can be improved if applied again in the next semester.

2. Methodology

2.1 Research Context

In this study, the hybrid educational system was evaluated after the end of Fall 2021 semester through a survey to gather feedback from teachers via a questionnaire distributed at Istanbul Gelisim University and some other Turkish universities. The questionnaire is meant to tackle hybrid platform, its advantages, and disadvantages, and what could be more appropriate platform for the coming semester if the crisis continues, especially with the spread of the mutated Omicron in a big way. The questionnaire that was distributed to participants consists of 19 questions, the first of which are related to general information about the participants, type of education platform applied during the study period. The survey replied to a question raised about the significance of applying the hybrid educational system, what were the main pros and cons of this type of education. At the end of the questionnaire, teachers were asked about their satisfaction with hybrid education in comparison with both face-to-face and online and which type they prefer to be implemented in the next semester.

2.2 Population and sample

In this study, a questionnaire was distributed to teachers at Gelisim University as well as some other Turkish universities. The target group includes Turkish and foreign, male and female teachers from different scientific and social sciences colleges. In this survey, the personal data of the participants were disregarded to preserve the privacy of the participants. In this study, two copies of the questionnaire were prepared, one in Turkish for Turkish teachers and another in English for foreign teachers, giving them the freedom to choose the appropriate language. The Google Form website was used to design the questionnaire and then it was distributed to participating teachers via e-mail.

2.3 Data Analysis

After distributing the questionnaire to participants and their answers were collected and sorted out according to the type of each question. Some of the questions were analyzed by giving the options a numerical value for ease of analysis. In this study, Excel 2016 and SPSS Version 25 were used to analyze participants' answers.

3. Results and Discussion

As a result of easing the measures taken at the beginning of COVID-19 crisis in Turkey, universities opened their doors in the first semester (Fall 2021) for students to study face to face. However, due to the spread of mutant Omicron, face-to-face, hybrid, and online education platforms were implemented, based on the nature of the subject and the number of infected cases in the surrounding region. In this study, the hybrid educational system, which was applied in some subjects, was evaluated by surveying the opinions of teachers at Istanbul Gelisim University and some other Turkish universities (Table 1).

Table 1. Mean and standard deviation of participants' responses on the questionnaire (n=88).

	Question	Mean	SD
Q1	Gender		
Q2	Faculty		
Q3	Nationality		
Q4	What type of classes did you teach in the Fall semester 2021?		
Q5	If you have hybrid classes, which format did your students choose?		
Q6	In which subjects do you prefer hybrid format?		
Q7	In hybrid, what type of format do good students prefer?		
Q8	In hybrid, what type of format do weak students prefer?		
Q9	During the semester, did students switch from one format to another?		
Q10	How would you rate the hybrid format?	3.45	0.96
Q11	Do you agree with the use of hybrid in practical courses?	2.11	0.91
Q12	What type of classes do you want to teach next spring 2022 semester?		
Q13	What are the advantages of hybrid classes?		
Q14	What are the disadvantages of hybrid format?		
Q15	How do you rate hybrid compared to face-to-face lectures on campus?	3.20	1.18
Q16	How do you rate hybrid teaching compared to online education?	3.59	1.05
Q17	Do you think blended format is better than hybrid? Hybrid format (some students participate face-to-face and some online at the same time), Blended format (students complete some components face to face and do others online).	3.39	0.98
Q18	Do you think you succeed more in company of other colleagues?	3.64	0.68
Q19	Do you think casual interactions with other colleagues help you release anger and express gratitude?	3.20	1.04

Response scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree and 5 = Strongly Agree.

Response scale: 1 = Bad; 2 = Unacceptable; 3 = Neutral; 4 = Acceptable; 5 = Good.

The number of participants in this study was 88 teachers, of whom 63.6% are males and 36.4% are females, 38.6% of them work in scientific faculties, and 61.4% in social sciences faculties. Turkish teachers constitute 65.9%, while foreigners constitute 34.1%, as shown in Table 2.

Table 2: Socio-demographic profile of the participants (n=88).

Variable		Frequency	Percent
Gender	Male	56	63.6%
	Female	32	36.4%
Faculty	Science	34	38.6%
	Social	54	61.4%
Nationality	Turkish	58	65.9%
	Non-Turkish	30	34.1%

The results show that 86.4% of the teachers taught courses through hybrid educational system (Table 3). Besides, more than two-thirds of the teachers (70.5%) taught most of their classes via hybrid educational system, while 15.9% of the teachers taught their courses online while the rest (13.6%) delivered their classes through face-to-face education, as shown in Table 3. Therefore, it is clear from these results the tendency of universities towards applying hybrid education platform, and this is due to the keenness of these universities to create a healthy educational environment that provides appropriate education and at the same time keeps students, teachers, and community safe. The study shows the students' tendency towards online education in general. If the subject is hybrid, then a large percentage of students tend to choose the online system instead of face-to-face platform. This category is observed with the sector of students who have a weak scientific level, while good students prefer face-to-face platform. The results, according to teachers, show that their students are distributed equally between face-to-face (50.0%) and online (50.0%), as shown in Table 3.

Table 3. Participants' responses on the type of education system questions (n=88).

	Face-to-face	Hybrid	Online
Q4	12 (13.6%)	62 (70.5%)	14 (15.9%)
Q5	38 (50.0%)	-	38 (50.0%)
Q12	58 (65.9%)	12 (13.6%)	18 (20.5%)

However, this percentage varies greatly based on students' scientific level, as 50% of weak students tend towards online and 20 .5% of them towards face-to-face. In the same vein, 65.9% of the good students prefer face-to-face education, while 20.5% of them prefer online education, as shown in Figure 1.

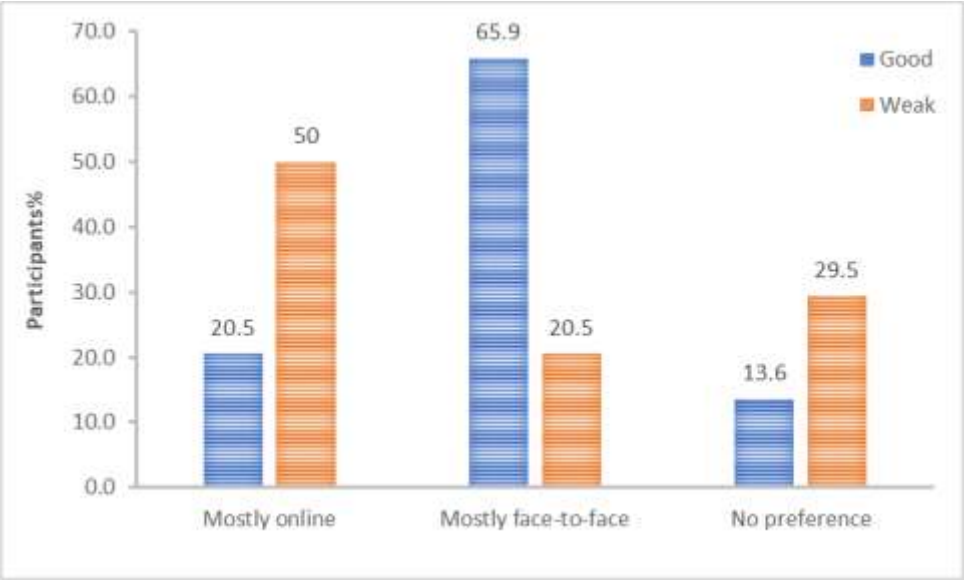

Fig. 1. The education system that the good and weak students prefer.

It was noted during the study period that a number of students transfer from one platform to another, as 50.0% of the teachers participating in the study admitted that they had students who transferred from face to face to online while 20.5% of teachers had students who transferred from online to face-to-face. Also, 18.2% of the teachers say that they have students who transferred from face-to-face to online due to exceptional and emergency circumstances as shown in Figure 2. The increase of students in the online system and the transfer from face-to-face to online can be explained due to the fear of some students of getting sick, as well as

students' preference for rest, especially with the availability of recorded lectures on the university website, as mentioned in our previous research [2].

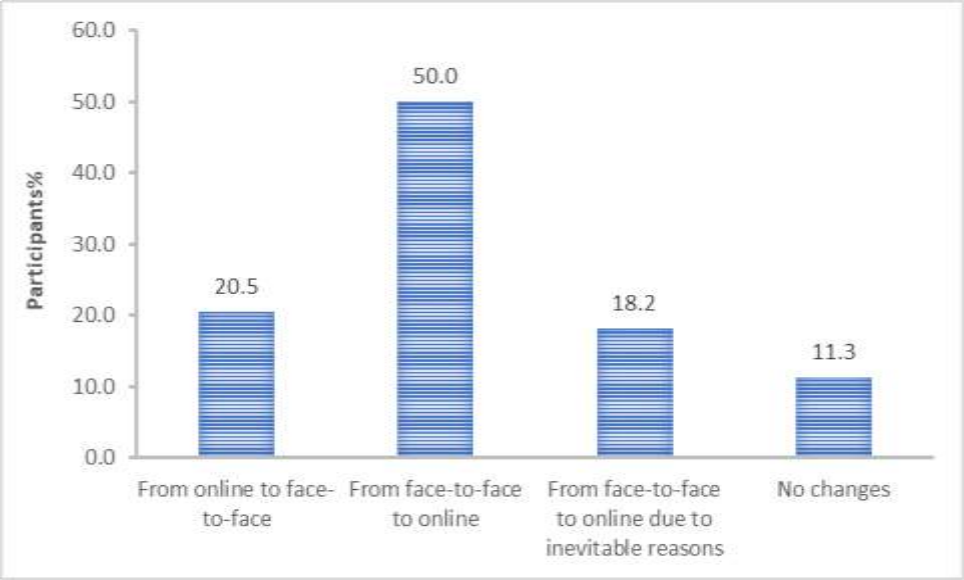

Fig.2. The students switch from one format to another during the semester.

The results show that teachers prefer face-to-face education in general to both online and hybrid education. However, with the continuation of the crisis and the spread of the mutant Omicron, the choices of teachers changed for fear for their lives and the lives of their students and families. 61.3% of the teachers considered hybrid educational platform acceptable or good, while 16% of them considered this platform unacceptable or bad, as shown in Table 4. When asked about hybrid in comparison to face-to-face education platform, 40.0% of them admitted that hybrid system is acceptable or good, while 24% of them considered it unacceptable or bad compared to face-to-face education, as shown in Table 4. On the contrary, we found out that teachers give a better evaluation of hybrid education compared to online, as 56.0% of them considered hybrid education to be acceptable or good compared to online, while 12.0% of them considered it unacceptable or bad (Table 4).

Table 4. Participants' responses on good/bad questions (n=88).

	Bad	Unacceptable	Neutral	Acceptable	Good
Q10	4 (4.5%)	12 (13.6%)	18 (20.5%)	48 (54.5)	6 (6.8%)
Q15	8 (9.1%)	18 (20.5%)	22 (25.0%)	28 (31.8)	12 (13.6%)
Q16	6 (6.8%)	6 (6.8%)	20 (22.7%)	42 (47.7)	14 (15.9%)

Teachers are aware of the importance of face-to-face education in practical lessons, where students need to acquire practical skills, which are not achieved unless they are practiced, as 62.0% of teachers refuse to use hybrid education in practical lessons, and only 8.0% of them agreed to that, as shown in Table 5. Some teachers approved of the use of hybrid education in practical lessons, due to their awareness of the seriousness of the pandemic situation. Teachers believe that hybrid education provides students with the opportunity to choose face-to-face education, based on their circumstances, which also enables the student to acquire some practical skills. When teachers were asked whether they prefer hybrid for practical or social subjects, or both, (Table 5), none of the teachers agreed to use hybrid education to teach practical subjects, which confirms the previous results, while 36.4% of them agreed to use it in teaching social subjects only, while 36.3% of them did not agree to use this type of education in general, and the reason may be due to the problems they faced during the last semester. While 27.3% of the teachers agreed to use hybrid education in all subjects, regardless of whether these subjects were scientific or social, and this may be due to the reasons previously explained.

Table 5. Participants' responses on agree/disagree questions (n=88).

	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
Q11	24 (27.3%)	38 (43.2%)	18 (20.5%)	8 (9.1%)	0 (0.0%)
Q17	2 (2.3%)	16 (18.2%)	26 (29.5%)	34 (38.6%)	10 (11.4%)
Q18	0 (0.0%)	4 (4.5%)	30 (34.1%)	48 (54.5%)	6 (6.8%)
Q19	6 (6.8%)	14 (15.9%)	32 (36.4%)	28 (31.8%)	8 (9.1%)

Hybrid education has many advantages compared to online education, and it also has some advantages compared to face-to-face education, especially in times of crisis. However, this education has many negative sides which have been discussed in many studies.

According to Figure 3, 56.8% of the participating teachers consider the best advantages of hybrid education are to reduce the number of students inside the hall as well as inside the university, which provides a safer environment, and this indicates a degree of anxiety among teachers about contracting the virus or transmitting it to their families. While 29.5% of them believe that the availability of lectures recorded on the university website is more important, in the context of advantages of hybrid, than reducing the number of students. This may be the reason for teachers' awareness of the importance of recorded lectures in reviewing and consolidating information for a large segment of students. 13.6% of teachers believe that there are no advantages of hybrid education, while none of the teachers agree that there is no difference between face-to-face education and online education, which indicates the importance of face-to-face education for the student from teachers' point of view.

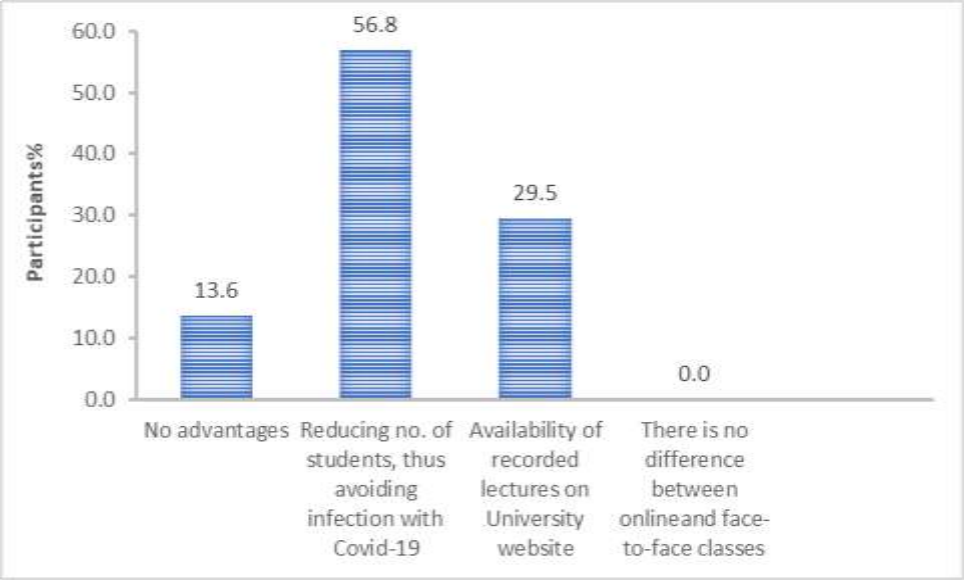

Fig. 3. The participants' responses about the advantages of hybrid classes.

On the other hand, Figure 4 shows the most important negatives of hybrid education, as 31.8% of teachers consider the limited participation and competition among students to be the most negative aspect of this type of education, especially for students who preferred online to hybrid education. It has been observed also that the distribution of the teacher's effort between face-to-face students and online students affects the method and extent of class discussion during the lesson. Therefore, 20.5% of teachers consider that hybrid education generally affects the teacher passively. Hybrid limits teacher's movement because he has to stand in front of the camera and also affects the teaching methods used because they are sometimes not suitable for the application used to transmit the lecture via the Internet. This also affects the method and effectiveness of discussion between the teacher and his students and may affect the teacher's follow-up of his students, especially online students, and may also affect the follow-up of absence reporting during lectures. The results also show that 18.2% of teachers consider that the most important negative of this education is the lack of communication among all students because part of students follow the lectures via the Internet. The reason for this may be due to the importance of social communication and competition among students, as well as the exchange of experiences and information among them. 15.9% of teachers consider that hybrid education provides an opportunity for the student to evade attendance or attention during the lesson, especially online students, so they consider it the biggest disadvantage of the hybrid educational system. The results also show that 13.6% of teachers consider all of the mentioned negatives to be of equal importance, as shown in Figüre 4.

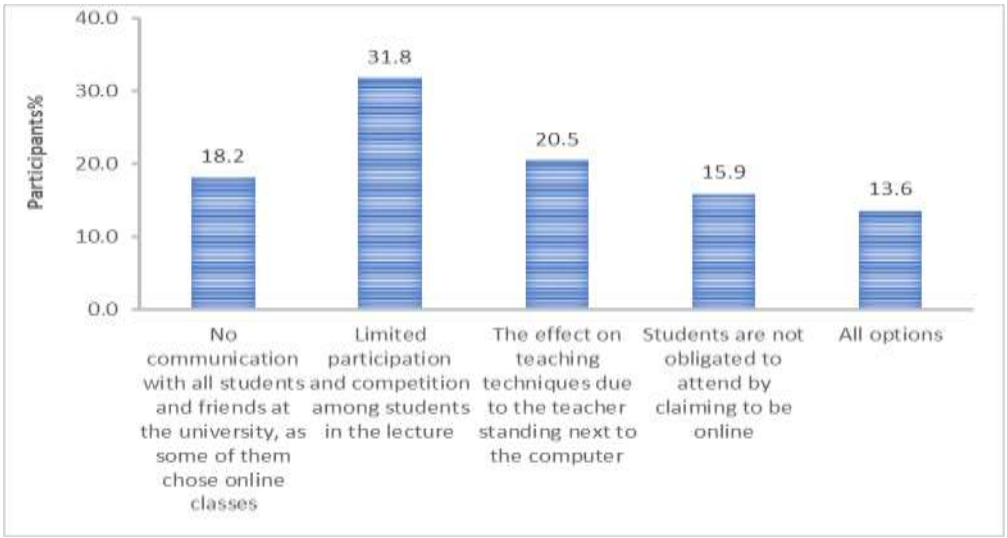

Fig. 4. The participants' responses about the disadvantages of hybrid classes.

In view of the exacerbating ongoing rises of new waves of Omicron infection (the number of infections at the time of preparing this study exceeded 100,000 infections per day), the same educational system used in the previous semester may continue to be used in the next semester. Teachers were asked which of the educational platforms they prefer in the next semester, 65.9% of them answered they prefer face-to-face education, while 18.0% of them prefer online education, and the rest (13.6%) prefer hybrid education, as shown in Table 2. These results reflect the importance of face-to-face education from the point of view of most teachers and may also reflect the concern of the rest of the teachers about the continuing spread of the disease and the possibility of getting infected with Omicron. Despite the importance of hybrid education in the current situation and its help in overcoming the crisis, the results showed a tendency of 44.0% of teachers to use blended education instead of hybrid education, as shown in Table 5. It increases the opportunity for competition among students, as well as increases social contact between them and their teachers. It also gives the teacher greater freedom to choose the method of teaching and freedom of movement instead of being restricted to stand in front of the camera.

With a great opportunity to continue with the same educational system that was applied in the previous semester, including the hybrid system, so we recommend the following recommendations, especially with the tendency of students to choose online education in the next semester, as mentioned in our published study [2]. Where the study showed that about half of the students prefer to continue with the online system, and about a third of them prefer hybrid educational system [2]. The study showed that the reasons may be due to the concern of these students about infection with Covid-19, as well as the university recording of lectures and uploading them on the university website in both online and hybrid systems. Reasons may also refer to students getting used to rest during the crisis [2]. Therefore, the university administration must relieve students' anxiety by implementing some measures that prevent the spread of disease and do not hinder the educational system.

In order to improve hybrid education, the teacher must distribute time and effort equitably between face-to-face and online students. We also recommend using programs that provide a greater opportunity for communication between the teacher and his students via the Internet. Training teachers is a priority so that they can learn how to move freely and not to restrict their movement in front of the camera. We also recommend the possibility of recording students' attendance automatically in these programs to encourage students to attend.

We also recommend using the blended education system as an alternative or alongside hybrid education to increase the opportunity for communication and competition among all students, and this may help encourage students to fully accept face-to-face education. The blended education system has the same advantages as hybrid education in terms of reducing the density of students inside the university to limit the spread of the disease. In blended platform the university students can be divided into two groups, one group attending face-to-face and the other online, then exchange between them weekly, and that reduces the students' density inside the university and also within public transportation by half. On the other hand, the blended system is distinguished by the fact that all students have the opportunity to attend classes face-to-face and online simultaneously. Blended platform then increases the level of social communication among students and gives everyone the opportunity to participate in discussion and communication with teachers. We also recommend increasing educational and social activities within the university, with the participation of both teachers and students taking into account safety measures, which may contribute to increasing students' tendency towards face-to-face education.

4. Conclusion

After the number of Covid-19 infections decreased and their severity lessened, the Turkish authorities allowed the easing of procedures in the country, as well as the opening of universities and the return of public education, while adhering to safety measures. The Board of Education has recommended the use of face-to-face education according to the status of coronavirus (COVID-19) in the region in which the university is located. Therefore, most Turkish universities have used different education platforms, including hybrid educational system, according to the status of each university, in order to limit the spread of the disease. In this study, a questionnaire was distributed to teachers at Istanbul Gelisim University and in some Turkish universities via e-mail to explore their views on the effectiveness of hybrid educational platform and its pros and cons from the teachers' point of view. After collecting the results, they were analyzed using Excel and SPSS. The results showed that most of the teachers (86.4%) experienced hybrid system. And 61.3% of the teachers considered hybrid educational system acceptable or good, where these teachers prefer face-to-face education over both hybrid education and online education. 13.6% of the teachers considered that hybrid education does not have any advantages compared to online and face-to-face platforms, while 56.8% of them considered that the best advantages of hybrid education are reducing the number of students inside the hall and inside the university, which provides a safer environment for all. On the other hand, 31.8% of the teachers considered that students' limited participation and competition are the most negative aspects of this type of education. Despite all the risks, the results showed the preference of 65.9% of teachers to move to face-to-face education in the next semester. In the event that the same system is applied in the coming period or in future crises, we recommend avoiding the negative aspects of this system and working to improve the quality of education by improving the electronic applications used, training teachers on them, working to increase the proportion of students in face-to-face education and increasing the participation of online students, as well as trying to implement the blended education system.

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