

# Student Opinions and Experiences During Pandemic Period In Marine Education Within Online Education

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## Abstract

This study aims to evaluate marine education during COVID-19 pandemic process based on perceptions of Marine Education Faculty students. It is known that teaching, learning and management aspects were affected in the world caused many deaths and many people to get sick, and how this process reflected in the education of students. This study was conducted according to qualitative research methods. In the study, as a qualitative data collection tool, semi-structured interview form was analyzed. Semi-structured interview questions were prepared and research questions were asked. This study was carried out with a total of 102 marine education faculty students in the 2020-2021 fall semester academic year. Within the scope of the results obtained according to the findings of the participants; opinions regarding the difficulties of online education in applied courses, 18% of the participants stated that they still have difficulties in accessing the necessary technological tools and infrastructure. However, they said (44%) that they can comprehend the subject in a better and more understandable way with the videos prepared by the lecturers in applied lessons and that they can overcome this difficulty in this way.

**Keywords:** learning, marine education, online education, strategic management, quality

## INTRODUCTION

There are opinions that this epidemic is among the most severe events that affected the world the most after the second world war (Gür, 2020). In such a short time, the Covid-19 epidemic, spreading over a very wide geography and seen even in tribes where human interaction is very limited, affects all aspects of people's lives on a global scale and causes changes in many areas.

The unexpected closure of educational institutions all over the world and the initiation of education and support from digital platforms at home due to quarantine days naturally caught countries unprepared. While many countries are caught unprepared for mass distance education in this way, the differences in opportunities and digital literacy between different socioeconomic groups in the countries have opened the long-term consequences of distance education to the discussion (Özer, 2020).

According to the definition made by the University of Wisconsin Continuing Education Group, it is designed to provide distance education, student interaction and learning certificate; It is a planned learning/teaching experience that uses a wide range of technologies to reach a distant

audience. The most important reason for this definition change is the developments in the field of educational technologies. Distance education has removed all borders and walls in education. In other words, distance education provides the opportunity to learn at the desired age, place and time, at the desired speed, using the desired environment. Distance, time, place, age, socio-economic status, physical disability, etc. especially, always keep distance education and lifelong learning on the agenda (Adıyaman, 2002: 92).

On the one hand, the students who received education and on the other hand, the academicians who gave the education were affected by these new methods and practices and tried to keep up with the situation. Faced with these new tools and methods for the first time, both sides faced various difficulties. (Öztürk, 2019; Özer et al., 2019; Serçemeli, 2019)

Baron and Crooks (2005) stated that although there is a consensus that web-based distance education involves more academic fraud than traditional face-to-face education, this situation is flimsy. Lee and Busch (2005) defined the elements that distinguish distance education methods from traditional face-to-face teaching according to the experiences and opinions of the instructors. As a result of the research, no difference was found

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between the views of the instructors towards distance education and traditional education regarding the interaction with students on homework, communication with students outside the classroom, the effort of instructors to provide feedback or the effect of motivation on student achievement.

Looking at the historical development of distance education, it is seen that it first started as letter education dating back to the 1700s (Özbay, 2015: 378). Over time, applications using printed materials, radio, television, video conferencing, computers and internet tools are emerging. In this respect, it is seen that applications are developed in distance education similar to the development in technology (Gökmen, Uysal, Yaşar, Kırksekiz, Güvendi, & Horzum, 2017). It is possible to divide the periods of distance education in a global context into 3. In the first period, which included the 1700s and 1900s, education was provided by letter. From 1925, distance education with the help of audio-visual tools has changed shape. Since the 1990s, with the introduction of the internet into our lives, the era of informatics-based distance education has started (Bozkurt, 2016). Following the decision of the Ministry of National Education (MEB) and the Council of Higher Education (YÖK) for a compulsory interruption to education, with the foresight of the uncertainty and prolongation of the process, the regulations required for the implementation of distance education, the transition to a flexible academic calendar and the use of distance education were rapidly implemented (TÜBA, 2020).

Turkey as well as all over the world because of an outbreak of Covid-19 social, economic, educational field as in the economic sphere radical decisions were taken. In our country, after the first case was seen on March 10, 2020, on March 13, the interim holiday planned to be held one week later was pulled forward and the schools were closed, and a week after this date, the distance education process was initiated on March 23, 2020. During this period, more than 1.5 billion students and 63 million educators in 188 countries around the world were affected by this process due to the closure of schools (UNESCO, 2020). It can be stated that one of the areas where the pandemic has great effects is the education field. The United Nations Educational, Scientific and Cultural Organization (UNICEF, 2020) states that the Covid-19 pandemic affects more than 91% of students worldwide, and this number corresponds to approximately 1.6 billion students.

The COVID-19 pandemic does not only bring

physical suffering to those who suffer from this disease; besides, it also causes moods such as panic and shock, loss of social trust, sadness, shame, suspicion and anger to both patients and others. Economic losses of individuals and families as a result of the economic downturn due to the epidemic, disruptions in education processes problems in accessing basic needs such as food and health services worsen the situation (Brown, 2020).

Distance education is a method in which communication and interaction between teachers and learners are provided through specially prepared environments when there is no possibility to carry out classroom activities (Kaya, 2002). Distance education has so far been seen more as a complement or a substitute for face-to-face education. However, it can be said that there is no alternative other than distance education due to the extraordinary conditions experienced by the whole world today.

The United States Distance Learning Association (USDLA) (2004) emphasizes the intertwining of technology while expressing distance education; distance education is to enable education to reach distant students with the help of multimedia technologies such as computers, audio, video and graphics. Several components need to come together to realize distance education in a qualified way, educational, pedagogical and technological conditions affect the quality and accessibility of distance education (Özkul & Girginer, 2001). In cases where distance prevents education, distance education is applied for reasons such as having a certain illness or being dependent on the home environment due to physical disability (Newby, Stepich, Lehman, & Russell, 2006). Features such as distance, age, time, being physically disabled, and socio-economic status always keep distance education on the agenda (Adiyaman, 2002).

Although it is thought that many cases, deaths, precautions, restrictions and delays in the pandemic process may affect the lives of individuals in one way or another, it is a fact that they will also significantly affect the students of the Marine Education. These students tried to continue the exam preparation process both by struggling with a psychologically unknown disease, by trying to protect themselves and to take various precautions, as well as by remote and online education they did not know. In this process, the students of the Marine Education were required to adapt to both distance and online trainings and were expected to continue the preparation process in a safe way. The fact that this unexpected crisis lasted longer than expected has inevitably negatively affected the

psychology of the students. With this study, the opinions of Marine Education students about this process will be examined and the effect of this process on their education will be determined. With this study, it was planned to reveal how the students of the Marine Education were affected by the COVID-19 pandemic process, which brought many negative effects in the world and our country, caused many deaths and many people to get sick, and how this process reflected in the education of students. In this direction, the general purpose of this study is to examine distance education and Marine education in terms of student views during the pandemic period.

## METHOD

### Research Mode

In the research, mixed research has been done, including quantitative and qualitative research methods. It is constructed in the descriptive survey model, which is one of the quantitative research designs. Descriptive survey models are suitable models for studies that aim to describe a past or present situation as it exists (Karasar, 2006).

In addition to these, qualitative research methods were also used in this study. "Qualitative research can be defined as a study in which qualitative data collection methods such as observation interview and document analysis are used, and a qualitative process is followed to reveal perceptions and events in a realistic and holistic manner in the natural environment." (Yıldırım & Şimşek, 2011). According to Kuş (2003); "The main feature of qualitative research is to reveal the perspectives and worlds of the meaning of the research participants and to see the world with the eyes of the participants."

### Data Collection Tool

In the study, as a qualitative data collection tool, semi-structured interview form was used. Semi-structured interview questions were prepared and research questions were asked. In the qualitative research approach, in-depth interview (face to face interview), direct observation and document analysis techniques are generally used to collect data (Legard, Keegan, & Ward, 2003). The semi-structured interview form created within the scope of this study includes four open-ended semi-structured interview questions. In the last part of the research, in order not to lose any data during the interviews, interviews were recorded with a voice recorder on a voluntary basis.

To ensure the internal validity of the interview form, it has been submitted to the examination of

faculty members from Department of Educational Sciences to obtain an expert opinion. In line with these views, the form was rearranged..

Within the scope of quantitative research, a questionnaire form has been previously conducted to collect the quantitative data of this research as a data collection tool, and the questionnaire consists of 32-item 5-point Likert-type items. The questionnaire items were formed and scored as "strongly agree (5)", "agree (4)", "undecided (3)", "disagree (2)" and "strongly disagree (1)".

### Working group

This study was carried out with a total of 102 Marine Education students in the 2020-2021 fall semester academic year. The students participating in the study were selected according to the purposeful random sampling method. Purposeful random sampling is the classification of systematically and randomly selected case samples in line with the purpose of the study (Marshall & Rossman, 2014). At the same time, the credibility of the information collected by this method is considered to be higher (Creswell, 2016).

The qualitative study group of the research was formed with 102 Marine Education students in the 2020-2021 fall semester academic year. While creating the study group, the students participating in the study were selected according to the purposeful random sampling method.

### Collection of Data

During the process of collecting qualitative data in the study, 102 participants were responded forms. Participants were informed in advance about the purpose of the study and the use of the interview method as a data collection method. A "Google Meeting" was held to explain the subject and purpose of the meeting to the participants. The data of the study started to be collected in January 2021 with the volunteers who participated in the study. A questionnaire form was created to collect the quantitative data of this research, and the questionnaire consists of 32-item 5-point Likert-type items.

### Data Analysis

For the analysis of qualitative data, interviews were made with the participants using the interview form, which is a data collection tool. According to the opinions of the interviewed participants, the answers given to each question were categorized one by one and placed in the tables. After this first categorization, the data were re-examined by the researcher and basic themes

and categories were formed. These themes and categories were reviewed by taking into account the relevant literature and categories showing similar patterns were combined, and those that differ were grouped under a separate category and coded. Next to these categories, whichever manager answered, is written as numbered. The sentences removed from the categories were written as examples in the mentioned part. Individual interviews were made by visiting schools and when the administrators were available. Meetings with managers were held in an environment where a one-on-one conversation could be made. The data obtained from the answers to the research interview questions were analyzed by content analysis. In content analysis, data are analyzed in four stages (Yıldırım & Şimşek, 2011).

1. Coding of Data: In this first stage of the content analysis, after each participant was given a number and the interview was transcribed, the data obtained from the participants were analyzed within the framework of the research, divided into meaningful sections and the conceptual meaning was named and coded. The code list, which was previously prepared based on the conceptual framework of the research and the interview questions, was finalized after the examination of all the data. This code list has served as a key list in organizing the data. Data other than research questions were excluded from coding. Later, the coding keys and interview transcripts were read separately by the researchers, and the necessary arrangements were made by discussing the "consensus" and "disagreement" issues. For the reliability calculation of the research, the average was calculated as 91% by using the reliability formula suggested by Miles and Huberman (1994). Reliability calculations above 70% are considered reliable for research (Miles & Huberman, 1994). The result obtained here is considered reliable for the research. Codes that show agreement in the coding made by the researchers were taken as a basis in reaching the themes.

#### Intraclass Correlation Coefficient

	Intraclass Correlation	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	,998	,982	,991	159,105	105	106	,000
Average Measures	,994	,991	,996	159,105	105	106	,000

One-way random effects model where people effects are random.

According to the results of the reliability test of the questionnaire, the validity and reliability of the questionnaire items are high and the Cronbach Alpha value was found to be  $\alpha = 0.919$ .

2. Finding Themes: At this stage, the codes determined in the coding stage of the data were considered as separate categories and evaluated as separate themes.

3. Organizing and Defining Data According to Codes and Themes: At this stage, the opinions of the participants were explained in a language that the reader could understand and the opinions were presented to the reader first hand. Footnotes were used to determine to which participant the interview notes belong, and the interview notes are given in quotation marks.

4. Interpretation of the Findings: The interpretation of the findings, which were described and presented in detail, by the researcher, and some results were explained at this last stage.

SPSS 25.0 package program was used for the analysis of quantitative data in the study. Descriptive analysis and internal consistency reliability coefficient (Cronbach Alpha) analysis were performed to calculate the data, normality analysis, mean and standard deviation.

#### FINDINGS AND COMMENTS

##### Quantitative Findings and Comments:

##### Interpretation Range of Survey Tables

Table 1 shows the average range of criteria used in the interpretation of the survey results.

Table 1. Average Criteria Ranges

Weight	Points	Limit Option
1	1.00 – 1.80	I strongly disagree
2	1.81 – 2.60	I do not agree
3	2.61 – 3.40	I am indecisive
4	3.41 – 4.20	I agree
5	4.21 – 5.00	Absolutely I agree

#### Cronbach Alpha Coefficient

Reliability Statistics	
Cronbach's Alpha	N of Items
,997	2

Büyüköztürk (2002) considers that the reliability coefficient is  $\alpha = 0.70$  and higher in terms of the reliability of the test scores.

#### Normality Test (Non-Parametric)

**Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>		Shapiro-Wilk			
	Statistic	Df	Sig.	Statistic	Df	Sig.
Average,188		102	,000	,822	102	,000
Lilliefors Significance Correction						

Since the size of the sample whose normality distribution is examined is larger than 50 (n < 50), the

"Shapiro-Wilk" test is more preferred and used. Here is the "Sig." Of the "Shapiro-Wilk" test. H0 hypotheses are accepted for all groups since their values are less than 0.05. In other words, "data with 95% confidence is not a normal distribution for all groups." can be called. Besides, the Q-Q Plot chart has been reviewed. The said graphic is in Figure 1.

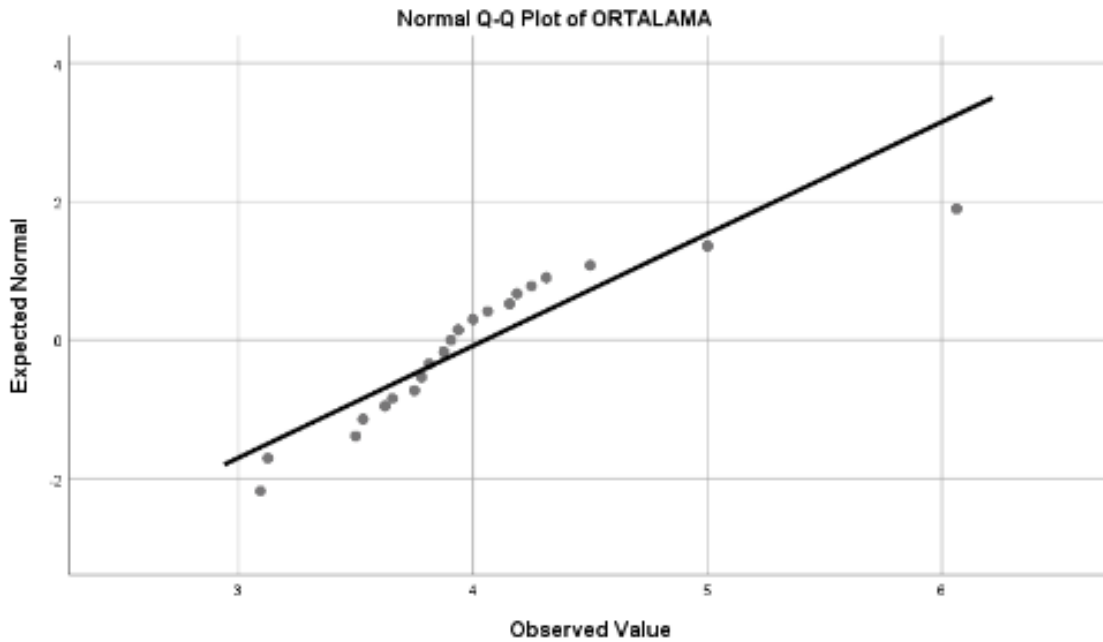
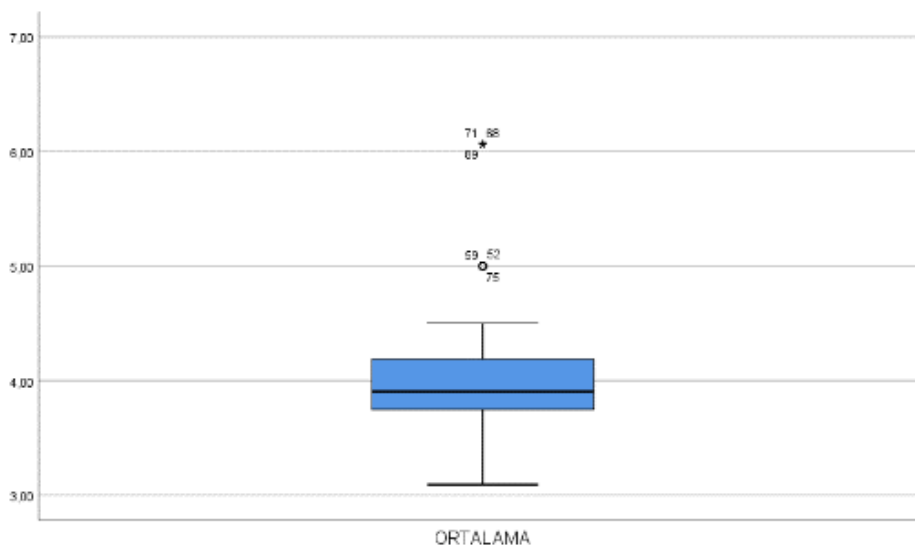


Figure 2: Q-Q Plot Chart

When the linearity of the slope in the graph in Figure 2 is examined, it is seen that it does not meet the normality assumption.

The result of the analysis made to check whether there is a possible outlier to ensure normality assumption is shown in Figure 3.



When Figure 2 is examined, it is seen that the span distance between the quarters is not balanced and there are extreme values in the data. Since there

was an extreme outlier among the data, it was understood that the data were not distributed normally.

**Mean and Standard Deviation of Scale Items**

Items	Average	SS
Assign roles and responsibilities	4,9825	7,28129
Build online teams	4,9706	6,28129
Social relationship, friendly attitudes must be encouraged, collaborative work should be done to increase learners' interaction and instructors must assist students	4,2941	0,83947
Availability and access to a common ground in a computer-mediated discussion are necessary to sustain instructional interaction over the entire length of the discussion. Instructional dialog takes	4,2745	0,64726
Be flexible to adapt new learning style	4,2353	0,78572
There is a lack of technological assistance	4,2059	0,78776
There is a lack of support for the changing roles of students	4,1667	0,84529
Encourage discussions	4,1373	0,78399
Encourage group members to lead discussions	4,1078	1,07083
Make participants comfortable with the technology and ultimately make the technology transparent	4,098	0,77727
Collaborative learning strategies require more interaction	4,0882	0,91308
Students expect an e-learning system to be dependable and user friendly	4,0588	1,07927
Online courses do not exist in isolation	3,9706	0,73735
Promote human interaction	3,9706	1,00942
Absence of real-time feedback	3,9608	1,04286
Lecturers presence in online groups is important to students that active participation is the most important factor influencing the success of online groups	3,9216	0,86387
A capacity for relationship building	3,9216	0,99191
There is the flexibility of time and location	3,8824	1,09268
Be a team player, communication skills, and deliver mechanism	3,8824	0,74852
The facilitator contribute to build up a positive, constructive environment	3,8725	0,69896
There is a lack of adequate time-frame	3,8431	1,37693
Understanding of the attitudes, experiences and dynamics of the interaction of students is considered by highlighting the significance	3,8333	1,00576
Encourage group members to question theory and practice	3,8235	0,83739
Feedback and motivational skills	3,8235	1,01875
The tension between teacher and student control of the online	3,8039	1,44222
Encourage the on-line group to develop its own life and history Welcome shared language, metaphors, rituals and jokes	3,7941	1,1021
Students' collaborative engagement with new technologies heighten understanding of influential factors that shape the effectiveness of peer interactions, learning contexts and computer interfaces for enhancing learning from a	3,7941	0,87131
Establish an online identity as e-moderator	3,7549	1,18101
Online learning groups often can develop their strong identity	3,7451	1,14049
Lead a round of introductions with perhaps, an on-line ice-breaker	3,7353	0,86661
Be reflective to understand how their students learn, adapt to the teaching environment	3,6961	1,05106
Participants learning require two kinds of interaction with course content and other participants	3,549	1,17421

The mean and standard deviation values in the table were evaluated according to the limit ranges scoring given in Table 2. When looking at the table, the answers given by the participants are generally at the level of agree and absolutely agree. While the item "Assign roles and responsibilities" got the highest score ( $\bar{x} = 4.9825$ ) at the level of absolutely agree, the item "Build online teams" got a score at the level of agree.

**Table 2. Average and Standard Deviation of Sub-Dimensions**

	Average	SS
LOWER DIMENSION 2	4,3671	1,58141
LOWER DIMENSION 3	3,9804	0,81448
LOWER DIMENSION 4	3,9765	0,45232
LOWER DIMENSION 1	3,9343	0,52095
LOWER DIMENSION 5	3,7516	0,92714

The mean and standard deviation values in the table were evaluated according to the limit ranges



scoring given in Table 2. When we look at the table, the answers given by the participants are generally at the level of I agree and absolutely agree, and the second sub-dimension gets the highest score, while the 5th sub-dimension has the lowest score according to the table, but the score is not low, at the level of "I agree".

#### Qualitative Findings and Comments:

The findings of the research were analyzed to answer each research question and the results of

this analysis are given below in order.

#### Dimension I: Findings on how online education improves learning.

The first dimension of the research was created within the scope of presenting opinions on how online education improves learning. In this context, 102 participants were asked for their opinions. The responses to these questions have been coded and their themes have been extracted and the distributions related to these themes are given in Table 3.

Table 3. Findings on how online education improves learning

Category	Themes	Frequency (f)	Percent (%)
How online education improves learning	That you have been learned well enough	65	64%
	Positive development and learning about online courses is provided	28	27%
	Registration of courses and sharing public notes is advantageous for learning, but online education is not very healthy in terms of learning.	26	25%
	There is no difference between the quality of education we received from our professors and the education we received online.	18	17%

Some of the participants' views on how online education improves learning are as follows;

*K (19) "I think we have learned enough well now"*

*K (28) "There is no difference between the quality of education we received from our teachers at school and the education we received online. Online training is a much more successful system, especially in course follow-up. Also, in the trainings we have received at school, our fellow students sometimes interrupt the lesson with unnecessary topics and conversations, which negatively affects the course and flow. In online education, we can concentrate better on the lesson and our teacher. By examining the notes and videos given by our teachers, we can have the chance to reinforce the subjects much better. "*

*K (67) "I think online education has both beneficial and detrimental aspects. Having some verbal lessons online can save time and provide the opportunity to reinforce it by watching the lesson later, but I think it is the opposite for applied lessons."*

*K (89) "I do not think that online education is very healthy in terms of learning, although it is advantageous to record courses and share public notes."*

*K (49) "I am having the most regular student period I have ever experienced. As an individual, without being under any pressure, I showed interest in the lessons with my free will; I want to make the necessary presentations and homework instantly.*

*Because, regardless of the course content, all tasks, exams, etc. When I view it on the calendar in the system, it is easier to make a schedule. Since I am mostly in front of the computer, I do it as soon as any project-homework falls on my calendar. I can say that he made a great contribution to research and development about this subject. I think it will be much easier for all students and lecturers to continue using this type of application even when face-to-face training starts again. It is a great chance to see all the course contents and the documents related to the course separately for each course. After the face-to-face lesson, I forgot my USB Memory at home, I buy the lecture slide after a friend, it completely eliminates the trouble. Submitting homework is much more comfortable this way, I forgot it does not cause any problems, the deadline is predetermined, it minimizes paper waste. My opinion about online courses is in this direction for now. "*

It was planned to reveal how the students of the Marine Education were affected by the COVID-19 pandemic process, which brought many negative effects in the world and our country and also caused many deaths and many people to get sick, and how this process reflected in the education of students with this study. In this direction, the general purpose of this study is to examine distance education and Marine education in terms of

student views during the pandemic period. In this context, according to the findings obtained in the dimension of how online education improves learning, it is understood that approximately 64% of the students can learn well enough. They stated that there was no difference (18%) between the education quality they received face to face and the education we received online. They stated that online education is a much more successful education system, especially in terms of course follow-up. Besides, in the trainings we have received at school, our fellow students sometimes

interrupt the lesson with unnecessary topics and conversations, which negatively affects the course and flow.

#### **Dimension II: Findings regarding the difficulties of online education in applied courses.**

The second dimension of the research was created within the scope of revealing the opinions about the difficulties of online education in applied courses. The responses to these questions have been coded and their themes have been removed and the distributions related to these themes are given in Table 4.

**Table 4. Findings on the difficulties of online education in practical courses**

Category	Themes	Frequency (f)	Percent (%)
The challenges of online education in hands-on classes	Access to necessary technological tools and infrastructure	19	18%
	In practical lessons, our teachers can comprehend the subject better and more clearly with the videos they have prepared.	45	44%
	Trying to do our applied simulator lessons as much as possible can only be more useful in school.	55	54%
	It is not very efficient to have lessons online, as well as technical difficulties, the environmental conditions are very difficult in terms of focusing and understanding the lesson.	38	37%
	Simulation lessons are very inefficient	29	28%

Some of the participants' views regarding the difficulties of online education in your applied courses are as follows;

*K (11) "Access to the necessary technological tools and infrastructure is very difficult for us."*

*K (33) "We can grasp the subject in a better and more understandable way with the videos that our teachers have prepared in applied lessons. Thanks to the videos, we are able to look at the issues from a broad perspective. With the information given by our teachers and the accompanying videos, we understand the practical lesson better, we understand it much better .."*

*K (61) "Of course, we do not fully understand when we see the applied courses online as the name implies, but this may be a compensation."*

*K (79) "We are trying to do our applied simulator lessons as much as possible, but I'm sure it would be more beneficial for us if we could be in school."*

*K (49) "It is not very efficient to have the lessons online. Besides the technical difficulties, the environmental conditions we are in make us very difficult to focus on and understand the lesson. Since we are in an extraordinary situation, it is very difficult for us to attend classes and to give a lot of homework. I also know that there are very logical reasons to open the camera, but I don't think it is*

*very right to have the camera turned on since we attended the class at home."*

*K (59) "Simulation lessons are very inefficient, but since I have completed my internship, I do not need any simulation lessons. In fact, this thought may be related to the fact that I used every device I used in the simulation and a verb in the internship. Therefore, simulation changes can be made in the curriculum. I think that if it can be taught as 1st and 2nd-year courses, it would be a change that would maximize their interest in the lesson and the profession, both more integrated with navigation lessons and much more attractive for new students coming from scratch related to Marine."*

Within the scope of the results obtained according to the findings of the participants' opinions regarding the difficulties of online education in applied courses, 18% of the participants stated that they still have difficulties in accessing the necessary technological tools and infrastructure. However, they say (44%) that they can comprehend the subject in a better and more understandable way with the videos prepared by the lecturers in the applied lessons and that they



can overcome this difficulty in this way (44%). It is understood that especially thanks to videos, they can find the opportunity to look at the issues from a wide perspective. In addition to these, some participants stated that they had difficulties especially in understanding the practice lessons. Although they tried to do our applied simulator lessons as much as possible, they stated that it would be more beneficial (54%) if it could be done face to face at school.

### 3rd Dimension: Findings regarding the suggestions for the future of education.

The third dimension of the research was created within the scope of revealing the opinions about the suggestions for the future of education. The answers to these questions have been coded and their themes have been extracted and the distributions related to these themes are given in Table 5.

Table 5. Findings on what are the suggestions for the future of education

Category	Themes	Frequency (f)	Percent (%)
What are the suggestions for only online education in the future the future of education	As the future advances into the digital age, the education system will be made entirely in a computer environment very soon.	59	58%
	Arranging a flexible structure for online education for students to be more comfortable	15	14%
	Continuing to use this type of practice even when face-to-face training begins again	47	46%

Some of the opinions of the participants regarding the suggestions for the future of education are as follows;

K (38) "As the future is moving towards the digital age, I think that the education system will be made entirely in computer environment very soon. In the online education system, lessons that take place in online education, where many components from homework sharing to conversations to measure and evaluation, file sharing are used together, are recorded at the same time. Retrospective sources can be easily accessed. In this way, students can access the recorded courses at any time, and we can easily ask questions that students sometimes cannot ask face to face in distance education. The stress we experience is significantly reduced at the points where the lesson-abduction knowledge is not consolidated. "

K (44) "I think we are living the future of education right now. So I think that in the future, there will only be online education. "

K (77) "I think our school manages the online education process well compared to other universities. As far as I have heard from the media and my circle of friends, many students suffered from systemic deficiencies and their education was disrupted. At least we overcame these losses with the least damage, I hope it continues like this. "

K (55) "Arranging a flexible structure for online education for students to be more comfortable. In online education, chat broadcasts can be opened in which our department professors tell about their experiences. Organizing a more disciplined structure for seafarers within the scope of face-to-face training. "

K (47) "Simulation lessons are very inefficient, but since I have completed my internship, I do not need any simulation lessons. In fact, this thought may be related to the fact that I used every device I used in the simulation and a verb in the internship. Therefore, simulation changes can be made in the curriculum. I think that if it can be taught as 1st and 2nd-year courses, it would be a change that would maximize their interest in the lesson and the profession, both more integrated with navigation lessons and much more attractive for new students coming from scratch related to marine education. "

Participants expressed that they think that the education system will be made entirely in computer environment very soon (58%), as the future is moving towards the digital age, within the scope of the results obtained according to the findings of the participants' opinions regarding what the suggestions for the future of education are. In the online education system, it is understood that many components from homework sharing to conversations, measurement and evaluation, file sharing are used together, the lessons in online education are recorded at the same time, retrospective resources can be easily accessed so that students can access the recorded lessons at any time.

## CONCLUSION AND RECOMMENDATIONS

### Results According to the Quantitative Data:

In this study, the results that emerged in line with the answers given by the students of the

Marine Education faculty to the questionnaire items are given below;

As a result of the analysis made in line with the answers given by the Marine Education faculty students to the items, it was concluded that the scale data was not a normal distribution.

In line with the feedback obtained from the interviews, it was concluded that the participants answered the first 5 items at the level of "I strongly agree", while they answered all the remaining items at the level of "I agree". The students stated that creating discussion environments and group work in attending classes would improve their knowledge more and spend a more productive lesson (Keskin & Küçükali, 2017). It was also revealed that they had a more interesting learning process by encountering new learning models in this process. Also, they emphasized that they are open to new learning models.

When the items were classified according to sub-dimensions and re-analyzed, it was seen that most participants answered "I strongly agree" to the sub-dimension named "Interaction Behavior", which is sub-dimension 2, and it was concluded that they answered "I agree" to all the remaining sub-dimensions. In line with this result, it was revealed that the education methods students used during the pandemic process were effective and beneficial and contributed greatly to their learning (Sönmez, 2018). This process is not only teacher-centered, but as a result of the active participation of students in the lesson, it shows that students also increase their own knowledge and benefit from the knowledge of their peers by giving importance to group work. In addition, students' responsibilities increase and their self-confidence increases. The names of the remaining sub-dimensions were named as "Barrier", "Interaction Capacity", "Social Interaction Role" and "Group Interaction", respectively, according to the answers given by the participants from the most replied to the least answered (Üstündağ, Güneş, & Bahçivan, 2017).

#### **Results According to Qualitative Data:**

##### **1st Dimension: The results obtained according to the findings of the participants' opinions regarding how online education improves learning are as follows;**

With this study, it was planned to reveal how the students of the Marine Education Faculty were affected by the COVID-19 pandemic process, which brought many negative effects in the world and our country, caused many deaths and many people to get sick, and how this process reflected in the education of students. In this direction, the general

purpose of this study is to examine distance education and marine education in terms of student views during the pandemic period. In this context, according to the findings obtained in the dimension of how online education improves learning, it is understood that approximately 64% of the students can learn well enough. They stated that there was no difference (18%) between the education quality they received face to face and the education we received online. They stated that online education is a much more successful education system, especially in terms of course follow-up. In addition, in the trainings we have received at school, our fellow students sometimes interrupt the lesson with unnecessary topics and conversations, which negatively affects the course and flow. In online education, they say that they can concentrate better on the lesson and our teacher. It is understood from the obtained data that by examining the notes and videos given by the teaching staff, they can have the chance to reinforce the subjects much better. They stated that having some oral lessons online saves time for the students, and they have the opportunity to reinforce it by watching the lesson again later. However, in the applied lessons, the participants stated that it was the opposite. Some of the participants stated that they had the most regular student period they have ever experienced. The students show interest in the lessons with their free will without being under any pressure; They stated that they would like to make the necessary presentations and homework immediately (Aksal, A.F., 2011). They say that they try to do all the projects and assignments given to them and that they make a great contribution to the development of their research and development aspects. They stated that the majority of the participants about the online courses have a positive opinion (Altınay, Dagli, Altınay, & Altınay 2020).

##### **2nd Dimension: The results obtained according to the findings of the participants' opinions regarding the difficulties of online education in applied courses are as follows;**

Within the scope of the results obtained according to the findings of the participants' opinions regarding the difficulties of online education in applied courses, 18% of the participants stated that they still have difficulties in accessing the necessary technological tools and infrastructure. However, they say (44%) that they can comprehend the subject in a better and more understandable way with the videos prepared by the lecturers in applied lessons and that they can

overcome this difficulty in this way. It is understood that they can find the opportunity to look at the issues from a wide perspective, especially thanks to videos. In addition to these, some of the participants stated that they had difficulties especially in understanding the practice lessons. Although they tried to do our applied simulator lessons as much as possible, they stated that it would be more beneficial (54%) if it could be done face to face at school. Some of the participants stated that the online courses are not very efficient, and the technical difficulties, as well as the environmental conditions they are in, forced the students in terms of focusing and understanding the lesson (37%). It is understood that since they are in an extraordinary situation, it is compulsory to attend the classes and the students are given a lot of homework (Gazi, Z.A., 2011). In addition to these, they stated that they did not need any applied simulation lessons and they did not experience any difficulties in this basic course (28%), since they had personally applied them during their internship in simulation lessons (Bączek Zagańczyk-Bączek Szpringer, Jaroszyński, Woźakowska-Kapłon, 2021).

**3rd Dimension: The results obtained according to the findings of the participants' opinions regarding what the suggestions are for the future of education are as follows;**

Participants expressed that they think that the education system will be made entirely in computer environment very soon (58%), as the future is moving towards the digital age, within the scope of the results obtained according to the findings of the participants' opinions regarding what the suggestions for the future of education are. In the online education system, it is understood that many components from homework sharing to conversations, measurement and evaluation, file sharing are used together, the lessons in online education are recorded at the same time, retrospective resources can be easily accessed so that students can access the recorded lessons at any time. It is understood from the opinions that the students can easily ask the questions they cannot ask face to face in distance education, the stress experienced by the students at the points where the lesson is missed and the knowledge is not consolidated is understood from the opinions taken. In this context, the participants (60%) stated that they are already experiencing the future of education and that they think that there will be only online education in the future. They stated that they think their universities manage the online education process better than other universities.

They say that for online education, a flexible structure in which students can be more comfortable should be arranged (14%). For this purpose, they suggest that there should be chat broadcasts in which the department lecturers describe their experiences in online education. Participating students suggest that simulation lessons can be given as 1st and 2nd-grade lessons. In addition to these, to be able to integrate the navigation lessons better, it will be much more attractive for new students who came from scratch if the simulation courses are seen as 1st and 2nd-grade courses and that the simulation courses will be placed especially in the first years of the Marine Education faculty. They suggest (Altınay, F., Altınay, Z., Aydın, C.H. *et al.*, 2020).

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