

# A comparative study of satisfaction in pre and mid COVID-19 pandemic: A case study of international students in Ondokuz Mayıs University, Turkey

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## Abstract—

At the end of 2019, COVID-19 (a worldwide pandemic) affected the public health and social life. New restrictions were put into place by the governments including Turkey such as social distancing and wearing masks to decrease the mass expansion. Like all other sectors in the country, the educational sector was also increasingly affected by the pandemic where face to face study was shifted to online classes.

This research is analysing the satisfaction of international students in on-campus and online study. Quantitative research through e-questionnaire was conducted on 144 international students from four different regions (Asia, Europa, Africa, and Australia) at Ondokuz Mayıs University. The findings reveal the preference and affecting factors of international students among online study and on-campus study.

According to the results, the percentage of preference for studying in class was 57.63% and 53.47% for online classes. Factors that are related to student's satisfaction on-campus have more affection on international students than online study.

**Keywords—** Higher Education, International Students, Covid-19, Online study, Pandemic.

## I. INTRODUCTION

The educational sector is developed by the rising demand for various educational opportunities due to the digital revolution and globalization. Better teaching and learning tools are the leading factors of the rise in cost for education globally. Meanwhile, a competitive environment between educational institutions creates more options for a selection to students (Isani and Virk, 2005). The report indicates that there were more than 4.8 million international students in 2016 all around the world. The United States of America, the United Kingdom, Australia, France, Germany, and Russia are the host of more than half of these international students. While, The major sending countries of international students are China, India, Germany, South Korea, Nigeria, France, Saudi Arabia, and several Central Asian countries (IOM, 2018). The spread of Covid-19 in late 2019 affected the lifestyle of humans in

many aspects and led countries into quarantines (Dinh and Nguyen, 2020).

Number of authors have been investigating the impact of Covid-19 pandemic in Higher Education across the world. For instance, Kawamorita, Salamzadeh, Demiryurek, & Ghajarzadeh (2020) investigated the main challenges faced by entrepreneurial universities and their responses to those challenges by comparing Iran, Turkey, Iraq, United Arab Emirates, Oman, Jordan, Kuwait, and Lebanon. The digitalisation of the teaching learning process is one immediate solution applied during this challenging period by many Higher Education Institutions in many countries. Similar findings were presented by other authors such as (Bojović, Bojović, Vujošević, & Šuh, 2020; Dinh & Nguyen, 2020; Pal, Vanijja, & Patra, 2020; Kawamorita, Altun & Kizilkaya, 2020).

However, only 22 relevant articles on University student satisfaction during the pandemic were found on web of science listed journals as of November 2020.

The Covid-19 pandemic accelerated online teaching due to the spread of the virus (Pal et al. 2020). Therefore, educational institutions forced to adapt online studies to decrease the risk of infection among students (Bojović et al, 2020).

In 2019, Turkey was the target destination for more than a hundred and fifteen thousand international students at different levels. While, over sixteen thousand international students were studying in Turkey in 2000 (Study in Turkey, 2019). Due to the Covid-19 pandemic in Turkey, all educational institutions were closed by the government to control the spread of the virus on 12 March 2020 (Kılınçel et al, 2020). According to the UNESCO report, schools in 188 countries are closed because of the pandemic on the 8th of April 2020 (Lee, 2020). In higher education sector, distance education model became one of the solutions applied immediately to avoid the termination of education during this challenging time. The news of the suspension of formal education at universities was announced in March 2020 by the Turkish Higher Education Council. Then, Ondokuz Mayıs University decided to transform all programmes to synchronous distance education model. Kawamorita, Altun & Kizilkaya (2020) presented a case study on Distance Learning

Ondokuz Mayıs University by examine how the institution responded to challenges.

Ondokuz Mayıs University is located in the black sea region (Karadeniz bölgesi), Samsun City. Three thousand four hundred twenty-two international students from 104 countries are enrolled in the university at different levels. The University has five graduate schools: graduate school of Educational Science, graduate school of Sciences, graduate school of Fine Arts, graduate school of Health Sciences, and graduate school of Social Sciences (OMU, 2019).

This research is a comparative study of international student's satisfaction in Ondokuz Mayıs University before Covid-19 and during the Covid-19 pandemic. The study analysis the level of satisfaction among international students between on-campus education and online education.

## II. METHODOLOGY

The study is comparing the satisfaction of the international student by region and before Covid-19 and while Covid-19 at Ondokuz Mayıs University, Samsun, Turkey. The data collected by conducting E-questionnaire on 144 international students. Descriptive analyse used to analyse the collected data.

The conducted questionnaire had four sections which are socio-demographic characteristics, students' satisfaction before Covid-19, students satisfaction while Covid-19, and preference. The data collected and analysed by SPSS. The factors are rated by 5-points of likert scale ranging from 1=less satisfied to 5=highly satisfied (Malhotra.2002).

As likert scale used as a rating scale, the likert items which had mean 0-2 as less-satisfied, 2.5-3.5 as satisfied, and 3.6-5 as high-satisfied (Hakim&Hatifie.2020).

Table1.The interpretation scale of factors

Mean	Satisfaction level	Codes
0-2	Less-satisfied	LS
2.5-3.5	Satisfied	S
3.6-5	High-satisfied	HS

## IV- RESULTS

### Socio-demographic characteristics:

The socio-demographic characteristics of the collected data from international students are presented in Table (2). The findings show that 59.4% of the responses were male and 40.5% of them were female. A large number of respondents are students from Asia (75.52%) while the number of students from Africa, Europe, and Australia is respectively less than Asia. The majority of the respondents are students at the Bachelor level (78.32%) while students in maters level are 16.08% and Ph.D. is 5.59%. meanwhile, 30.06 % are students of the graduate school of Health Sciences, 29.37% are students of the graduate school of Educational Science, 21.67% are students of the graduate school of Sciences and 18.88% are students of science and technology. Most of the students are lived for more than 4 years in Turkey and the

majority of them are living in the house (75.52%) and the majority of the student's age groups (73.42%) are between 19 -25. Being sponsored by families or self-finance was the most students (71.32%) financing source while 27.27% of the students were sponsored by Turkey scholarship (YTB) and 1.39% of the others were sponsored by TUBITAK. The gap between monthly income and monthly expenses was noticeable. The majority (46.15%) of the student's monthly income was between 750-1150 Turkish lira per month while most of the international students (51.04%) monthly expenses were between 750-1150 Turkish lira per month.

Table (2) Socio-demography of international students.

Order	Variable	N=144	%
<b>1</b>	<b>Gender</b>		
	Male	85	59.4
	Female	59	40.5
<b>2</b>	<b>Region</b>		
	Asia	109	75.52
	Africa	26	18.18
	Europa	8	5.59
	Australia	1	0.69
<b>3</b>	<b>Marital status</b>		
	Single	133	93
	Married	11	7
<b>4</b>	<b>Education level</b>		
	Bachelor	112	78.32
	Master	23	16.08
	PhD	9	5.59
<b>5</b>	<b>Studying language</b>		
	Turkish	133	93
	English	11	7
<b>6</b>	<b>Period of stay (year)</b>		
	1 year	11	7.69
	2 year	27	18.88
	3 year	15	10.48
	4 year	44	30.76
	More than 4 years	47	32.16
<b>7</b>	<b>Field of study</b>		
	Educational Sciences	42	29.37
	Social Sciences	32	21.67
	Science and Technology	27	18.88
	Health Sciences	43	30.06
<b>8</b>	<b>Source of financing</b>		
	YTB(scholarship)	39	27.27
	TUBITAK (Scholarship)	2	1.39
	Private	103	71.32
<b>9</b>	<b>Age( year)</b>		
	19-25	105	73.42
	26-30	33	23.07
	>30	6	3.49

<b>10</b>	<b>Monthly income (TL)</b>		
	Less than 700	36	25.17
	750-1150	66	46.15
	1200-1600	25	17.48
	More than 1650	17	11.18
<b>11</b>	<b>Monthly expense (TL)</b>		
	Less than 700	13	9.09
	750-1150	73	51.04
	1200-1600	32	22.37
	More than 1650	26	17.48
<b>12</b>	<b>Accommodation</b>		
	Dorm(KYK)	28	19.58
	Dorm(Private)	7	4.89
	House	109	75.52

### Student satisfaction before Covid-19:

This part of the study contains factors that are related to the satisfaction of international students at Ondokuz Mayıs University. The section contains 24 questions, which are categorized into three parts: Factors related to lecturers, factors related to services offered by university inside the campus and factors related to services offered by faculties.

#### Factors related to lecturer:

This part of the research contains nine factors that are related to lecturers, which affect student's satisfaction. The findings show that the total average of student's satisfaction of factors related to the lecturer is 3.57 which is categorized as a satisfied group. Students from Australia are categorized as a high-satisfied group with a total average of 4.77. Although, students from Africa with a total average of 3.29, Europa with a total average of 3.13, and Asia with an average of 3.12 are categorized as satisfied. (Table3)

#### Service offer by faculties:

The section of the study contains five factors, which provide by faculties and affects students' satisfaction. The findings show that the total average of service offered by faculties is 3.52 that are categorized as satisfying factors. Students from Australia are categorized as a highly satisfied group with a total average of 5. However, students from Africa with an average of 3.11, Europa with an average of 3.01, and Asia with 2.96 are repeatedly categorized as satisfied. (Table3)

#### Services offered by the university inside the campus:

This part of the research contains ten factors that affect students' satisfaction with services offered by the university inside the campus. The findings show that the total average of international students is 2.85 which is categorized in a satisfied group. This section has the lowest satisfaction of international students compare to others. As the findings, reveal that students from Africa with an average of 3.42, Asia with an average of 3.11, and students from Europa with an average of 2.99 are categorized as satisfying factors. Meanwhile, students from Australia with an average of 1.9 are

categorized as less- satisfying with the service, which offers by the university inside the campus. (Table3)

**Table 3. Students satisfaction before Covid-19**

factors	Asia	Africa	Europa	Australia	Total mean
	Mean	Mean	Mean	Mean	
Lecturer related satisfaction factors					
Proficiency	3.28	3.65	3.23	5	
Being help full in the classroom	3.05	2.95	3.02	5	
Being help full out of the classroom	3.35	3.43	3.3	4	
Lecturer's teaching method	2.66	2.78	2.6	5	
Teacher's qualification	3.3	3.39	3.41	4	
Textbook quality	3.16	3.43	3.12	5	
Syllabus quality	3.01	3.3	3.06	5	
Teacher's response to contact	3.08	3.17	3.2	5	
Behavior	3.27	3.57	3.29	5	
Sub-mean	3.12	3.29	3.13	4.77	3.57
Services offer by faculties					
Course/subject effectiveness	2.93	3	3	5	
Curriculum relevant to field of study	3.16	3.34	3.13	5	
Course selection easiness	2.9	3	3.04	5	
Lecture halls and laboratory	2.96	3.08	3.03	5	
The Ability to select other faculties subjects	2.86	3.17	2.87	5	
Sub-mean	2.96	3.11	3.01	5	3.52
Services offer by university inside the campus					
Facilities for the university registration	2.79	2.95	2.78	5	
How safe do you feel on campus	3.83	4.04	3.59	5	

Internet	2.56	2.82	2.53	1	
Campus staff are help full with students	2.77	2.59	2.76	2	
Food quality in the dining hall	3.09	3.59	2.92	1	
Public transportation	3.02	3.47	2.89	1	
Accessibility to library	3.78	4.21	3.54	1	
Easy accessibility library's books (hard/soft)	3.52	4.04	3.32	1	
Sport and recreational facilities	2.91	3.34	2.83	1	
Diversity	2.84	3.21	2.81	1	
Sub-mean	3.11	3.42	2.99	1.9	2.85

**Student's satisfaction while Covid-19:**

This part of the study contains factors that affect online studies. This research considers twelve factors that are categorized into two groups: Lecturer related satisfaction factors and factors related to online service.

**Lecturer related satisfaction factors:**

This part of the research contains eight factors that affect student satisfaction with the lecturer. The total average 2.83, which determined as a satisfied group by international students. Students from Africa with an average of 3.48, Asia with an average of 3.12 and students from Europa with an average of 2.97 are repeatedly classified as satisfied meanwhile Australia's students are categorized as less satisfied with the total average of 1.75. (Table4)

**Factors related to online service:**

This part of the study contains four factors that affect student's satisfaction with online service. The finding reveals that international student with a total average of 2.6 is satisfied with the online service that offers by Ondokuz Mayıs University. The result shows that students from Africa with an average of 3.35, Asian students with an average of 2.91, and European students with an average of 2.89 are satisfied with the online service however, students from Australia with average 1.25 are categorized as less satisfied. (Table4)

**Table 4. Factors related to students satisfaction while Covid-19**

Factors	Asia	Africa	Europa	Australia	Total mean
	Mean	Mean	Mean	Mean	
Lecturer related					

satisfaction factors					
Proficiency	3.09	3.52	2.95	3	
Being help full in the classroom	3.02	3.47	2.86	2	
Lecturer's teaching method	3.18	3.43	3	2	
Teacher's qualification	3.39	3.56	3.24	2	
Textbook quality	3.09	3.47	2.93	1	
Syllabus quality	3.06	3.56	2.91	1	
Teacher's response to contact	3.03	3.43	2.94	2	
Behavior	3.1	3.47	2.99	1	
Sub-mean	3.12	3.48	2.97	1.75	2.83
Factors related to online service					
Ease of use	2.99	3.56	2.89	1	
Effectiveness of lecture	2.81	3.26	2.77	1	
Course selection easiness	2.83	3.26	2.92	2	
Privacy	3.04	3.34	3.01	1	
Sub-mean	2.91	3.35	2.89	1.25	2.6

**Preference:**

This part of the research reveals the preference of the international students for online studies and studying in class. The finding shows that 57.63 per cent of the student prefers to continue their studies in the class while 42.37 of the students also prefer to continue their studies online. (Table5)

**Table 5. Student preference.**

	Yes		No	
	N	%	N	%
I prefer to continue my studies online	77	53.47	67	46.53
I prefer to continue my studies in class	83	57.63	61	42.36

**III. CONCLUSIONS**

Based on the latest years, the demand to study in Turkey by international students is rapidly increasing. As the results of conducted research revealed that, more than fifteen percent of the international students prefer to continue their studies

online and in class. Although, international students are more satisfied by Ondokuz Mayıs University services before Covid-19. Services offered by the university inside the campus are considered as less satisfying by international students. However, factors related to lecturer and Services offer by faculties are the main satisfying categories. The finding shows that online studying services are less satisfying than the other factors. Meanwhile, international students are more satisfied with factors related to lecturer while being in the class rather than online studying. This finding directly links with the challenges identified by Kawamorita, Altun & Kizilkaya (2020) that although the Institution is experienced in providing the distance learning education, not all the lecturers are equipped with the digital skills to perform qualify education online. However, the OMU Distance Education Centre has been supporting not only the lecturers but also the users (students) by providing an online information resource on Covid-19 pandemic and distance education <https://evdekal.omu.edu.tr/> (evdekal=stay home) with 37 short informative videos and guidelines.

Therefore, we expect the higher level of satisfaction for online education in coming years.

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