

# The Impact of Online Learning Implementation on Satisfaction, Motivation, Quality of the Learning Process, and Student Learning Outcomes

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## ABSTRACT

This study aims to find out whether online learning contributes to student learning satisfaction, whether online learning has a positive influence on students' learning motivation, whether online learning has a significant influence on the quality of the learning process, and whether online learning has a positive impact on student learning outcomes. The research method used is a survey method, which collects respondent data as a research sample and is processed with statistical data and presentation in the form of graphs and percentage figures. The instruments used in this study are questionnaires to find out or measure the level of satisfaction, motivation, and quality of the learning process and documents in the form of student learning outcome scores (midterm test scores). The instrument used is created in the form of a Google form (GF) to reach student data online. The population of this study is all students of the Faculty of Teacher Training and Education UHAMKA in semesters 2, 4, and 6. While the research sample was 1007 out of the total number of active students as many as 4042. The results showed that (1) the level of satisfaction of FKIP UHAMKA students to online learning was 52.53%, (2) student motivation for online learning by 54.51%, (3) the quality of the online learning process by 56.10, and (4) student learning outcomes through online learning increased by 96.21%. Therefore, it was concluded that online learning has a positive impact on learning motivation, the quality of the learning process and student learning outcomes.

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## 1. INTRODUCTION

Education in the 21st century demands a quality learning process as well as the achievements of students who have high quality and competitiveness. As it is known, there are at least 6Cs in education

in the 21st century, among which learners need to have critical thinking skills, namely the ability to solve problems. Another one is creative thinking, which is the ability to produce extraordinary ideas or ideas. Another ability is communication or communication well, especially the ability of foreign languages or English. Furthermore, collaboration or collaboration skills or a wide network are needed by students so that they will be able to compete in the fields of work together or solid team work. Another important ability regarding morals is the ability to have good character. The last is the ability to have an attitude of patriotism over the nation and the state (Abd Ghani et al., 2020; Ahmad, Yoke, Yunos, & Amin, 2019; González-Pérez & Ramírez-Montoya, 2022; Nadiroh, Zulfa, & Yuliani, 2021).

Related to the 6Cs above, education in universities is one of the decisive levels of education, namely the phase where students inevitably have to be ready to face big challenges. Higher education is a level that prepares students to learn, practice and gain experience through a quality learning process. A quality learning process in the digital era that cannot be avoided is an online learning model. This online learning since 2000 has been introduced starting to be used by some universities in the world, especially developed countries. Some use blended learning models or mixed learning, which is a mixture of online learning with face-to-face learning in the classroom (Susilawati & Supriyatno, 2020). Others still organize conventional learning, namely face-to-face learning activities.

Time continues to move quickly until the beginning of 2020 precisely in January 2020, Muhammadiyah University Prof. DR, HAMKA (UHAMKA) began to design earnestly the blended learning model by initiating guidelines for the implementation of blended learning and guidance on learning management system (LMS) owned by UHAMKA under the name UHAMKA Online Learning (OLU), which would be effectively held in the odd semester lecture of the academic year 2020/2021. However, in the midst of preparing training in the development of teaching materials and online-based learning media, the world and Indonesia are experiencing a global pandemic, namely Corona virus disease (Covid) 19.

The existence of Covid 19 caused facial learning to change instantly to online learning (Penrod, Shaw, Nash, Dierkes, & Collins, 2022; Rafique, Mahmood, Warraich, & Rehman, 2021). Any mode of online learning is done to overcome online learning that is not done in a structured manner with an ideal design. Finally, online learning modes ranging (Kamal, Shaipullah, Truna, Sabri, & Junaini, 2020) such as WA, email, google classroom, YouTube, Edmodo, Zoom, Google meet, Schoology, and OLU are carried out. Related to the use of online learning, almost all university students in the world including Indonesia have experienced various obstacles: reduced focus and distractions, technology and internet problems, heavy workload, and inadequate supports from teachers/lecturers (Hussein, Daoud, Alrabaiah, & Badawi, 2020), and these could bring about the shrinkages of learning quality. For example, more students' engagements in online learning environment decreased faster (Spitzer, Gutsfeld, Wirzberger, & Moeller, 2021). In addition, online learning is one environmental factor which reduces the lower level students' academic performance (Li & Che, 2022). In the context of motivation, more students are believed to have a negative impact on their motivation as they lack of social interactions (Esra & Sevilen, 2021). Some students could be satisfied with online learning provided by the lecturers, some of them could be dissatisfied. The choices of online learning platforms and the delivery of instruction could affect their satisfactions.

There are many research studies on the implementation of online learning during the Covid-19 Pandemic. Laksana (2021) did his study focusing on the areas of minimum internets. Other studies limited on the learning satisfaction (Kang & Park, 2022) (Agyeiwaah, Baiden, Gamor, & Hsu, 2022). Meanwhile, Yau, Yeung, & Lee (2022) studied on teachers and students' perception of online learning. From these previous studies, this research gap is then focusing on investigating some important variables: satisfaction, motivation, learning process quality, and learning outcomes on the online learning implementation during the Covid-19 Pandemic. This research also provides many respondents that are believed to represent the population.

Therefore, to determine whether the quality of the online learning process is well carried out, the students' satisfaction in participating in online lectures increase, whether the learning motivation is the

same or more increased or vice versa and the students' learning outcomes improve, it is necessary to conduct a research study on the impact of online learning implementation. The research questions addressed are: 1) What is the students' satisfaction on the online learning implementation? 2) What is the students' motivation on the online learning implementation? 3) what is the learning process quality in the online learning implementation? And what are the students' learning outcomes in the online learning implementation?

## 2. METHODS

The research method used is a survey method, which collects respondent data as a research sample and is processed with numeric description and presentation in the form of graphs and percentage figures (Creswell, 2018). The population of this study is all the students of Faculty of Teacher Training and Education, Universitas Muhammadiyah Prof. Dr. HAMKA (FKIP UHAMKA) in semesters 2, 4, and 6. While the research sample amounted to 25% of the total number of students. Here is the data on the student population in the class of 2017, 2018, and 2019.

**Table 1.** Data on the number of research respondents

No	Academic year	Number of populations	Number of respondents
1	2017-2018	1233	306
2	2018-2019	1449	379
3	2019-2020	1360	322
	Total	4042	1007

Of the total students of FKIP UHAMKA, the number of respondents used in this study was 1007 active students. The instruments used in this study were questionnaires to find out or measure the level of satisfaction, motivation, and quality of the learning process and documents in the form of student learning outcome scores (midterm test scores). The instrument used was created in the form of a Google form (GF) to reach student data online. Based on the results of the research instrument trial, data were obtained in the table below.

**Table 2.** Data of try-out result

No	Variables	Number of items before tryout	Invalid items	Number of valid items
1	Satisfaction	9	6	8
2	Motivation	10	2, 5	8
3	Quality of learning process	11	2, 3	9
	Total	30	5	25

There are three-phase processes in administering the survey. First, the valid items totally amounted 25 were distributed to all the students of FKIP UHAMKA. Secondly, the respondents were given five days to fill out the survey questionnaires. And thirdly, the data were collected and tabulated based on each variable.

In data analysis, the number of students in the sample who returned or completed the questionnaires were reported. The researchers checked the response bias. The next step was to discuss a plan to provide a descriptive analysis for all the data of variables to indicate the means, median, mode, and standard deviations. Then, the researchers answered the descriptive questions by providing percentages of data for satisfaction, motivation, learning process quality, and learning outcomes. finally, the data were interpreted with some categories.

### 3. FINDINGS AND DISCUSSION

#### 3.1. Results

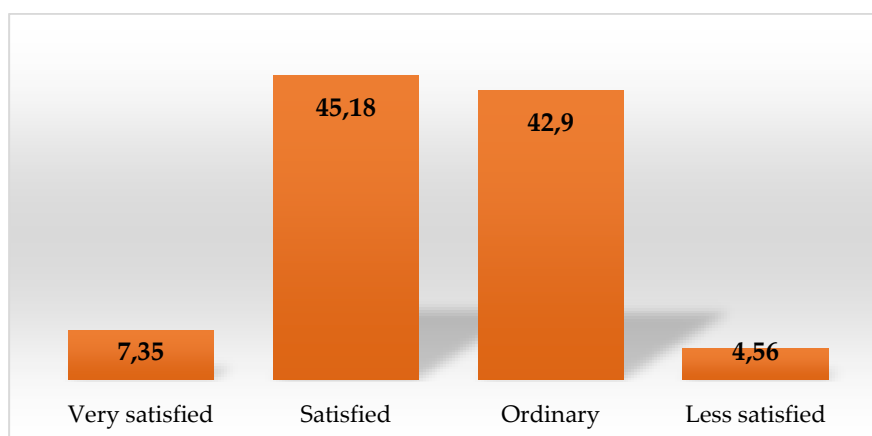
##### Satisfaction of the online learning process

Based on the data description, it was obtained that satisfaction in the online learning process with average results (mean) = 17.84, median = 18, mode = 18 and standard deviation = 3.87. After the data is described, the results of the percentage of the online learning process satisfaction category are obtained in students as follows.

**Table 3.** Percentage of Online Learning Process Satisfaction Category

Interval	F	%	Category
24 – 32	74	7.35	Very satisfied
18 – 23	455	45.18	Satisfied
12 – 17	432	42.90	Ordinary
8 – 11	46	4.56	Less satisfied
Total	1007	100	

Table 3 describes that 7.35% of students expressed great satisfaction, 45.18% of students expressed satisfaction, 42.9% of students expressed ordinary, and 4.56% of students expressed dissatisfaction with online learning. The following is the graph indicating the students' satisfaction on online learning implementation.



Graph 1. Percentage of Online Learning Process Satisfaction Category

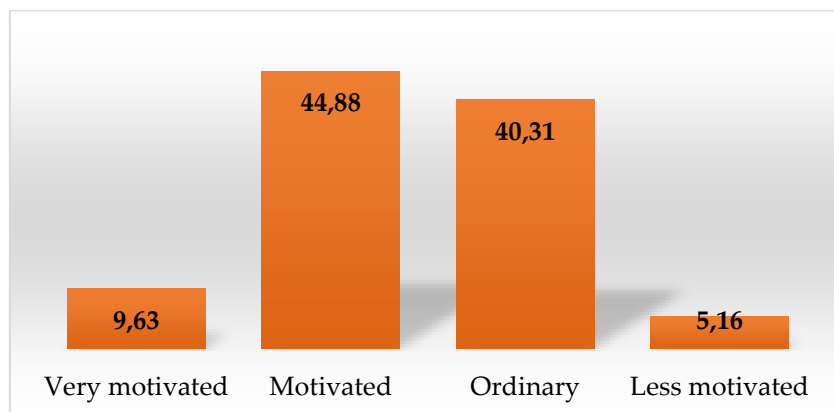
##### Motivation in the Online Learning Process

Based on the data description, it was obtained that motivation in the online learning process has an average result (mean) = 20.59, median = 21, mode = 22 and standard deviation = 2.43. After the data is described, the results of the percentage of student learning motivation categories are obtained in the online learning process in students as follows.

**Table 4.** Percentage of Motivation Categories in Online Learning

Interval	F	%	Category
24 – 28	97	9.63	Very motivated
21 – 23	452	44.88	Motivated
17 – 20	406	40.31	Ordinary
11 - 16	52	5.16	Less motivated
Total	1007		

In the aspect of motivation in learning from table 4, it was shown that online learning was very motivating as much as 9.63%, motivating 44.88%, ordinary 40.31%, and less motivating 5.16%. the following is the graph 2 informing the percentages of motivation categories in online learning implementation.



Graph 2. Percentage of Motivation Categories in Online Learning

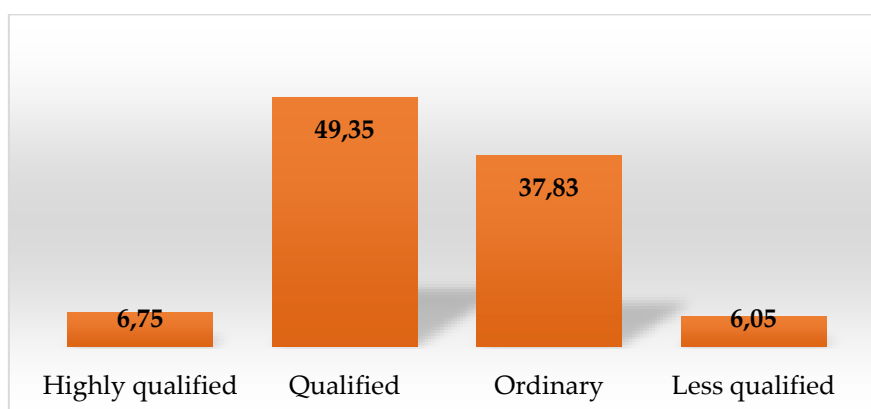
### Quality of Online Learning Process

Related to the quality of the online learning process, the average result (mean) = 21.34, median = 21, mode = 19 and standard deviation = 4.41. After the data is described, the results of the percentage of the quality category of the online learning process in students are obtained as follows.

Table 5. Percentage of Quality Category of Online Learning Process

Interval	F	%	Category
28 – 36	68	6.75	Highly qualified
21 – 27	497	49.35	Qualified
15 – 20	381	37.83	Ordinary
9 - 14	61	6.05	Less qualified
Total	1007	100	

For the quality of the learning process, the table above describes that the quality of the online learning process carried out by lecturers with students is very qualified (6.75%), qualified (49.35%), ordinary (37.83%), and lack of quality (6.05%). To make it more clearly, it is presented in graph 3.



Graph 3. Percentage of Quality Category of Online Learning Process

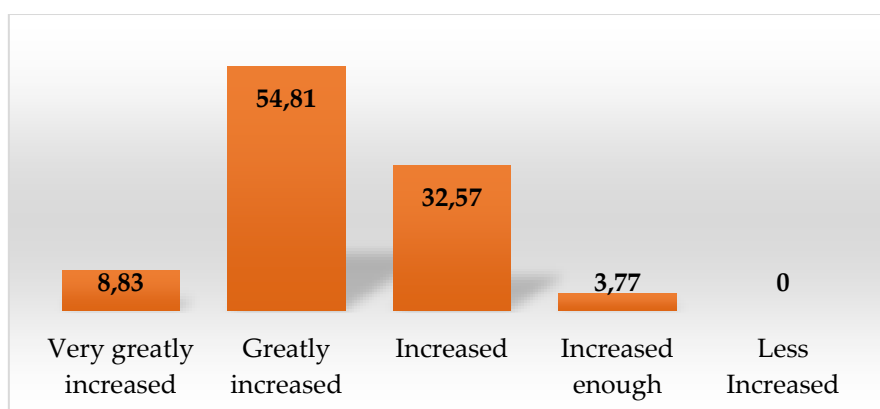
### Students' learning outcomes

Student learning outcomes in the online learning process in semesters 2, 4 and 6 gain the average results (mean) = 80.51, median = 80, modus = 80 and standard deviation = 6.43. After the data is described, the results of the percentage of student learning outcome categories are obtained through online learning in students as follows.

**Table 6.** Percentage of Student Learning Outcome Category

Interval	F	%	Category
90 – 100	89	8.83	Very greatly increased
80 – 89,9	552	54.81	Greatly increased
70 – 79,9	328	32.57	Increased
50 – 69,9	38	3.77	Increased enough
40 – 49,9	0	0.00	Less Increased
Total	1007	100	

Finally, table 6 shows that student learning outcomes through online learning are greatly improved (8.83%), greatly increased (54.81%), increased (32.57%), quite increased (3.77%), and less increased (0%). To illustrate the significant increase of students' learning outcomes, it is then presented in graph 4.



Graph 4. Percentage of Student Learning Outcome Category

### 3.2. Discussion

During the Covid-19 Pandemic, online learning increasingly becomes the necessity for higher institutions to accommodate the learning instruction for lecturers and students. A variety of learning platforms are provided, from simple tools such as Whatsapp, Instagrams to more complicated ones like Google Classroom, Schoology, Edmodo, and Moodle. There some challenges and problems arise, and lecturers and students are trying to adapt to the utilization of online learning platforms better.

Based on the first finding dealing with the students' satisfaction, more students felt satisfied with the online learning platforms used by teachers under the faculty policy as well as the infrastructure of the network. This is supported by (Abuhassna et al., 2020) who found that many factors that played a role in determining the students' satisfaction such as the role of lecturers, faculty, students' attitude, learning environment, and the effectiveness of online platforms. Al-Nasa'h, Al-Tarawneh, Abu Awwad, & Ahmad (2021) pointed out that there were three categories of satisfactions. Students with low category of satisfaction to online learning platforms tended to have low self efficacy and high anxiety and fear of Covid 19. Students with moderate category of satisfaction tended to reveal moderate efficacy with low anxiety and fear of Covid 19. Meanwhile, students with high category of satisfaction

tended to reflect high self efficacy and fear of Covid 19 and low anxiety. The students' satisfaction to online learning was also significantly influenced with the attributes of stimulation and attractiveness performed by the teachers (Agyeiwaah, Badu Baiden, Gamor, & Hsu, 2021). In addition, the other previous study also revealed that the students were satisfied with university academic staff, and they were highly satisfied with Google Classroom and Moodle (Almusharraf & Khahro, 2020).

Related to motivation in the online learning process, the students were motivated (54.51%) to learn in online learning modes asynchronously and synchronously. It means that the rest thought that online learning did not improve their ability. This result is in line with what Esra & Sevilen (2021) did in their study. They found the students' motivations were lower in online learning when compared to face-to-face learning activities. In contrast, Jones, Fenerci-Soysal, & Wilkins (2022) found that the students' motivation in the beginning of course, during the course, and the end of course were consistently high to engage in an online course. Meanwhile, Natalya & Halim (2021) found that there were increases of academic motivation in the early Covid 19 and in the second phase as students felt happy, fun, free, and any other positive emotions. However, in the phase 3, the academic motivation of the students decreased. The result is also supported by Behforouz, Al Gaithi, & Fekri (2021) who found that Omani students were motivated to learn by online platforms, mainly for the females ones. In addition, they showed their positive willingness to continue using online platforms for the learning activities.

Dealing with quality of online learning process, there are some reasons why online learning mode is required. Some of them are the possibility of combining work and study, the possibility of having education at the place of residence, learning time flexibility, reasonable tuition fee, workload flexibility, and friends' recommendation. Based on a study from Markova, Glazkova, & Zaborova (2017), respondents highly tended to strongly agree to have flexibility in learning time, in workload flexibility as well as to study at the place of residence. In addition, this research finding is supported by (Saxena, Baber, & Kumar (2021) stating that there were some quality factors of online learning such as assurance, responsiveness, and website content which were believed to be significantly positive impact of online learning process.

The last finding to discuss is the students' learning outcomes. As it is known, the students' learning grades were significantly increased through online learning platforms. It could be said that more students got better scores comparing to the offline learning situation even though it was not a guarantee that their knowledge improved. It is in line with Panigrahi, Srivastava, & Sharma's (2018) study where they found the integration of online learning with virtual communities could boost the students' learning outcomes better. However, it is in contrast to what Rahman (2021) did in his study stating that the students from three universities had a decrease in their learning outcomes during the Covid 19 pandemic. When compared to the students' learning outcomes they had in the face-to-face situation, data showed no significant difference between the on-campus and online learning groups of students in their learning outcomes (Holmes & Reid, 2021). To support this result, thus the students' online learning outcomes are affected by some factors such as learner characteristics, course content, ease of use course design, and faculty capacity (Pham, Le, & Do, 2021).

#### 4. CONCLUSION

Based on the results of the analysis, it can be concluded that (1) The level of students' satisfaction on the implementation of online learning is 52.53%, (2) Students' motivation towards online learning is 54.51%, (3) The quality of the online learning process is 56.10%, and (4) Student learning results through online learning have increased by 96.21%. Furthermore, there are some recommendations given to support more quality learning. Firstly, in order to increase student satisfaction, online learning implementation services still need to be improved, especially in the aspects of providing feedback, lecturer communication relations to students, conformity of variations in learning modes, and task loads. Secondly, in order to increase student learning motivation, online learning implementation services should be able to encourage student independence, increased competence, and interest in ICT and science. Thirdly, in order to improve the quality of the learning process, online learning

implementation services are recommended to (1) prepare a comfortable, adequate, and interesting mode of learning, (2) encourage lecturers to provide materials clearly, friendly, and easy to understand, and (3) encourage lecturers to provide materials in accordance with course outline or syllabus so that there is conformity with the evaluation of learning outcomes in terms of material content and evaluation types. And fourthly, in order to improve or maintain student learning results through online learning, it is recommended that lecturers always provide enough exercises or quizzes and discuss as feedback on what students have done so that preparation for the exam can be maximized.

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