

Readiness of University Students in Emergency Online Learning During *Covid-19* Pandemic

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Abstract.

Due to the Covid-19 pandemic situation, online learning has become an alternative way of learning. This study aims to describe the readiness of emergency online learning during the Covid-19 pandemic. This study employed a quantitative method with 387 students as participants, consisting of 269 women and 118 men from a private university in West Jakarta. The Emergency Transition to Full-Scale Online Learning Scale has been translated into Bahasa Indonesia and was used to collect data via an online platform. Descriptive statistics and a comparison of means tests were applied to analyze the data. The results indicated that students' readiness for the emergency transition to online learning was categorized as moderate. It also discovered that there were significant differences in initial preparedness and motivation for online learning factors based on gender group and the support factors based on faculty and batch group.

Keywords: emergency online learning, readiness, university students, pandemic

1. INTRODUCTION

The Covid-19 pandemic started in the year 2020, and it quickly became a global pandemic [1]. It has impacted several nations, including Indonesia. As of August 3, 2021, the number of patients who have tested positive for Covid-19 had reached 3.5 million, according to the official Covid-19 website. This pandemic has an affect on all aspects of life, including schooling. In response to this, the Minister of Education and Culture initiated a learning transition from face-to-face to online learning.

Online learning is defined as learning which students and teachers do on their own [2]. Furthermore, Suharyanto and Ailangkay [3] describe online learning as learning that is supported by media or electronic technologies. There are major benefits to online learning, including 1) students are more likely to absorb, recall, and repeat the material offered, 2) it can improve students' understanding and memory, 3) increasing collaboration in online communities, 4) saving education costs, and 5) focusing the center of attention during learning on the students [4].

However, the online learning method still has to be improved. The online learning method merely transfers the learning design, which is generally done face-to-face in a classroom, to an online platform. During pandemic period, Rahiem [6] views learning as emergency online learning. Emergency online

learning is a type of learning that takes place in an emergency and uses online media to respond to a crisis. On April 13, 2020, the Indonesian Child Protection Commission ran a poll about emergency online learning and received 246 complaints about it. The most common concerns are about the lack of supporting tools and internet connectivity. An initial survey of students about emergency online learning was conducted by researchers. The most common issues encountered during emergency online learning were inconsistent internet connections (61%), learning difficulties (9%), and the lack of supporting resources such as mobile phones, laptops, PCs, or tablets (8%).

To address those problems in the online learning process, adaptation is critical. Students must prepare themselves to keep up with rapid changes in the educational system. According to Naji et al. [7], there are various elements that enable emergency online learning. The initial level of readiness and motivation for online learning is the first aspect to consider. It indicated the responsibility of the organization (university) for providing and explaining information about changes that occur so that they adjust to these changes. The second factor is self-efficacy beliefs about online learning. Self-efficacy refers to a social cognitive theory that describes a person's belief in his/her ability to achieve their goals. The third factor is self-directed learning online which is an individual process of understanding learning needs,

determining learning goals, identifying learning resources, determining and implementing learning strategies, and evaluating the learning process. The fourth factor is support, which includes things like encouraging, motivating, or inspiring people. Support can help people become more motivated and successful in changing their learning habits.

The success of online learning objectives is determined by the student's learning process [8]. As a result, students must be able to adjust to existing changes in order to succeed in the emergency online learning process. This study aims to describe students' readiness during emergency online learning in the Covid-19 pandemic period. The findings in this study will contribute to university/faculty understanding of which factors need to be improved during the online learning process.

2. METHOD

2.1 Variable

The variable in this study is the readiness for emergency online learning transition, which is defined as the process by which students, individually and collectively, can be motivated, confident, and able to accept change based on emergency online learning situations. The emergency Transition To Full-Scale Online Learning Scale measured initial readiness to make emergency changes in online learning. The scale consisted of four factors: initial preparedness and motivation for online learning, self efficacy belief about online learning, self-directed learning online, and support. The higher the average or mean value of each factor, the higher the students' readiness for emergency online learning transition.

2.2 Participants

The participants in this study were 387 students from a private university in West Jakarta, Indonesia. A non-random cluster sampling technique was used to choose participants.

Table 1. Participants Demographic (n=387)

Category	n	%
Gender		
Men	118	30.5
Women	269	69.5
Faculty		
Faculty of Economics and Business	124	32.0
Faculty of Medicine and Health Sciences	111	28.7
Faculty of Psychology	90	23.3
Faculty of Engineering and Computer Science	49	12.7
Faculty of Social Sciences and Humanities	13	3.4
Batch		
2020	141	36.4
2018	123	31.8
2019	123	31.8

Instructional Media		
Laptops	292	75.5
Handphone	75	19.4
Laptops and mobile phones	14	3.6
Tablet	4	1.0
Computer	2	0.5
Internet Source		
Wifi	283	73.1
Internet Quota	98	25.3
Internet and Wifi Quota	6	1.6
Platforms used*		
Zoom	376	44.0
University's Learning Management System	265	31.0
Google (Google classroom, google meet)	178	20.8
Other (Canvas, Edmodo, Learn Wise, Padlet, Whatsapp, Jitsi)	35	4.1

Note: (*) demographic data with more than one answer

2.3 Research Instruments

Emergency Transition To Full-Scale Online Learning Scale, which was developed by Naji et al [7], was translated into Bahasa Indonesia and was used to collect data on university students' readiness for online learning during the Covid-19 pandemic. The scale consists of 29 items in four factors, including initial preparedness and motivation for online learning, self-efficacy belief about online learning, self-directed learning online, and support. Each item is a self-assessment statement with five options ranging from 1 "strongly disagree" to 5 "strongly agree." Item scores will be calculated according to each factor.

Content validity was applied, involving five experts, with the results of Aiken's V ranging from 0.60-0.93. Item analysis using corrected item-total correlation (r_{it}) test results in coefficient values of 29 items ranging from 0.305-0.743. Internal consistency was applied to test the reliability of the scale. The result showed all factors are reliable: initial preparedness and motivation for online learning ($\alpha = 0.876$), self-efficacy beliefs about online learning ($\alpha = 0.80$), self-directed learning online ($\alpha = 0.860$), and support ($\alpha = 0.856$).

3. RESULTS

The results of the calculation of empirical categorization are based on factors of initial preparedness and motivation for online learning ($\bar{x} = 39.32$), Self-efficacy beliefs about online learning ($\bar{x} = 15.91$), self-directed learning online factor ($\bar{x} = 36.78$), and support factor ($\bar{x} = 19.68$). It can be concluded that students' online learning readiness is included in the moderate category. Overall, the results of this study indicate that students' readiness for emergency online learning transition is in the moderate category.

Table 2. Categorization of Emergency Transition Factors to Full-Scale Online Learning

Factors	Categorization		
	Low	Moderate	High
IPM	18.9%	61.8%	19.4%

SE	12.1%	64.6%	23.3%
SDL	16.5%	55.4%	17.1%
S	19.9%	62.3%	17.8%

Note: IPM= Initial preparedness and motivation for online learning, SEB= Self-efficacy beliefs about online learning, SDL= Self-directed learning online, S = Support

According to the Kolmogorov-Smirnov test (see Table 3), The data was not normally distributed, so the non-parametric test was applied. The Mann-Whitney U test and Kruskal-Wallis test were used to analyze the demographic data. The results of the normality test can be seen in Table 3.

Table 3. Normality Test Results

Factors	N	p
IPM	387	0.00
SE	387	0.00
SDL	387	0.00
S	387	0.00

Note: IPM= Initial preparedness and motivation for online learning, SEB= Self-efficacy beliefs about online learning, SDL= Self-directed learning online, S = Support

Based on Table 4, Initial preparedness and motivation for online learning based on gender group (p= 0.005), which means a significant difference. The support factor was based on the batch group (p = 0.022) and the faculty group (p= 0.045), which means there is also a significant difference.

Table 4. Statistical analysis results for each factor based on demographics

Demographics	Factors			
	IPM	SE	SDL	S
Gender	0.005	0.278	0.516	0.642
Batch	0.610	0.295	0.557	0.022
Faculty	0.068	0.348	0.264	0.045

Note: IPM= Initial preparedness and motivation for online learning, SEB= Self-efficacy beliefs about online learning, SDL= Self-directed learning online, S = Support

According to Table 5, the results of the average ranking of each factor have significant differences based on demographic groups.

Table 5. Mean Rank Analysis Results Based on Demographics

Factors	Demographics	N	Mean Rank
IPM	Gender		
	Men	118	214.65
SE	Women	269	184.94
	Men	118	186.12
SDL	Women	269	197.46
	Men	118	189.35
S	Women	269	196.04
	Men	118	197.45
IPM	Batch		
	2018	123	199.93
	2019	123	194.82
	2020	141	188.11
SE	2018	123	197.33
	2019	123	183.17

SDL	2020	141	200.55	
	2018	123	194.83	
	2019	123	186.99	
	2020	141	199.39	
S	2018	123	213.72	
	2019	123	183.12	
	2020	141	186.28	
IPM	Faculty			
	Faculty of Medicine and Health Sciences	111	173.67	
	Fuly of Economics and Business	124	206.15	
	Faculty of Psychology	90	198.32	
	Faculty of Engineering and Computer Science	49	207.57	
	Faculty of Social Sciences and Humanities	13	170.62	
	SE	Faculty of Medicine and Health Sciences	111	184.08
		Faculty of Economics and Business	124	199.69
		Faculty of Psychology	90	206.03
		Faculty of Engineering and Computer Science	49	178.61
	SDL	Faculty of Social Sciences and Humanities	13	199.12
		Faculty of Medicine and Health Sciences	111	178.85
		Faculty of Economics and Business	124	198.72
		Faculty of Psychology	90	203.78
	S	Faculty of Engineering and Computer Science	49	191.62
		Faculty of Social Sciences and Humanities	13	219.62
Faculty of Medicine and Health Sciences		111	175.25	
Faculty of Economics and Business		124	209.78	
SE	Faculty of Psychology	90	202.81	
	Faculty of Engineering and Computer Science	49	177.15	
	Faculty of Social Sciences and Humanities	13	203.15	

4. DISCUSSION

The goal of this study is to describe university students' readiness throughout the Covid-19 pandemic's emergency online learning. Readiness to change in emergency online learning is defined as the extent to which students individually and collectively can be motivated, confident, and able to adapt to changes based on emergency online learning situations [7]. According to categorization, university students' readiness during online learning is in the moderate category. The moderate group had the following percentages of participants: (61.8%) for initial preparedness and motivation for online learning, (64.6%) for self-efficacy belief in online learning, (55.4%) for self-directed learning online, and (62.3%) for support (see Table 2).

The result 1) showed no differences were found in the factors of self-efficacy beliefs about online learning, self-directed learning online, and support within gender

groups. However, there were significant differences in the factors of initial preparedness and motivation for online learning within the gender group. Men are higher compared to the women group. These results are in contrast to previous research conducted by Hung et al [9] and Naji et al [7] that found there is no difference in attitudes between men and women in preparing for the online learning process.

Within the group, there is no difference between initial preparedness and motivation for online learning, self-efficacy beliefs about online learning, and self-directed learning online. However, there is a significant difference in support factor. Within the faculty group, there are also notable differences in initial preparedness and motivation for online learning factors, self-efficacy beliefs about learning online factors, and self-directed learning online factors. The support factor, on the other hand, differs significantly.

4.1 Initial preparedness and motivation for online learning

Initial preparedness and motivation for online learning factor is in the moderate category. It indicates that students have been informed about the transition from face-to-face to online learning. However, 25.9% of students are having trouble adjusting to the existing learning system. The ineffectiveness of the online learning process is hindered by the lack of understanding about efficient learning methods and the use of software to aid the learning process [10].

4.2 Self-efficacy beliefs about online learning

The level of self-efficacy about online learning is modest. It implies that students already have confidence in their ability to manage online learning to achieve their goals and are willing to use online learning platforms. However, 2.1% of students claimed that the online learning platforms they were using did not improve their study. It may be stated that in an emergency online learning, the online platform is beneficial to most students' learning process. This finding is consistent with prior study, which revealed that using online platforms as a learning medium can help students attend online courses [11] [12] [13].

4.3 Self-directed learning online

The self-directed learning online factor is in the moderate category. It means the students can already learn independently, but 33.6% of students find difficulties understanding the material presented. Students also might not feel productive while learning online (1.6%). This is the opposite of the 3.7% of students who believe that online learning allows them to be more productive in their studies. Furthermore, students reported that they have become more flexible in their other activities (8.8%) and are able to focus more on the continuing learning process (1.9%).

4.4 Support

The support factor is included in the moderate category. It indicates that the students have gotten the necessary assistance, such as a reduction in the cost of education to replace the quota used throughout the learning process. In addition, the government has policies in place to offer students with free internet quotas. Various learning technologies, such as Zoom, University Virtual Classroom, Google Meet, Google Classroom, and others, are also provided by the university and lecturers to assist students' needs. Students are encouraged to participate in online learning using these platforms (97.9%). However, some students continue to have issues with unstable internet connections (82.2%), learning support tools such as laptops, mobile phones, and other devices (6.2%), difficulty communicating with lecturers or friends (6.7%), and lecturers who do not master digital technology related to online platforms for online learning (0.7%).

Students' readiness for an emergency online learning shift during a pandemic was categorized as moderate. It means that students can follow the online learning process, but there are few things need to be considered. First and foremost, the significance of establishing successful communication. Du and Chaaban [14] explained that the role of effective communication between lecturers and students can assist students grasp the needs and benefits of an emergency transition to online learning. Students can develop positive attitudes, motivation, and enthusiasm for the learning process. Second, in online learning, integrating group projects as part of the learning technique is encouraged. Students can communicate with one another through group projects, which might help them feel less lonely during the learning process [7]. Third, the independent learning process by students can be supported by interactive learning activities [9]. Finally, the role of support is critical in the learning process that students go through. Anderson, Imdieke, and Standerford [15] stated that support can be offered through activities and supporting facilities to accommodate student requirements. The learning environment has been shown to improve motivation, problem-solving skills, communication, and collaboration [16]. Emotional support is another type of assistance that can be provided. It can assist students in overcoming challenges during online learning.

Due to pandemic, some limitations in this study must be addressed, including as the data collection being solely relied on self-reports sent online to students. Because the participants only came from one university, this conclusion cannot represent the readiness of students in general when it comes to emergency online learning. In the following study, it's also crucial to capture the lecturers' readiness.

5. Conclusions and Recommendations

5.1 Conclusion

This study aims to describe the readiness of students in the emergency online learning transition during the pandemic. The results showed that students were well-prepared in an emergency of the learning transition, which covered four factors: initial preparedness and motivation for online learning, self-efficacy beliefs about online learning, self-directed learning online, and support. Another finding showed no significant difference in self-efficacy beliefs about online learning, self-directed learning online, and support within gender groups. However, in terms of initial preparedness and motivation for online learning, men are better prepared and motivated than women. Furthermore, there is no significant difference in the initial preparedness and motivation factors for online learning, self-efficacy beliefs, online learning factors, and self-directed learning online factors within batch and faculty groups. However, a significant difference was found in support factors within batch and faculty groups.

5.2 Recommendation

This research suggests that more research be done to expand on this initial study's findings by employing focus group discussions to capture the dynamic of the student preparation and learning process during emergency online learning. The suggestions also address to universities in preparing for online learning. First, the importance of two-way effective communication between lecturers and students during online learning will help students understand the transitions in the learning system, as well as encourage students to build positive attitudes towards the learning process. In addition, the group-based learning method can overcome the feeling of being isolated during a pandemic. Students also require assistance, such as instrumental support and emotional support. Using various online platforms can also encourage students to get involved in their learning process. Finally, the lecturer's capacity in terms of digital and technology literacy must be improved.

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