**Intended publication**

**The Readiness Analysis of Online Learning at Undergraduate Students in Pandemic Era**

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| *\*Corresponding author:* | **ABSTRACT**At the end of 2019, the emergence of COVID-19 affected all areas of life, especially education. Since there was still no certainty when this pandemic will end, online learning was an absolute necessity which must be fulfilled by all Indonesian students. This research aimed to determine the readiness of undergraduate students in online learning during the COVID-19 pandemic. This research was a qualitative research method using closed-ended questionnaires and interviews. Subject of this research were undergraduate students at University of Muhammadiyah Prof. Dr. Hamka. The results of this study show that students’ readiness were high in computer/internet self-efficacy, self-directed learning and motivation for learning, on the dimension of learner control and online communication self-efficacy students’ readiness were moderate. It can be concluded that undergraduate students at University of Muhammadiyah Prof. Dr. Hamka ready to face online learning. Furthermore, suggestions concerning the improvement of Online Learning Readiness were also discussed in this study. ***Keywords****: Covid-19, Online learning, undergraduate students’ readiness*  |
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**Introduction**

At the end of 2019, the emergence of COVID-19 happened first in Wuhan, China. This virus spread rapidly within a month. In January 2020, the World Health Organization (WHO) declared COVID 19 being an International Public Health Emergency as a high-risk and infectious disease. Indonesia is one of the countries impacted by COVID-19 with an emergency situation. The pandemic affected all areas of life, especially education. As a result, schools from kindergartens until Universities have been closed. In less than a month, The Ministry of Education made a policy to replaced face-to-face learning became online learning to break the chain of spreading the virus.

Since there is still no certainty when this pandemic will end, online learning is an absolute necessity which must be fulfilled by all Indonesian students. Learning activities that were previously carried out face-to-face in the classroom turned into an online learning system. The concept of social distancing and physical distancing requires everyone to stay at home so that the virus does not spread. Some applications were used to include lecture material, assignments, online discussions, and review the learning process. This method was increasingly being used as well by other institutions in various countries to provide opportunities and the needs of students in the continuity of learning.

Online learning is a learning method that assists learners to conduct more diverse learning. Through the facilities arranged by the system, students can learn without being restricted by distance, space and time (Churiyah et al., 2020). Online learning has advantages and disadvantages that have an impact on the achievement of the learning objectives itself. Adnan (2020) states that online learning is considered more accessible because it is affordable to rural areas. Flexibility is another interesting aspect since students can schedule or plan their time to complete the courses and assignments that are available online, so the students can develop new skills in the learning process anywhere and anytime.

However, this unexpected change in online learning method makes people aware that there are still many disadvantages in using this method. Internet access and the inadequate availability of the latest technology in several areas affect the responses and capacity of students to participate in digital learning. Lack of real interaction between lecturers and students causes students to feel bored and unfocused in learning through virtual classrooms. Students only communicate with their lecturers and peers digitally. Thus, real-time sharing of ideas, knowledge and information was lost from the world of online learning (Adnan, 2020).

Recently, students' readiness to learn is an important aspect of learning activities, especially in online learning. In the following years, many researchers studied and developed the concept of online learning readiness. It was studied in multiple dimensions and measured in various validated scales. In 2020, (Hidayat & Hamrat) adopted the Online Learning Readiness Scale (OLRS) instrument by Hung et al., (2010) into Bahasa Indonesia and to test its psychometric properties for Indonesian use. The results of their research showed that the confirmatory factor analysis was valid and reliable, it can be used to assess students' online learning readiness in Indonesia. Online Learning Readiness Scale (OLRS) instruments is an instrument to assess students' readiness in online learning through a confirmatory factor analysis. OLRS has 18 items in five important dimensions, namely computer/internet self-efficacy, self-directed learning, learner control, motivation for learning and online communication self-efficacy.

Computer/Internet self-efficacy is an influencing factor in online learning readiness. Computer self-efficacy is based on the individual's belief and confidence in their computer skills and knowledge (Sarfo et al., 2017). Meanwhile, Internet self-efficacy is a form of appraisal to determine individual proficiency in using applications or learning tools in online learning (Lu et al., 2019). Schlebusch, (2018) concluded that the Computer/Internet self-efficacy of students influenced their proficiency in using ICT. However, students who are familiar using the internet are not necessarily comfortable using computers. Thus, students need to have confidence in using computers and the internet, and also be able to motivate themselves to find solutions in solving a problem.

Self-directed learning is one of the most important aspects in order to improve the quality of students in learning, especially in online learning. Sumuer, (2018) argued that self-directed learning tends to occur in the context of learning that supports students plan, implement, and evaluate their learning independently by using skills through some elements such as; motivation, self-management, and self-control. Serttaş & Kasabalı, (2020) also defined self-directed learning as learning that requires students to find appropriate methods and strategies to meet their needs and support their strengths. In conclusion, students were trained to understand learning material, complete assignments and solve problems with appropriate solutions, and evaluate learning outcomes independently.

Learning environment affects students in achieving learning goals. According to Abdul-Rahman, (2020), Learner control was a strategy that provides opportunities for students to make decisions in managing study time, and find the effective ways of implementing the learning process. Therefore, students need self-control to examine whether they have 'learner control' since the accuracy of learning strategies and methods can affect student performance in achieving learning goals.

Motivation is one of the most important factors influencing the success of language learning and it cannot be denied. Timor et al., (2021) argued that motivation causes a change in energy which is marked by a reaction to achieve a goal within itself. This reaction is usually in the form of encouragement in themselves to try and compete in doing something to get better results than before, and can overcome obstacles that occur. However, all students in the class do not have the same type and level of motivation. Some learners may have very strong motivation to learn a language, others may have weaker motivation, and others may not be motivated at all. Therefore, the motivation of students really supports the performance of students in achieving their goals, strengthens their learning, makes it easier to remember and store information.

In online learning environment there is no face-to-face interaction like in a traditional learning environment, students and lecturers only interact using online communication tools. Online communication tools include e-mail, chat rooms and other messaging applications. Chung et al., (2020) stated that online communication self-efficacy is important to reflect on the lessons that have been learned and express their thoughts and emotions. Thus, online communication self-efficacy is an essential dimension to overcome the limitations of online communication.

Since online learning has become very popular in educational institutions, it is necessary to know the aspects of student learning readiness. On the basis of this thought, the writer is interested in conducting a research on the readiness analysis of online learning at undergraduate students at University of Muhammadiyah Prof. Dr. Hamka.

**Material and Methods**

 This study applied qualitative method that focused on survey given to the subject of the study to find out the undergraduate students’ readiness on online learning during Covid-19 Pandemic. This research was conducted at the University of Muhammadiyah Prof. Dr. Hamka, Jakarta, Indonesia. Subjects in this study were undergraduate students from nine faculties at University of Muhammadiyah Prof. Dr. Hamka. The research instruments used were closed-ended questionnaires by Google form and in-depth interviews by WhatsApp.

**Closed-ended Questionnaires**

 A total of 220 students filled out the questionnaires through a Google form. The answers were analyzed to determine undergraduate students’ readiness in online learning. The questionnaires measured 5 dimensions of online learning readiness consist of: 1) Computer/Internet Self-Efficacy, 2) Self-Directed Learning, 3) Learner Control, 4) Motivation for Learning, 5) Online Communication Self-Efficacy. Question statements can be graded as Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A) and Strongly Agree (SA) based on a Likert scale which did not have correct or wrong answers and presented in the form of a percentage.

**In-depth Interviews**

After distributing the questionnaires, the researchers also took data from the interviews. Interviews were conducted by 18 students from 9 faculties at the University of Muhammadiyah Prof. Dr. Hamka. Each faculty was taken a sample of 2 students to be interviewed through the WhatsApp. The questions were related to the 5 dimensions of online learning readiness as in the questionnaire. Furthermore, this interview was conducted to find out suggestions from students to improve online learning readiness. This interview was conducted to find deeper information from the data obtained from the questionnaires.

**Results and Discussion**

**Closed-ended Questionnaire**

In order to comprehend undergraduate students’ readiness in online learning, the researchers distributed Online Learning Readiness Scale (OLRS) Indonesian version by Hidayat & Hamrat, (2020). The results were summarized in the Table 1 below:

**Table 1: Result of Close-ended Questionnaires**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No** | **Statement** | **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
| 1 | I feel confident in performing the basic functions of Microsoft Office programs (MS. Word, MS. Excel, and MS. PowerPoint) | 0(0%) | 1(0.5%) | 41(18.6%) | 102(46.4%) | 76(34.5%) |
| 2 | I feel confident in my knowledge and skills of how to manage software for online learning. | 0(0%) | 3(1.4%) | 53(24.1%) | 104(47.3%) | 60(27.3%) |
| 3 | I feel confident in using the Internet (Google, Yahoo) to find or gather information for online learning. | 0(0%) | 3(1.4%) | 21(9.5%) | 71(32.3%) | 125(56.8%) |
| 4 | Carry out my own study plan. | 1(0.5%) | 6(2.7%) | 66(30%) | 94(42.7%) | 53(24.1%) |
| 5 | I seek assistance when facing learning problems. | 0(0%) | 3(1.4%) | 15(6.8%) | 95(43.2%) | 107(48.6%) |
| 6 | I manage time well. | 4(1.8%) | 20(9.1%) | 82(37.3%) | 81(36.8%) | 33(15%) |
| 7 | I set up my learning goals. | 2(0.9%) | 8(3.6%) | 69(31.4%) | 100(45.5%) | 41(18.6%) |
| 8 | I have higher expectations for my learning performance. | 0(0%) | 1(0.5%) | 30(13.6%) | 106(48.2%) | 83(37.7%) |
| 9 | I can direct my own learning progress. | 1(0.5%) | 3(1.4%) | 65(29.5%) | 103(46.8%) | 48(21.8%) |
| 10 | I am not distracted by other online activities when learning online (instant messages, internet surfing). | 14(6.4%) | 58(25.5%) | 71(32.3%) | 56(25.5%) | 23(10.5%) |
| 11 | I repeated the online instructional materials on the basis of my needs. | 1(0.5%) | 12(5.5%) | 79(35.9%) | 89(40.5%) | 39(17.7%) |
| 12 | I am open to new ideas. | 0(0%) | 9(4.1%) | 60(27.3%) | 96(43.6%) | 55(25%) |
| 13 | I have motivation to learn. | 3(1.4%) | 9(4.1%) | 52(23.6%) | 105(47.7%) | 51(23.2%) |
| 14 | I improve from my mistakes. | 1(0.5%) | 3(1.4%) | 23(10.5%) | 99(45%) | 94(42.7%) |
| 15 | I like to share my ideas with others. | 1(0.5%) | 3(1.4%) | 54(24.5%) | 98(44.5%) | 64(29.1%) |
| 16 | I feel confident in using online tools (email, discussion) to effectively communicate with others. | 2(0.9%) | 10(4.5%) | 46(20.9%) | 96(43.6%) | 66(30%) |
| 17 | I feel confident in expressing myself (emotions and humor) through text. | 3(1.4%) | 14(6.4%) | 56(25.5%) | 93(42.3%) | 54(24.5%) |
| 18 | I feel confident in posting questions in online discussions. | 2(0.9%) | 26(11.8%) | 87(39.5%) | 70(31.8%) | 35(15.9%) |

Statements 1, 2 and 3 on the questionnaire were included in the first online learning readiness dimension, namely Computer/Internet Self-Efficacy. After statement 1, 2, 3 was calculated, the result of this study show that the highest percentage of 51% students stated “strongly agree”, 48% students stated “agree”, only 1% students stated “neutral” and there were no students who stated “disagree” and "strongly disagree". So it can be concluded that undergraduate students show a positive response in this dimension. That means they have very high self-readiness in Computer/Internet Efficacy for online learning. Here was the diagram of the result of data.

**Picture 1: the result of Computer Self-Efficacy**

Statements 4, 5, 6, 7 and 8 on the questionnaire are included in the second online learning readiness dimension, namely Self-Directed Learning. After statement 4, 5, 6, 7, 8 was calculated, the result of this study show that the highest percentage of 57% students stated “agree”, 38% students stated “strongly agree”, only 4% students stated “neutral”, while a students stated “disagree” and there were no students who stated "strongly disagree". So it can be concluded that undergraduate students show a positive response in this dimension. That means in the dimension of Self-directed Learning they have readiness in online learning. Here was the diagram of the result of data.

**Picture 2: the result of Self-directed Learning**

Statements 9, 10 and 11 on the questionnaire are included in the third online learning readiness dimension, namely Learner Control. After statement 9, 10 and 11 was calculated, the result of this study show that the highest percentage of 53% students stated “agree”, 30% students stated “neutral”, 17% students stated “strongly agree”, while 1% students stated “disagree” and there were no students who stated "strongly disagree". So it can be concluded that students’ answer on this dimension were very diverse. A lot of them have readiness in learner control, however, there were still some students who were unsure about their readiness in the dimension of learner control. Here was the diagram of the result of data.

**Picture 3: the result of Learner Control**

Statements 12, 13, 14 and 15 in the questionnaire are included in the fourth online learning readiness dimension, namely Motivation for Learning. After statement 12, 13, 14 and 15 was calculated, the result of this study show that the highest percentage of 52% students stated “agree”, 40% students stated “strongly agree”, 7% students stated “neutral”, while only a students stated “disagree” and there were no students who stated and "strongly disagree". So it can be concluded that undergraduate students show a positive response in this dimension. That means they have very high self-readiness for online learning in the dimension of Motivation for Learning. Here was the diagram of the result of data.

**Picture 4: the result of Motivation for Learning**

Statements 16, 17 and 18 in the questionnaire are included in the last online learning readiness dimension, namely Online Communication Self-Efficacy. After statement 16, 17 and 18 was calculated, the result of this study show that the highest percentage of 48% students stated “agree”, 29% students stated “strongly agree”, 23% students stated “neutral”, and there were no students who stated “disagree” and "strongly disagree”. So it can be concluded that students’ answer on this dimension were diverse. A lot of them have readiness in online communication, however, there were still a few students who were unsure about their readiness in the dimension of online communication self-efficacy. Here was the diagram of the result of data.

**Picture 5: the result of Online Communication Self-Efficacy**

**In-depth Interview**

In this section, the interview questions were related to the 5 dimensions of online learning readiness as in the questionnaire conducted to find deeper information from the data obtained from the questionnaires. Furthermore, this interview was conducted to find out suggestions from students concerning the improvement of online learning readiness.

Based on the results obtained for the Computer/Internet Self-Efficacy, students showed the highest readiness in online learning. Students felt very ready and confident in using computers and the internet during online learning since they were used to operating computer and applying the internet in daily activities. This was supported by Chung et al., (2020) which stated that nowadays, students were proficient in using technology since this digital era was already rich in technological advances. However, several obstacles were often experienced, especially for students who lived in rural areas with limited facilities such as unstable internet connections and sudden damage to the laptop during online learning.

Next, in the dimension of Self-directed Learning, students showed their readiness in online learning. They made their own lesson plans and were able to solve their learning problems in various ways, such as repeating learning materials, taking material notes, and discussing with their friends. Even though they often found it difficult to manage their study time during online learning, they still try to do learning optimally. Serttaş & Kasabalı, (2020) stated that self-directed learning as learning that requires students to find the right strategies to support their learning needs. That means students of the University of Muhammadiyah Prof. Dr. Hamka can find their respective learning strategies according to their needs and goals in online learning.

In the dimension of Learner Control, students showed that they were unsure in online learning. They can direct their own learning progress by repeating the learning material that has been learned to keep achieving the target in learning. However, most of them found it difficult to control themselves from interference from other online activities such as notification from others social media during online learning. They used others social media when online learning takes place. It caused them to lose focus on learning. In his research, Chung et al., (2020) also got similar results. In this dimension, the results of their research show that Learner Control has the lowest average among the other five dimensions. Therefore, to overcome these problems and stay focused during online learning, they did several effective ways such as turning off notifications from others social media, keeping their smartphones out of reach and participating in online learning using laptops.

Then, in the dimension of Motivation for Learning, students of showed the higher readiness in online learning. They realized that the implementation of online learning during the Covid-19 pandemic requires high self-motivation to learn. Vasilevska et al., (2017) stated that high motivation is a driving force for students to achieve their learning goals. Therefore, the things they can do to motivate their self in online learning by looking at the struggles of their parents and their goals to complete education by getting maximum results or according to the target achievement. So that, it can be concluded that motivation was the most important factor in students' readiness to online learning.

Last, in the dimension of Online Communication Self-Efficacy, students showed their readiness in online learning and felt confidence to communicate online. They also stated that communicating online can also minimize making mistakes in speaking due to nervousness. Chung et al., (2020) argued that students who had high online communication self-efficacy have the ability to express themselves in writing rather than speaking. However, some of them also thought that in terms of convenience, they still more comfortable communicating offline to minimize misunderstandings and tried their courage to speak properly and correctly.

Furthermore, students provided suggestions concerning the improvement of online learning readiness. They expect effective and interesting learning as accompanied by games and fun videos related to learning materials. They expect all educators to provide detailed and easy-to-understand material explanations and be able to master the use of technology in order to improve the quality of the online learning media itself. In addition, there was a need for communication and collaboration between students and lecturers, so online learning will be easier to implement. They also hope that the internet quota can be evenly distributed to rural areas since for students who living in rural areas will get more obstacles than students living in big cities.

**Conclusion**

Based on the results of the research and discussion that have been described above, it can be concluded that undergraduate students at the University of Muhammadiyah Prof. Dr. Hamka has readiness in implementing online learning with some differents variations in each dimension. It showed that undergraduate students’ readiness was high in the dimensions of Computer/Internet Self-Efficacy and Motivation for Learning. Furthermore, the dimensions of Self-Directed Learning, Learner Control and Online Communication Self-Efficacy showed that undergraduate students’ readiness were moderate.

Although many students already have online learning readiness, there were still some students who showed their doubts during the implementation of online learning. There were several obstacles that they experienced during online learning, such as an unstable internet connection, especially for students who lived in rural areas with limited facilities, which was one of the obstacles to the implementation of online learning. In addition, most of them also need help in managing their study time independently during online learning. They also felt disturbed by other online activities such as notifications from other social media during online learning. Then, in terms of communicating, they had high confidence to communicate online during online learning, but in some cases they still felt more comfortable if they can communicate directly or offline to minimize misunderstandings.

Therefore, the researcher recommends several suggestions for consideration and thoughts in the implementation of online learning. The first suggestion is to prepare for the quality of online learning more maturely. Not only the learning media, but also students and lecturers also have to improve their quality so that the implementation of online learning in the future can run optimally.

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