

# Education Quarterly Reviews

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**Farhan, F. S., & Lismandasari. (2022). The Impact of Online Learning Process During the Covid 19 Pandemic: Possibly Leading to Learning Loss? *Education Quarterly Reviews*, 5(4), 290-296.**

ISSN 2621-5799

DOI: 10.31014/aior.1993.05.04.591

The online version of this article can be found at:  
**<https://www.asianinstituteofresearch.org/>**

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Published by:  
The Asian Institute of Research

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# The Impact of Online Learning Process During the Covid 19 Pandemic: Possibly Leading to Learning Loss?

Fanny Septiani Farhan<sup>1</sup>, Lismandasari<sup>1</sup>

<sup>1</sup> Faculty of Medicine and Health, Universitas Muhammadiyah Jakarta, Tangerang, Indonesia

Correspondence: Fanny Septiani Farhan, Faculty of Medicine and Health, Universitas Muhammadiyah Jakarta, Tangerang, Indonesia. E-mail: fannyfarhan@umj.ac.id

## Abstract

The COVID-19 pandemic has a risk of causing a learning loss in the education sector. If this condition continues, it may lead to the declining in the ability and the quality of students. This research aims to evaluate the risk of learning loss for Medical students in online learning process during the COVID-19 pandemic. This research is a quantitative-descriptive research with a total sampling of 172 students from Medical Program. The primary data is obtained by filling out a questionnaire through a validated Google form. The results of the research show that there is a decrease in the student's understanding during the problem based learning activities as much as 29.6%. The Clinical skill lab activities are decreased by 62.8%. The change from offline learning to online learning has caused the decrease in these activities that resulting in an ineffective learning, thus leading to the risk of learning loss. If the condition continues, learning loss may occur as a result of online learning during the Covid 19 pandemic.

**Keywords:** Learning Loss, Covid 19, Online Learning

## 1. Introduction

Medical learning consists of theoretical abilities and clinical skills, which the theoretical abilities are applied by using a problem-based learning (PBL) approach that stimulates interest and critical thinking (Sari et al., 2016). After PBL activity in small groups, the final activity is plenary discussion to evaluate the understanding of PBL process. The Clinical skill lab (CSL) is a learning concept through problems from various integrated disciplines concerning cases found in health services through simulation scenarios, which will eventually be tested as an Objective-structured Clinical Examination (OSCE) competency test (Anas & Utama, 2021). The required competencies that must be achieved by medical students become the biggest challenges during online learning, which it depends and is closely related to the instructor's experience in teaching, interaction, technical resources, and infrastructure. Hence, the barriers in technology, finance, institutions, educators, and students are very important in determining the success or the failure of the online learning implementation in medical education (Al-Balas et al., 2020).

The long-existing obstacles in learning process will lead to a state of learning loss (Kaffenberger, 2021). Learning loss can be defined as the ineffectiveness of learning process which resulting in the loss of specific and general knowledge as well as skills, a decline in academic achievement, and most often due to an extended gap or discontinuity in education (Li et al., 2020; The Glossary of Educational Reform, 2013). Several factors affecting learning loss are including cognitive development and abilities, which the beginners or the younger classes are more pronely affected due to the inability to learn independently, the personal profiles such as parents' education and occupation, the location of residence, and the school proportion of indigenous students (Donnelly & Patrinos, 2021).

Ineffectiveness in the learning process will result in the lack of knowledge and skills, thus if it lasts for a long time, it will bring an impact toward the competencies and the quality of the developing human resources during the COVID-19 pandemic (Andriani et al., 2021; Assiddiqi & Soeryanto, 2021; Engzell et al., 2021; Zakharova et al., 2021). Online learning requires a focus on developing, providing teaching materials, content, and the role of education as a mediator, facilitator, and motivator, thus learning activities can run optimally (Kurniawan & Budiyo, 2021). Based on the explanation above, the authors are interested in raising this issue as a research material, especially regarding the risk depiction of learning loss on students of PSKd FKK UMJ in online learning during the COVID-19 pandemic.

## **2. Method**

The type of this research is descriptive-quantitative. This research was conducted at the Faculty of Medicine, Universitas Muhammadiyah Jakarta, in June - December 2021. We compare students opinion about the process of problem based learning and Clinical Skills Lab activities before and during the Covid 19 pandemic. Before pandemic Covid 19, student learn PBL and CSL by face-to-face method (offline), but during the pandemic, the whole process swich to online. The instrument using a questionnaire on learning loss, which previously had been tested for its validity and reliability, as well as scoring by using a Likert scale 1-3. To evaluate the PBL process, we ask about student understanding of plenary discussion, student ability to analyze skills and the quality of discussion. To evaluate the skills lab process, we ask about the facilities, and student understanding about skills procedure. The respondents of this research are students of PSKd FKK UMJ class 2018 and 2019 with a total of 172 students. This research has obtained a research ethics approval with the number 216/PE/KE/FKK-UMJ/X/2021.

## **3. Results**

The questionnaire on the risk of learning loss, which is filled out by the research respondents, compares the offline and online learning conditions in lectures, problem based learning, and CSL activities.

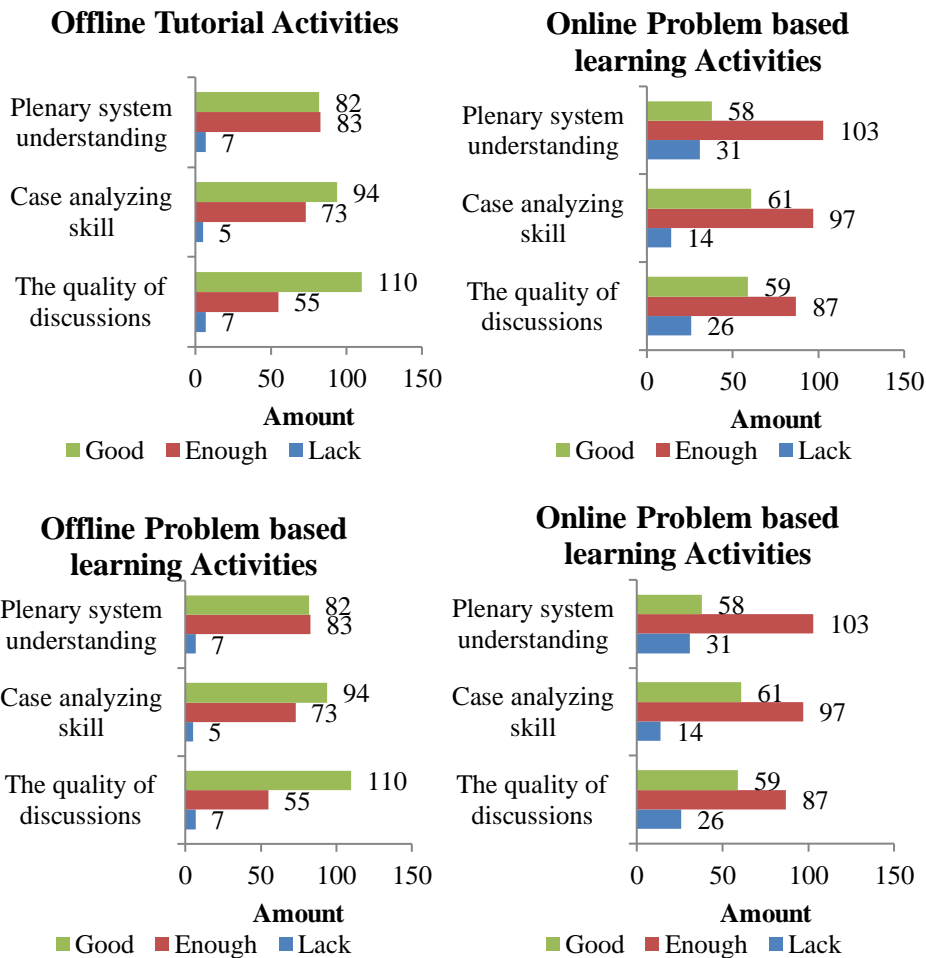
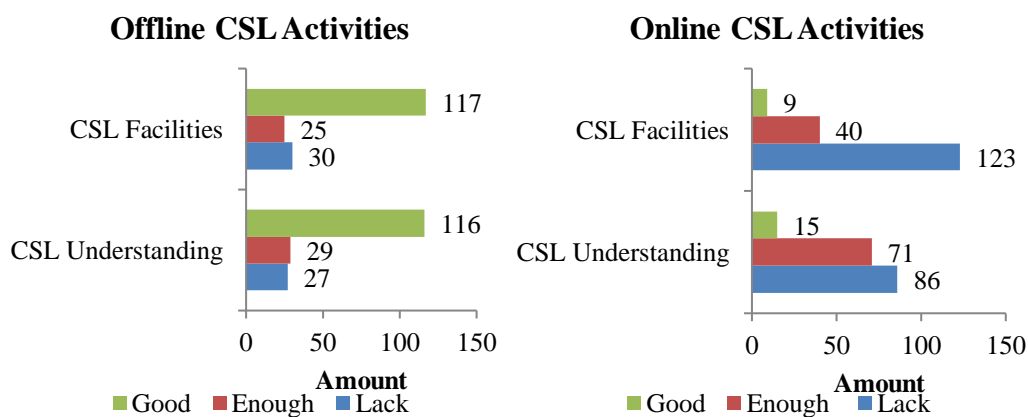


Figure 1: The risk of learning loss in Problem based learning Activities

Figure 1 shows that in offline learning, students are able to follow the problem based learning activities well, the quality of discussions is classified as good (64%), able to analyze cases well (54.7%), and able to understand the plenary well (47.7%). However during online learning, the discussion quality is decreased by 29.6%, the plenary understanding by 25.6%, and the ability to analyze cases by 19.2%.



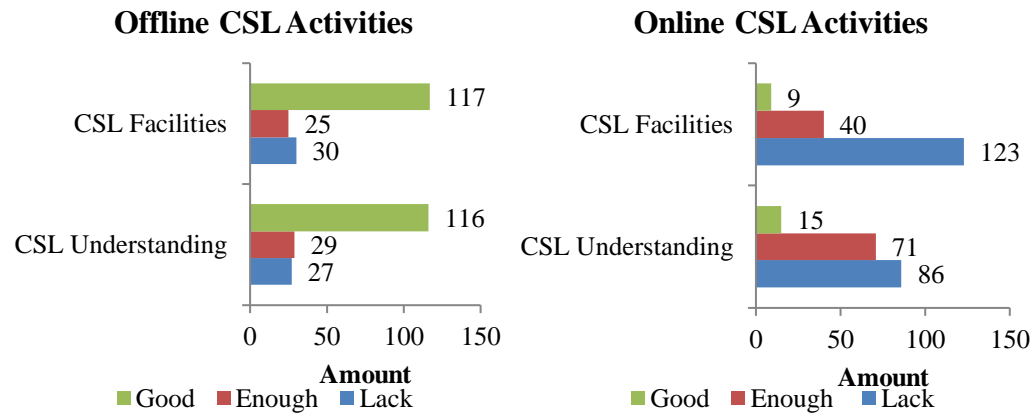


Figure 2: The risk of learning loss in Clinical Skill lab activities

Figure 2. shows that during offline learning, students are able to understand CSL well (67.4%), however as they conduct the online learning, there is a decrease in CSL understanding as much as 58.7%. Furthermore, the students feel that the CSL facilities in offline learning are good (68%), yet in online learning, it is decreased up to 62.8%.

#### 4. Discussion

Based on the results of this research, medical students of FKK UMJ feel that the problem based learning activities including the quality of discussions, the ability to analyze cases, and the understanding of plenary discussion, have been decreased. This can be seen from the change in scores between offline and online learnings, from the majority choosing 'good' to be 'lack'. The problem based learning discussions itself is usually conducted online of which students can turn off the camera or microphone and then leave it to do other activities until they go to sleep, or may open it if they want to participate more (Alawamleh & Al-twait, 2020; Rondonuwu et al., 2021).

The decrease in student responses regarding this problem based learning activity can be caused by internal factors from students themselves whom lack of curiosity, little prior knowledge, lack of critical thinking, bad mood, lack of confidence, and poor time management, as well as external factors such as confusing scenarios, predictable scenarios, undeveloped scenarios from prior knowledge, personality of tutors and group members, busy schedules, low motivation of group members, problem based learning assessments, and uninteresting case discussions (Zaluchu, 2017).

According to the research by Izza et al. (2019), problem based learning discussions are related to the student academic achievement, which means that the higher the problem based learning discussion activity, the higher the student's final grade achievement (Izza et al., 2019). Tutors who guide the discussion well will also produce a good quality of learning (Alawamleh & Al-twait, 2020).

Based on the student responses, offline learning is considered as more effective than online learning because in offline learning, there are more interactions and discussions between tutors and students, thus the communication runs smoothly and the learning atmosphere is conducive (Mitasari et al., 2021). However actually, the ability to discuss and analyze cases in problem based learnings during the COVID-19 pandemic can be maximized. According to Ali Ghufroon in Haryati & Sukarno's research (2021), it can be accomplished by applying "4C", referring to the critical thinking by getting used to discussing and reading continuously, creativity by finding and developing new and existing ideas, communication to avoid misunderstandings, and collaboration by cooperating with groups, universities, lecturers, and students.

In the plenary discussion as the final problem based learning meeting activity in a large class that concludes the problem from the discussion of each problem based learning case, students also receive a lot of guidance from experts on the cases they discussed from the previous small group problem based learning. Problem based learning

activities that based on the problem-based learning are very important in Medical Education to train the critical thinking skills of the students (Sari et al., 2016).

The research conducted by Rayhana & Alwi (2021) on the students of FKK UMJ class 2018 discovers that the value of problem based learning activities in offline and online learnings shows differences, which the value of the Tropical Medicine System offline problem based learning is better than the Urogenital System online problem based learning. This finding supports the results of this research that online learning give an effect toward the problem based learning activities. Offline learning is superior as it increases curiosity, the sources of supporting reading materials are available in the library, the tutors directly supervise the implementation of problem based learnings, and the presentation materials are already provided directly through flip charts that make students more prepared, rather than through PowerPoint by reading notes during online learning (Rayhana & Alwi, 2021).

Hence, it can be concluded that the problem based learning activities during online learning including the quality of discussions, the ability to analyze cases, and the understanding of plenary system, experience a decline compared to the offline learning which is at risk of learning loss marked by the decrease in the value of the problem based learning.

Based on the data obtained from the questionnaire, it is found that the CSL activities of students from FKK UMJ, including the understanding of CSL materials and the CSL facilities, during online learning indicate a lack of value compared to offline learning. CSL training activities during the COVID-19 pandemic are carried out through video, yet this is less effective, thus students have no enough understanding since they only imagine or use available tools only compared to the direct interaction with friends or lecturers (Rodonuwu et al., 2021). Moreover, the instructor cannot directly assess or see the skill's lab taught to the students based on psychomotoric skills. Hence, if it is not practiced directly, these skills will not develop (Sukraandini & Candrawati, 2021).

The research conducted by Fithriyah et al. (2021) on medical students of UNISMA discovers that the level of student readiness for CSL activities is low. This is for the reason that CSL activities require facilities, special tools, as well as valid and reliable interactions, thus online learning makes it difficult for students to reach the unconscious competent phase (Anas & Utama, 2021).

Clinical skills that must be achieved by students require optimal training during education, both in terms of quantity and quality (Hardisman & Yulistini, 2013). However, due to the COVID-19 pandemic, all CSL activities are held online due to the policy in preventing the spread of COVID-19. This makes students have to optimize their abilities with the online learning implementation (Anas & Utama, 2021). Pre-recorded teaching videos can be an alternative to online learning since students can repeat the video if they do not understand the skills conveyed (Nastiti et al., 2020). In line with the research of Waluyo & Solikah (2021), the use of pre-recorded teaching videos in CSL during online learning is more effective than using modules only. This is because media in the form of video is more motivating than in the form of visuals only.

The use of teaching videos is one alternative that proven to be quite effective in online learning, however a combination with blended learning may be needed to produce a good performance (Anas & Utama, 2021). The risk of learning loss during the COVID-19 pandemic is the impact of long delays in the learning process (Pratiwi, 2021). Online learning that has been going on for a long time brings an impact toward the students, including their ability and productivity (Argahani, 2020).

As conclusion, there is a decrease in the student's understanding regarding the learning materials in the problem based learning activities and the clinical skill lab activities. If this occurs continuously, it may lead to the risk of learning loss. This study gives important information about the impact of Covid 19 pandemic on educational sectors.

### **Acknowledgments**

We would like to thank Universitas Muhammadiyah Jakarta, who funds this publication.

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