



## Learning loss: Impact of the COVID-19 pandemic on the students' psychosocial condition

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### Abstract

Learning loss occurs when students lose knowledge and skills generally or specifically or there is an academic impediment due to prolonged gaps or the discontinuation of the educational process. This study aims to examine learning loss during and after the COVID-19 pandemic and its psychological impact on students. Qualitative research was carried out comprehensively in schools in Indonesia by conducting interviews with teachers who were selected as the subjects of this research. The results of this study indicated that there was a learning loss during and after the COVID-19 pandemic and had an impact on students' psychological conditions in learning. Therefore, this research implies that teachers must consider the conditions of student learning loss and always try to find the right solution to improve students' abilities to reduce the learning loss.

**Keywords:** Academic achievement, COVID-19, Impact, Learning loss, Online learning, Psychological condition.

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### **Contribution of this paper to the literature**

The originality of this study lies in its specific focus on investigating learning loss during and after the COVID-19 pandemic and its psychological impact on students. Learning loss was caused by the sudden implementation of online learning throughout Indonesian regions.

## **1. Introduction**

Numerous things have changed due to COVID -19 including education. The spread of the COVID-19 has provided challenges in every sector especially in education. In order to prevent the spread of the COVID- 19 virus in Indonesia, the government needs to take action by urging the public to carry out social distancing movements. Social distancing movements are designed to reduce the interaction of people in the wider community (Abidah, Hidaayatullaah, Simamora, Fehabutar, & Mutakinati, 2020). The implementation of social distancing during the COVID -19 pandemic has hindered the implementation of educational activities. This has resulted in an educational revolution in Indonesia which is marked by the shift from the face-to-face learning system to online learning. This resulted in the closure of schools throughout Indonesia and encouraged all education elements to conduct online learning including at the tertiary level (Putra et al., 2020).

Online learning is a new challenge for education. Implementing online education is still far from ideal because many obstacles still exist (Keskin & Yurdugül, 2020). These obstacles are also a challenge in implementing online learning considering that the implementation of online learning is necessary for educational activities during the COVID-19 pandemic (Rahayu & Wirza, 2020). Obstacles to distance learning have three group: obstacles related to learning activities, obstacles related to technology and personal and environmental constraints of students (Putra et al., 2020). The online learning policy is a form of adaptation to ensure education during the pandemic. One of the impacts of the implementation of online learning is the learning loss. The spread of COVID-19 has provided challenges for educational institutions. Students transfer from traditional classrooms to online classrooms. It tests basic ideas about concentration, the role of technology and the way students, teachers and parents interact throughout teaching and learning activities (Widiastuti, Mantra, Sukoco, & Santosa, 2021) which affect the conditions of the learning carried out. Students in Indonesia experience learning loss especially those who come from marginalized circles such as those who live in remote areas (Widiastuti, Mantra, & Sukoco, 2020).

Several problems arise during online learning. The unpreparedness of students in learning, the uneven distribution of supporting infrastructure and the ability of teachers and parents who are 'technological stutters' (Kearns, 2012). All these problems make the student learning process difficult to implement optimally and a hindrance for students' self-regulated learning (Al Fadda, 2019). Learning loss occurs due to the lack of quality and facilities for online learning as well as the ability to use online learning systems (Donnelly & Patrinos, 2022). Therefore, it ultimately has an impact on decreasing learning achievement. Learning loss is the loss of basic competencies that students should learn. Moreover, the cause of learning loss is the implementation of an emergency curriculum (Harmey & Moss, 2021). The important role of parental assistance during online learning for children is very necessary but the competence of parents does not fully support this condition.

Many parents complain about online learning as they help their children with their assignments and always accompany them to study at home. On the other hand, parents also continue to work outside the home where appropriate assistance is expected to minimize children's learning loss risk. Parents faced many obstacles during the COVID-19 pandemic such as a lack of time and skills regarding education (History, 2020). During the COVID-19 pandemic, parental assistance to children is carried out to monitor assignments and learning. Considering various problems faced by the students during the online learning, learning loss becomes a serious problem for all educators and parents. The occurrence of this learning loss may have a real impact on the quality of education (Engzell, Frey, & Verhagen, 2021). It is still a doubt for most Indonesian educators if only online learning is continually conducted in the learning process because most Indonesian students still prefer face-to-face learning (Bartholo, Koslinski, Tymms, & De Castro, 2022). When face-to-face learning is usually carried out, they assume that they are directly cared for or supervised, so that the level of desire to learn is relatively higher. However, with the current conditions of the pandemic, learning has decreased (Widiastuti et al., 2021). Face-to-face learning is considered more effective compared to online learning because teachers have more control over it (Widiastuti & Saukah, 2017). Moreover, limited facilities owned by the schools also made online learning difficult to conduct. Consequently, online learning caused the students' learning loss and also made them demotivated to learn. Moreover, the burden that must be carried by the family during online learning is also considered sufficiently burdensome. It cannot be denied that not all learning can be adapted to an online learning environment (Kebritchi, Lipschuetz, & Santiague, 2017). Due to limited facilities, children who come from middle or lower income families have fewer learning opportunities compared to other groups of children. This learning achievement gap causes students to not master the competencies needed because they are unable to follow the material or lose basic competencies that should be learned (Fitriani, Bandung, & Kadri, 2020). One of the threats is the inability of fresh graduates or educational graduates to face the world of work or even get a suitable job. This is due to the fact that practical competence which is the application of the knowledge they learn cannot be obtained. Therefore, it can be said that this learning loss will affect the quality of human resources in the future.

Many studies have been conducted related to the impact of the COVID-19 pandemic which mainly found that students may experience learning loss (Cakiroglu, Erdogdu, Kokoc, & Atabay, 2017; Liguori & Winkler, 2020; Rahayu & Wirza, 2020; Widiastuti, Murtini, & Anto, 2022). This study is being conducted to investigate the impact of the COVID-19 pandemic on students' learning. The findings of this study can be used as teaching guidance in the future if a similar phenomenon occurs.

## **2. Literature Review**

Online learning needs the technological ability to efficiently carry out teaching and learning processes as well as assessment practices. Online learning is a sudden teaching activity and assessment systems must be conducted by the teachers. Teachers are required to find an effective strategy to teach and conduct classroom assessment that complies with the characteristics of appropriate assessment implementation (Gamage, Silva, & Gunawardhana,

2020). There are various definitions concerning online learning provided by various linguists and researchers. Mantra, Indrawati, Suwandi, Sukanadi, and Laksmi (2021) define online learning as learning activities that use multimedia technology such as virtual classes, CD-ROMs, video streaming, voice messages, email and telephone conferences, animated online text and online video streaming. Moreover, Keskin and Yurdugül (2020) define online learning as a learning system that is carried out not face-to-face but that uses a platform that can help the teaching and learning process even though it is distanced. The characteristics of online learning are interactivity, independence, accessibility and enrichment (Liguori & Winkler, 2020).

Furthermore, Gaytan and McEwen (2007); Widiastuti, Krismayani, Murtini, and Nyoman (2022) describe that there are many strategies that can be implemented in online learning. The strategies used by the teachers certainly may help students learn. There are several online learning methods: a. E-Learning: a technology-based distance learning process that uses the internet network and also an instruction or learning process that involves the use of electronic equipment in creating, assisting development, delivering, assessing and facilitating the teaching and learning process where students are the centre and carried out interactively anytime and anywhere, b. Mobile Learning: learning media that uses cell phone technology to make it easier for students to master the material anywhere and anytime with lighter equipment not just relying on laptops that are difficult to carry and even heavy. The development of learning media using cell phones is intended to create mobile learning that is intended for all cellular phones with the android platform. Quantum learning is learning done by designing a fun learning process that is tailored to the level of student development. These learning methods become important elements of successful teaching and directly affect student success in learning (Handayani, 2020). A study conducted by Pustikasari and Fitriyanti (2021) with the title "Stress and Zoom Fatigue on Students During Online Learning during the COVID-19 Pandemic" found that when online learning was carried out, a significant relationship was found between learning media and fatigue and stress, a significant relationship between pain during online learning and learning duration with fatigue and a significant relationship between learning duration and stress.

Another study in the form of a literature review by Yuliansyah and Ayu (2021) entitled "The Implementation of Project-Based Assignment in Online Learning During COVID-19" found that online learning had obstacles such as limited internet quotas and still unfamiliar staff. Online learning facilitates students learning of concepts in depth and can improve learning outcomes.

### 3. Materials and Methods

This research is a type of qualitative research with a phenomenological approach. The research investigated the school teachers in Indonesia to reveal the real phenomena that occurred in the classroom. The teachers who participated in this study were randomly selected based on the specified criteria. Six participants take part. In-depth interviews were conducted to obtain data related to the impact of online learning during the COVID-19 pandemic and the post-COVID-19 pandemic. Interviews were conducted according to an agreement with participants to obtain real information related to the learning loss faced by students. The data collected in the form of interviews was then transcribed and coded according to the specified categories. Furthermore, data analysis is carried out through the data reduction stage with data presentation and the last step is drawing conclusions after the data has been interpreted. Data reduction was done by classifying important statements from participants and then entering them into the same theme category. Furthermore, data validity was carried out through triangulation by giving the same questions to research participants. The data that has been analysed is presented descriptively.

### 4. Results

The data for this study were collected through interviews conducted with the school teachers who were the participants in this study. The results of the interviews were carefully transcribed and put into the right category. The results of this study could be presented as follows:

The data for this study were in the form of interview transcriptions. The transcriptions were first coded according to their specified categories. After all the data were put in the right categories, data reduction was carried out to select the appropriate data for the purpose of this study. The selected excerpts of the interviews were then analyzed to establish the results of the study. Based on the results of interviews, it is known that there are several statements related to learning loss obtained due to the impact of the COVID-19 pandemic and the post-COVID-19 pandemic. The COVID-19 pandemic has a significant impact on student psychology and their learning. Students stated that their psychological condition was very disturbed due to the COVID-19 pandemic.

*"I was really scared at the time. Many people have died from the coronavirus. Feelings of worry that are too big make me scared and unable to focus on learning."*

*"I was really worried at that time. I always feel death approaching. Moreover, not being able to communicate directly with the lecturers made me and my friends unsure of what we understood about the material explained by the lecturer in online classes."*

The statement stated that students felt a great fear of the threat of the COVID-19 virus. These feelings affected their psychology. This has an impact on learning activities carried out online. Students cannot carry out their learning well. Besides, the learning process is also influenced by the conditions of students who are worried about their health. Students are more focused on health so they have a reduced ability to focus on learning. The following are the results of interviews conducted by students:

*"I was more focused on my health condition during the pandemic. I don't want to think seriously about it because it will greatly affect our immunity. Moreover, I have also experienced being exposed to the COVID-19 virus which shocked me and I didn't want to think about anything other than health including my college assignments."*

The impact of health concerns that make students unable to study well resulting in learning loss. In this case, students cannot follow the lesson well. High social anxiety has an impact on the lack of concentration and seriousness of students in learning. Learning loss that occurred during the pandemic was caused by high student concerns about COVID-19 and decreased learning abilities due to a lack of understanding and guidance carried out directly by lecturers in the classroom. After the COVID-19 pandemic, learning loss has not been completely

overcome. Another problem that arises is the reluctance of students to study directly on campus which makes them less enthusiastic to come to class to learn directly. Studying online has been carried out for approximately two years which has made them enjoy online learning even though they realize that as a result, they have lost the true meaning of learning.

*“The problem now is that I am used to online lectures and can do many things from home. There is no need to come to campus. Now I have to start over with all my previous activities, coming to class to do face-to-face activities.”*

*“There is a feeling of laziness and reluctance that I feel when I attend lectures directly in class. I am comfortable studying online but with offline lectures like now, I am too lazy to come to class.”*

Learning loss was also found after the COVID-19 pandemic. Students were reluctant to start a new life by learning directly in class. This is because students are used to online learning activities. Table 1 explains the impact of the learning carried out and the psychological and social impacts students face during and after the COVID-19 pandemic.

**Table 1.** The psychological and social impacts the students face during and after the COVID-19 pandemic.

Aspect	The impact of the COVID-19 pandemic	The impact of the post Covid-19 pandemic
Learning	Learning is done online.	Learning is done offline.
	Students have not been able to follow online learning using the learning platform properly.	Students are used to learning online, so they feel reluctant to start offline learning activities on campus.
	Students are not able to follow the learning optimally.	Learning aversion affects learning activities directly.
	The material obtained is not well understood.	The material obtained is not well understood comprehensively.
	Students are not familiar with the learning media used.	Students are not sufficiently familiar with the learning media used.
Psychology	The pressure for maximum and serious learning has an impact on decreasing the body's immunity and health.	Resulting in a new shock where students have to start a new life by coming to campus and studying directly.
	The fear of the impact of the virus affects the seriousness of student learning.	The uncomfortable feeling of starting a new life with offline learning.
	Feelings of depression and fear of the dangers of a very deadly virus.	Time management is starting to be conditioned to carry out learning in class.

Based on the data presented in Table 1, it is known that learning loss can be divided into 2 categories: learning loss during the pandemic and learning loss after the COVID-19 pandemic.

## 5. Helpful Hints

In this section, the learning loss during the pandemic and the learning loss after the COVID-19 pandemic are discussed briefly and elaboratively.

### 5.1. Learning Loss during the COVID-19 Pandemic

Learning loss describes the loss of learning in schools due to not implementing the face-to-face learning process. During the COVID-19 pandemic, two years ago, schools seemed to have lost their way of organizing the implementation of student learning. As a result, the government implements a policy of learning from home through an online learning system. In general, independent learning provides a wide space for students to freely access knowledge from various learning sources outside the classroom through the internet and online media (Widiastuti et al., 2021) so that the teacher is no longer the only source of learning. The formal curriculum no longer limits the concept of independent learning but students and teachers must be creative to gain knowledge. Students are really trained to be independent (Qolbiyah & Ismail, 2022).

If the independent learning policy has been effective, the learning process during a pandemic using an online system should not be a problem. In fact, teachers, students and parents often complain that the online learning process is ineffective and disorienting (Ma'ruf, Marisda, & Handayani, 2019). Some research on the effectiveness of online learning shows that there are many obstacles in the online learning process (Jost, Jossen, Rothen, & Martarelli, 2021). Hence, it is ineffective in providing students with optimal knowledge, attitudes and skills. Schools are required to facilitate positive and educational interactions between teachers and students and between students and other students. In the online learning process, this activity has been taken away, so students are completely alienated from their educational environment (Utami, Suyatna, & Distrik, 2020). The learning process carried out in uncomfortable conditions will never be effective. Furthermore, this will affect the psychology of students which has an impact on their motivation and interest in learning. One aspect that is very important but missing in education during this pandemic is character education (Brata, Mantra, Rai, & Wartha, 2021).

Students can no longer see and practice polite behaviour, cooperate with friends or be responsible for tasks at school. One aspect that is very important but missing in education during this pandemic is character education (affective domain). However, referring to some recent research, it turns out that the online learning system shows an increase in pseudo-learning outcomes (pseudo-evaluation). On the one hand, the value of learning outcomes in the form of scores tends to increase but on the other hand, the mastery of students' competencies towards the subject matter tends to be low (Widiastuti et al., 2021). This is because students do not perform the test optimally. They can freely access materials or answers through Google so the results obtained cannot measure students' abilities though assessment is very important to know students' learning abilities. This causes an incompatibility between the student's ability and the score obtained (Widiastuti, Mukminatien, Prayogo, & Irawati, 2020). Assessment not only aims to determine student learning outcomes but also to obtain information related to learning problems faced by students (Widiastuti, 2018).

### 5.2. Learning Loss after the COVID-19 Pandemic

As the pandemic spreads, its impact on education becomes concerning. When all the webinars are lulled by the discourse on handling education in health emergencies, the emergency situation for the quality of education actually happened much earlier maybe long before the COVID -19 outbreak (Mantra, Handayani, & Pramawati,

2021). With studying at home, children are also stressed and helpless for a long time so learning loss arises as a manifestation of the loss of children's opportunities to learn due to the demands of the applicable standards and curriculum. As a result, there is a deficit of competency as a manifestation of the quality of education in the country which is getting worse. During the pandemic, students tend to learn by themselves to obtain the objectives of learning (Ariebowo, 2021). Offline learning was carried out after the COVID-19 pandemic impacted learning loss in the education sector. Online learning activities have turned into offline learning resulting in students needed more motivation to come to class to learn. This reduces the abilities and learning activities of students. Students must begin to adjust to new conditions by coming to campus to attend lectures. They must learn to re-organize study time in class which requires major adjustments for the students to make during the pandemic (Gamage et al., 2020). Various learning problems arise during a pandemic; society is basically dynamic and will always experience changes. This means that the orientation of our education sooner or later must be based on technology and information (Suartama, Triwahyuni, & Suranata, 2022). So, in this context, the government is responsible for providing sustainable education and preparing adequate infrastructure to maintain the academic culture (Engzell et al., 2021). On the other hand, the cooperation of parents at home is very important. It is undeniable that a child tends to relax. This is indeed a challenge for parents because not all parents can effectively assist and discipline children in learning both at home and at school (Mantra, Budiningsih, Astuti, & Puspawati, 2021). Moreover, to optimize the educational adaptation process after the pandemic, collaboration from teachers, students, parents and the government is needed. Building a cooperative attitude during the recovery from the COVID-19 pandemic is not easy.

### 5.3. The Impact of Learning Loss on Student Psychosocial

To prevent the spread of COVID -19, learning is forced to be carried out at home. Educational policies in the form of online learning affect the psychological condition of students. Online learning using digital technology is a solution during a pandemic (Kearns, 2012). Online learning uses the internet network with its accessibility, connectivity, flexibility and ability to provide various learning interactions. This is due to the lack of knowledge of teachers and parents dealing with online learning. Educators are also not ready to implement technology in learning (Singh, Steele, & Singh, 2021). Stress and boredom can trigger learning loss. Mental pressure and stress experienced by students are caused by transitions in their lives. Everything that was originally done freely through face-to-face communication turned into social distancing which can cause high anxiety. Changes in the student learning environment that occur suddenly and are not properly conditioned cause stress (Putra et al., 2020). This results in a loss of interest in learning or student learning loss.

During the online learning process, teachers gave the students a number of tasks. Sometimes students are forced to do all the assignments even though they do not understand what is being made. Learning loss is a bad impact of the COVID-19 pandemic in the education sector and a big threat that can result in the loss of students' work ethic or enthusiasm for learning whether online or offline (Hasudungan & Ningsih, 2021). Several things cause learning loss to occur in education, namely: the academic pressure faced by students, the increased learning load and assignments given. This happens a lot because many educators prioritize assignments rather than face-to-face explanations (Han & Ellis, 2019). Learning loss is a condition in children that arises due to difficulties in the learning process. Furthermore, learning loss is interpreted as an imperfection in the learning process that takes place in school. In a broad sense, learning loss is generally caused by internal gaps in the student's education. Several factors contribute to a student's learning loss such as extended vacations, closed learning institutions, frequent school absences, school dropouts, health problems, ineffective learning and a variety of other conditions. Therefore, all education stakeholders should continually make improvements to overcome the learning loss by providing more quality education systems.

## 6. Conclusion

Learning loss is the loss of knowledge and skills in academic development that is usually caused by the cessation of the learning process in the world of education. Online learning has the potential to cause learning loss. Decreasing the learning achievement of children with special needs, children behave lazily as seen from the lack of time in collecting assignments, internet addiction and equitable access to learning thereby disturbing students' psychology. This study concludes that there are still many schools that cannot carry out remote learning effectively because the area where they live does not have internet access or not everyone can afford it. The challenge of learning loss is not only felt by students but also by teachers. Based on the results of the analysis that has been carried out, there is an imbalance between schools in the adaptation of the online learning system where some schools are said to have a higher risk of being affected by learning loss than other schools. The number of students experiencing learning loss is higher, namely in schools that have difficulty accessing the internet, especially those in remote areas.

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