

THE IMPACT OF THE APPLICATION OF ONLINE LEARNING SYSTEMS DURING THE COVID-19 PANDEMIC ON THE PSYCHOLOGICAL CONDITION AND LEARNING PERFORMANCE OF STUDENTS

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ABSTRACT

The application of online lectures as a lecture system implemented during the Covid-19 Pandemic is currently seen as a solution to comply with the PSBB policy and to maintain lectures that can continue in accordance with the lecture structure as stated in the Semester Learning Plan. It is undeniable, because of its sudden nature (without being preceded by socialization) there are many complaints. The purpose of this study is to describe the psychological condition of students in participating in online system learning in the Covid-19 pandemic situation and its effect on learning performance. The results of the study prove that there are significant differences in the psychological condition and learning performance of students between before and after the implementation of the online learning system during the Covid-19 pandemic. The measure of student stress after implementing online learning was significantly higher than the measure of stress. Similarly, there are significant differences in the measure of student learning performance between before and after the implementation of online learning during the Covid-19 pandemic.

Keywords: impact of online systems, psychological condition, learning performance

INTRODUCTION

The implementation of the "learning from home" strategy is the application of online system learning. The change from direct or face-to-face learning (given the term offline or offline) to an online system has both positive and negative impacts. The positive impact is that the implementation of online learning systems during the Covid-19 pandemic can accelerate education in the 4.0 era, in the sense that it can increase the use or use of advanced technology in the field of information in the field of education. It can be said that the Covid-19 pandemic has become a significant catalyst for the application of Technological Pedagogical Content Knowledge (TPACK) in the field of learning. TPACK is a learning framework that requires teachers to integrate technology and pedagogy in learning or into the learning environment (Mishra, et al, 2016). The application of online learning systems in universities at this time is very possible because almost all students generally have advanced technology equipment needed to carry out online learning activities, namely smartphones (smartphones) and / or laptops supported by the availability of internet networks.

Although the implementation of system learning from online has a positive impact on the application (and integration) of technology into learning, this change also has a negative impact that is psychological. Many students experience under stress in participating in online learning activities. Sources of pressure include lack of skills, network bondage, and a large task load. Many students are not used to using online learning systems, both fully online and blended.

Many students are not familiar and stutter when participating in online learning, especially if online learning is carried out through the UNESA vlearning platform. Many students are confused about using vlearning features and fail to connect. The availability and speed of internet network access also affects. In a pandemic situation, because all students have to study from home, a large number of students return to their hometowns. Not all students live in areas that are covered by internet networks or affordable but the signal appears to sink. This condition makes students often have to leave their residences to find other places that have internet networks. The massive, synchronous, and sudden use of the internet network during this pandemic also causes problems in implementing online learning because access activities are very slow. Communication activities, download access and upload often run slowly and even fail.

Various problems in online learning as stated theoretically have the potential to cause pressure. Many students feel stressed (depressed) because they fail or are late in access activities for connecting, downloading and uploading because they still stutter using online media platforms, unavailability of networks in their residence, and/or slow access. Allegedly, the stress experienced by students not only comes from difficulties or failure of access to the network, but also by learning load, especially those who perceive that the learning load given by the teacher is excessive or exceeds the weight of credits, or for those whose achievement motivation is relatively low. When the study load is too much or even just perceived too much, it causes students to use a lot of time to complete study tasks and their rest and recreation time is reduced. Of course, every student, including individual students, has another life outside of academic activities. Psychologically, when students have to compromise and use their personal time to study, they have the potential to experience boredom and and lose interest in learning. In the end, this situation makes them feel depressed (stressed) and this stress makes them lose focus and decreases their performance on academic tasks. As argued by Essel and Owusu (2017), the learning load increases in the sense that when learners have to perform tasks beyond what they can handle, they become frustrated and unable to focus and think clearly, and become confused and stressed because they do not have enough time to handle all learning tasks

Sun, et al. (2011) presented a number of research results that prove that learning load can be a significant source of pressure for students. Some of his research results state that learning is one of the most important sources of stress among learners worldwide and seems to be quite severe in Asian countries (Brown, Teufel, Birch, & Kancharla, 2006; Christie & MacMullin, 1998; Dodds & Lin, 1992; Gallagher & Millar, 1996; Huan, See, Ang, & Har, 2008; Tang & Westwood, 2007); Asian learners generally experience higher pressure than students on European soils because they have high academic load (Lee & Larson, 2000), low satisfaction with their academic performance, and high expectations (Crystal et al., 1994).

Why does Covid-19 have the potential to cause stress? As stated by Bhargava & Trivedi, (2018), stress is a condition of mental stress experienced by individuals when facing problems threatening environmental and social well-being that cause so many diseases. Feelings of anxiety, fear, and boredom also cause stress (Essel and Patrick Owusu, 2017). Of course, it is understandable that many community members feel anxious and afraid of contracting it, and feel bored constantly staying at home or lack of social interaction due to restrictions.

The prolonged pressure experienced by students both from covid-19 and online learning systems can affect their physical and psychological conditions. Physically, prolonged stress can reduce the immune system or immune so that a person becomes susceptible to various diseases (Bhargava & Trivedi, 2018). Being stressed can cause physical conditions, such as headaches, digestive problems, and sleep disturbances. As pointed out by the American Psychological Association, untreated chronic stress, or stress that is constant and lasts for long periods of time, can result in high blood pressure or a weakened immune system. This can contribute to the development of sources of obesity and heart disease. Stress also affects the psychological and behavioral condition of individuals As stated by Ang & Huan, 2006; Bjorkman (2007; in Sun, et al., 2011) that stress can be a significant contributor to causing mental and behavioral disorders, such as feelings of anxiety, depression, and suicidal ideation.

Stress itself is actually an emotional experience that is almost inevitable from everyday life that can have a negative or positive influence. In the psychology literature we can find two terms stress, namely good stress (called eustress), and bad stress (called distres). Good stress can help increase motivation, focus, energy, and performance; While bad stress generally causes anxiety, worry, and decreased performance. If bad stress is left unmanaged, it can lead to more serious problems.

METHOD

This research was carried out through a quantitative approach with a comparative causal design of one group. The population of this study is students of the Guidance and Counseling Study Program FIP Unesa who received online system learning in the situation of the COVID-19 pandemic in the even semester of 2019-2020. The population of this study is students of the Faculty of Education, Department of Guidance and Counseling who are classified as having experienced enough learning / lecture activities, namely students of the Class of 2018 and 2019. The study sample was 40 college students randomly drawn from the population. The psychological conditions experienced by can be understood very well by the individual himself. So that the technique that is considered accurate to obtain data about an individual's psychological condition is self-report. While learning performance data can be obtained well through observation techniques. However, because in the Covid-19 pandemic situation which causes learning to be carried out online, as well as learning performance data before the pandemic period has passed, as well as the disclosure of psychological condition data, learning performance data is collected through self-report techniques. The instrument used to measure psychological condition data is the KSD (anxiety, stress, and depression) scale adapted from DASS-21 (Depression, Anxiety, and Stress Scale) from Lovobond & Lovibond

RESULTS AND DISCUSSION

There are two hypotheses tested in this study, namely: (1) hypotheses related to whether there is a difference in the average psychological condition between before and after the implementation of online learning during the Covid-19 pandemic; and (2) whether there is a difference in the average learning performance of subjects between before and after the implementation of online learning during the Covid-19 pandemic. Here are the results of calculations and results from testing the two hypotheses.

The hypothesis about whether there is a difference in the average psychological condition between before and after the implementation of online learning during the Covid-19 pandemic is expressed in the form of a null hypothesis (H0) and a working hypothesis (H1). The test is performed using the t-test formula of one paired sample. A summary of the calculation results is presented in table 1.

Considering that the average measure of psychological conditions before the implementation of online learning during the Covid-19 pandemic of 39.10 was much smaller than the average size of psychological conditions after the implementation of online learning during the Covid-19 pandemic which was 49.68, it can be said that the psychological conditions experienced by subjects during the implementation of online learning during the pandemic were significantly higher than the stress experienced by subjects in the period before the application of learning in the pandemic. It can be concluded that the application of online learning during the pandemic tends to increase the psychological disorders of students. The hypothesis about whether there is a difference in average learning performance between before and after the implementation of online learning during the Covid-19 pandemic is expressed in the form of a null hypothesis (H0) and a working hypothesis (H1). The test is performed using the t-test formula of one paired sample. A summary of the results of the calculation is presented at table 2.

Considering that the average measure of learning performance before the implementation of online learning during the Covid-19 pandemic of 50.08 is much greater than the average measure of performance after the implementation of online learning during the Covid-19 pandemic of 42.15, it can be said that the learning performance of subjects in the period before the implementation of online learning during the pandemic was significantly higher than learning performance in the period after the application of learning in the pandemic. It can be concluded that the learning performance of students tends to decline after the implementation of online learning during the Covid-19 pandemic.

Table 1. Summary of t-test results

		Paired Differences					t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	KP Before X - KP After X	-10,575	13,311	2,105	-14,832	-6,318	-5,025	39	,000

Interpretation. From the calculation, the result of the difference significance value of 0.00 is obtained. This value is less than the expected significance value of 5% or $p = 0.05$. Based on the results of this problem, it can be interpreted that the null hypothesis (H_0) is rejected and the working hypothesis (H_1) is accepted. In other words, there is a significant difference in the average measure of psychological condition between before and after the implementation of online learning during the Covid-19 pandemic.

Table 2 Summary of hypothesis 2 presenters with paired sample t-test formula

		Paired Differences					t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Learning Performance Before X - Learning Performance After X	7,925	10,435	1,650	4,588	11,262	4,803	39	,000

Interpretation. From the calculation, the result of the difference significance value of 0.00 is obtained. This value is less than the expected significance value of 5% or $p = 0.05$. Based on the results of this problem, it can be interpreted that the null hypothesis (H_0) is rejected and the working hypothesis (H_1) is accepted. In other words, there is a significant difference in the average measure of learning performance between before and after the implementation of online learning during the Covid-19 pandemic.

DISCUSSION

The results of this study show that the average size of psychological conditions before the implementation of online learning during the Covid-19 pandemic of 39.10 is much smaller than the average size of psychological conditions after the implementation of online learning during the Covid-19 pandemic of 49.68, so it can be said that the psychological conditions experienced by subjects during the implementation of online learning during the pandemic are significantly higher than stress experienced by subjects in the period before the application of learning in the pandemic. It can be concluded that the application of online learning during the pandemic tends to increase the psychological disorders of students

Students who experience studying from home for a long time are prone to a series of emotional stressors. Students who receive a lot of negative information will risk more psychological incongruity, especially related to the learning process which is perceived as more burdensome. This study also shows that the average learning performance before the implementation of online learning during the Covid-19 pandemic of 50.08 is much greater than the average measure of performance after the implementation of online learning during the Covid-19 pandemic which was 42.15, so it can be said that the learning performance of subjects in the period before the implementation of online learning during the pandemic was significantly higher than the learning performance after Application of learning in the pandemic. It can be concluded that the learning performance of students tends to decline after the implementation of online learning during the Covid-19 pandemic. Mishra (2020) One of the strongest categories in performance decline lies in the transition of online learning, many report that online learning is an unpleasant experience and they express negative attitudes towards online learning. Not only do they consider online learning more difficult but also the lack of supporting resources (internet access, library, interaction with lecturers etc.) is an important challenge during the transition to online learning. Brandon (2020) states efforts should be made to improve student performance by providing free accessible online educational resources to students so that they can utilize their time in the most effective way during this period. In addition, according to Zayapragassarazan (2020), there needs to be an emphasis on flexible, student-centered learning that provides students with a variety of learning options to make learning outcomes useful and interesting.

The findings of Sahu's (2020) research suggest appropriate counseling services provided by the University in order to maintain students' mental health in this pandemic which supports the findings of this study. The emphasis on students' mental health so that counseling services are needed to overcome their psychological problems. Psychological support can serve to reduce the effects of COVID-19 on students, psychologist support can help students change their position to pay attention to positive things and reduce thoughts of negative events, so that students act and perform academically more positively from COVID-19 stressors. Students with higher psychological support have more psychological resources that have an effect on academic performance.

CONCLUSION

From these two findings, it can be concluded that the application of online learning during the Covid-19 pandemic has a negative impact on the psychological condition and learning performance of students. This study did not reveal whether the decline in student learning performance was related to increasing students' psychological problems. Similarly, this study does not reveal whether the increase in students' psychological problems is related to the implementation of online learning or the COVID-19 pandemic situation. To gain an understanding of this, separate research is needed. The implication of this research is that learning needs to be designed in such a way as to deal with psychological problems and student learning performance. This can be done in many ways, such as applying learning methods that are more

stimulating, fun, and encourage students to be more enthusiastic in participating in learning or doing learning activities.

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