

Blended Learning Through Learning Manajement System In Mathematic Of Statistic And Opportunity : Students' Perception

Ahmad^{1*}, Heny Sri Astutik²

Pendidikan Matematika, Universitas Muhammadiyah Purwokerto, Indonesia
Pendidikan Matematika, Universitas Pendidikan Muhammadiyah Sorong, Indonesia
*ahmad@ump.ac.id

Abstract

During the COVID-19 pandemic, the conventional education revolution to technology-based education became the world's spotlight. Online learning activities are one of the most effective solutions during the COVID-19 pandemic. Learning has begin to transition from face-to-face learning to distance learning (online learning) through. Blended learning activities are one of the best options thet can be implemented after the COVID-19 pandemic situation. Student perceptions have a significant part in enhancing students' role, activeness, and progress during the learning process in order to attain learning objectives. As a result, the goal of this research was to find out how junior high school students perception about blended learning though LMS in mathematics. This study employs descriptive quathitative methods with 47 sudents of grade IX in one of SMP Negeri at Sokaraja as a respondent of the study. Questionaire was used to collect the data. According to the findings of the study, Class IX students' perceptions of blended learning in subjects Mathematics Pandemic at SMP Negeri 2 Sokaraja are in moderate category with a average percentage of 42.56%.

Keywords: Blended Learning, Mathematics, Perception.

Abstrak

Dimasa pandemic COVID-19, revolusi pendidikan konvensional menuju pendidikan berbasis teknologi menjadi sorotan dunia. Kegiatan belajar daring menjadi salah satu solusi paling efektif di masa pandemic COVID-19. Pembelajaran sudah mulai beralih dari pembelajaran tatap muka ke pembelajaran jarak jauh (*online learning*). Kegiatan *Blended Learning* merupakan salah satu pilihan terbaik setelah situasi pandemic COVID-19. Persepsi siswa memiliki peran penting dalam meningkatkan peran, keaktifan, dan kemajuan siswa selama proses pembelajaran untuk mencapai tujuan pembelajaran. Oleh karena itu, penelitian ini bertujuan untuk mengetahui persepsi siswa SMP tentang *blended learning* melalui LMS pada pembelajaran matematika. Penelitian ini menggunakan metode deskriptif kuantitatif dengan 47 siswa kelas IX di salah satu SMP Negeri Sokaraja sebagai responden penelitian. Kuesioner digunakan untuk mengumpulkan data. Berdasarkan temuan penelitian, persepsi siswa kelas IX terhadap *blended learning* di SMP Negeri 2 Sokaraja berada pada kategori sedang dengan rata-rata persentase 42,56%.

Keywords: Blended Learning, matematika, persepsi

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INTRODUCTION

According to Unicef 2020 in years, there are 15 million children who are unable to attend school due to the Covid-19 pandemic and must complete their education at home.

There are over 45 million students in Indonesia, accounting for about 3% of the total number of students in the world (WHO, [2020](#)). This situation is particularly concerning because pupils will be unable to return to school until the pandemic has been resolved or ended. This is a challenge that is arguably not only focused on what is taught, but also how education itself is based on the need to meet the needs that exist in the future (Sene, [2021](#); Schleicher, [2020](#)). Online learning is still seen as a new paradigm to solve in educational activity (Keong et al., [2005](#)). Accordingly, above 90% of different educational institution successfully incorporated the online learning model (Alqurshi, [2020](#); Khan et al., [2022](#)). Online learning activities are one of the most effective solutions implemented during the COVID-19 pandemic (Astutik et al., [2022](#)). The government has begun to transition from face-to-face learning to distance learning (online learning) by utilizing technology. The transformation of digital technology has serious implications in the field of education. After the pandemic COVID-19 is over, this provision requires teachers to carry out combined learning between face-to-face learning and online learning. This combined learning is hereinafter known as blended learning.

Online learning is a type of learning that does not take place in a traditional classroom setting but rather through the use of internet-based information technology services (Anderson, [2008](#)). There are many online learning types used by the school one of them is using blended learning through Learning Management system (Muhaemin, [2019](#)). Blended learning is an approach to learning that combines face to face and online learning (TeachThought, [2020](#))(Furlong, [2018](#)). Blended learning through Learning Management System (LMS) is a type of internet-based learning. Learning activities that incorporate the Internet are meant to enhance connection between educators and students, even if it is not face to face (Robla et al., [2014](#)).

Learning Management System (LMS) is a term in the world of technology that was developed specifically to manage and facilitate the entire online learning process (Hidayat, [2014](#)). Some of the functions of the LMS are the publication of learning materials, downloading of learning materials, assignments, and assessment (Muhson, [2010](#)). The implementation of blended learning through LMS is not as simple as one might think (Bao, [2020](#)). Students face a variety of challenges during online learning, including a new change that can indirectly affect student learning absorption in both theory and practice, a concentration disorder that persists during the learning process, and an unsupported internet connection that occasionally experiences interference, obstructing the storage of material by students (Learning, [2011](#)). Aside from that, each student's technological and financial

capabilities vary, thus not all students support online learning activities (Means et al., [2009](#)). The internet network is already established, but the capacity Internet connection speed is not perfect, pupils do not understand the material offered, and online learning tends to be monotonous. (Keong et al., [2005](#))

Students' perspectives blended learning through LMS are shaped by these barriers (Raman & Halim Mohamed, [2013](#)). Perception is the process of a person translating diverse occurrences using his senses. Perception is how a person understands events based on his or her point of view (Carvalho et al., [2011](#)). Student's perception has important roles in learning process (Ahmad & Subekti, [2020](#)). It is necessary to do research on a person's perception in order to determine a person's point of view on an event so that it can be used as evaluation material in the future (Sintema, [2020](#)).

METHODS

This research is quantitative descriptive study on the perception of Class IX students of SMP Negeri 2 Sokaraja towards online learning in subjects Mathematics (Nardi, [2006](#)). This research aims to find out how students' perceptions of learning Mathematic using blended learning through LMS. 47 students from grade IX was selected as the sample of this study.

Questionnaire was used to collect the data. The methods for compiling the question items in the questionnaire must be based on the factors that go into producing the question item constructs, as well as the development of the contents factor. Several item questions was arranged from some of these criteria to provide an overview of their current situation. Each question will refer to the goal of mathematic are some of the questions that was addressed in the questionnaire.

In this study, the questionnaire was in the form of a Likert scale. Variable indicators are created from the variables to be measured. The indicator is then utilized as a starting point for putting together instrument components, which can be statements or questions (Nardi, [2006](#)). Very Positive, Positive, Moderate, Negative, and Very Negative sentences are followed by columns showing levels: Very Positive, Positive, Moderate, Negative, and Very Negative (Shafer et al., [1997](#)).

Descriptive quantitative data analysis was employed for the data analysis (Williamson et al., [2018](#)). Data presentation through tables, calculation of the mean, mode, median, percentiles, calculation of the spread of data, average calculations, standard deviations, and percentage descriptive statistics are all included in descriptive statistics (Cohen et al., [2007](#)).

RESULTS

The results of the research on the perception of Class IX students towards online learning in Mathematics at SMP Negeri 2 Sokaraja in 2020 were measured by 47 respondents and 30 questions, ranging from 1 to 5. The results of statistical analysis of research data were Overall, the mean (mean) = 85.49, median = 85, mode = 84, standard deviation = 5.73. The data is then made into categories or groups according to existing levels, consisting of 5 categories, namely: very positive, positive, moderate, negative, and very negative. The distribution table of the results of the Class IX Student Perception research on online learning in the subjects of mathemathic at SMP Negeri 2 Sokaraja can be categorized as [Table 1](#).

Table 1. Students Perception in Blended Learning through LMS in Mathematics

Interval	Category	Total	Percentage
$X > 94.07$	Very Positive	3	6.58
88,34 s/d 94,07	Positive	10	21,27
82,61 s/d 88,33	Moderate	20	42.56
76,88 s/d 82,60	Negative	11	23,40
$X < 76,88$	Very negative	3	6,38
Total		47	100

Based on the [Table 1](#) above, the perception of Class IX students towards Blended Learning through LMS at SMP N 2 Sokaraja is in the very positive category, with the percentage of 6.58% or 3 students, the positive category is the percentage of 21.27% or 10 students, the Moderate category is the percentage of 42.56%, the negative category is the percentage of 23.40% or 10 students, and the very negative category is the percentage of 6.38% or 3 students.

DISCUSSION

The factors of the students perception are fully described in the following factors.

Intelegence factor

The results of the research on intelligence indicators in this study were measured by 5 questions. The results of statistical analysis of research data obtained mean (mean) = 15.17, median = 15, mode = 14, standard deviation = 1.71. The distribution table of research results on intelligence indicators can be categorized as [Table 2](#).

Table 2. Intelligence Indicator Description

Interval	Category	Amount	(%)
$X > 28,71$	Very Positive	222	31,9
$26,26 \leq X \leq 28,71$	Positive	11	23,40
$23,81 \leq X \leq 26,25$	Moderate	2	4,26
$21,36 \leq X \leq 23,80$	Negative	9	34,05
$X < 21,36$	Very negative	3	6,38
Total		47	100

Based on the [Table 2](#) above, the results of research on intelligence indicators are mostly in the very positive category with a percentage of 4.26% or 2 students, a positive category with a percentage of 23.40% or 11 students, a Moderate category with a percentage 31.91% or 15 students, a negative category with a percentage of 34.05% or 16 students, and a very negative category with a percentage of 6.38% or 3 students.

Mental Factor

The results of research on mental indicators in this study were measured by 9 questions. The results of statistical analysis of research data obtained mean (mean) = 25.04, median = 25, mode = 25, standard deviation = 2.45. The distribution table of research results on mental indicators can be categorized as [Table 3](#).

Table 3. Mental Indicator Description

Interval	Category	Amount	(%)
$X > 28,71$	Very Positive	2	4,26
$26,26 \leq X \leq 28,71$	Positive	11	23,40
$23,81 \leq X \leq 26,25$	Middle	15	31,91
$21,36 \leq X \leq 23,80$	Negative	1	34,05
$X < 21,36$	Very negative	3	6,38
Total		47	100

Based on the [Table 3](#) above, most of the Mental indicators fall into the very positive category with a percentage of 4.26% or 2 students, a positive category with a percentage of 23.40% or 11 students, a Moderate category with a percentage of 46.81% or 22 students, the negative category is 19.15% or 9 students, and the very negative category is 6.38% or 3 students.

Physical Factor

The results of the research on physical indicators in this study were measured by 8 questions. The results of statistical analysis of research data obtained an average (mean) =

21.36, median = 21, mode = 20, standard deviation = 1.77. The distribution table of research results on physical indicators can be categorized as [Table 4](#).

Table 4. Physical indicator description

Interval	Category	Amount	(%)
$X > 28,71$	Very Positive	1	2,12
$26,26 \leq X \leq 28,71$	Positive	9	19,15
$23,81 \leq X \leq 26,25$	Moderate	21	44,68
$21,36 \leq X \leq 23,80$	Negative	14	29,79
$X < 21,36$	Very negative	2	4,26
Total		47	100

Based on the Table 4 above, the results of research on physical indicators are mostly in the very positive category with a percentage of 2.12% or 1 student, a positive category with a percentage of 19.15% or 9 students, a moderate category with a percentage of 44.68% or 21 students, a negative category percentage 29.79% or 14 students, very negative category percentage 4.26% or 2 students.

Social Factor

The results of research on social indicators in this study were measured by 5 questions. The results of statistical analysis of research data obtained an average (mean) = 14.42, median = 15, mode = 16, standard deviation = 1.49. The distribution table of the results of social indicator research can be categorized as [Table 5](#).

Table 5. Social Indicator description

Interval	Category	Amount	(%)
$X > 28,71$	Very Positive	1	2,13
$26,26 \leq X \leq 28,71$	Positive	14	29,79
$23,81 \leq X \leq 26,25$	Middle	19	40,43
$21,36 \leq X \leq 23,80$	Negative	8	17,02
$X < 21,36$	Very negative	5	10,6
Total		47	100

Based on the [Table 5](#) above, the results of the research on social indicators are in the very positive category with a percentage of 2.13% or 1 student, a positive category with a percentage of 29.79% or 14 students, a Moderate category with a percentage of 40.43% or 19 students, a negative category with a percentage of 17, 02% or 8 students, and the category is very negative the percentage is 10.63% or 5 students.

Environmental Factor

The results of research on environmental indicators in this study were measured by 3 questions. The results of statistical analysis of research data obtained mean (mean) = 9.48, median = 9, mode = 9, standard deviation = 1.21. The distribution table of the results of the Environmental Indicator research can be categorized as [Table 6](#).

Table 6. Environmental Indicator Description

Interval	Category	Amount	(%)
$X > 28,71$	Very Positive	3	6,38
$26,26 \leq X \leq 28,71$	Positive	6	12,76
$23,81 \leq X \leq 26,25$	Moderate	31	65,96
$21,36 \leq X \leq 23,80$	Negative	4	8,50
$X < 21,36$	Very negative	3	6,38
Total		47	100

Based on the [Table 6](#) above, the results of the research on environmental indicators are in the very positive category with a percentage of 6.38% or 3 students, a positive category with a percentage of 12.76% or 6 students, a Moderate category with a percentage of 65.96% or 31 students, a negative category with a percentage of 8, 5% or 4 students, and the category is very negative the percentage is 6.38% or 38 students.

CONCLUSION

Based on the study's overall findings, it was determined that Class IX students' perceptions toward blended Learning through LMS in Mathematics during the COVID-19 Pandemic Period at SMP Negeri 2 Sokaraja were in the very positive category with a percentage of 6.38 percent or 3 students, a positive category with a percentage of 21.27 percent or 10 students, and a Moderate category with a percentage of 21.27 percent or 10 students. These findings conclude that the majority of the students have a Moderate perception toward the implementation of blended learning through LMS.

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