The Effect of Online-Learning Media During Covid-19 Pandemic Towards Student’s Habits of Mind in Mathematics Learning

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**Abstract**: This research aims to determine the effect of online-learning media during the Covid-19 pandemic on students' habits of mind in learning mathematics. Online learning is learning by using an internet connection that can be connected between teachers and students or vice versa in the distance or near. Online learning becomes indispensable during the co-19 pandemic because schools were not allowed to conduct direct learning. There are various kinds of learning media including telegram. The design of the research uses quantitative approach. The sample in this study was class XI MIPA 1 of the 2020/2021 school year in one of the Senior High School in Kuningan as much 35 students. Based on the research result, it is found that that online learning media contributed 25.1% to habits of mind. This research can be recommended to improve the habits of students' minds. One of the instance of the media which can be used for online learning is telegram.

1. **Introduction**

The corona virus diases (covid-19) pandemic that has occurred in Indonesia since March 2020 has resulted in all activities being carried out at home to break the chain of the spread of covid-19, including in the field of education, all learning at the primary school level to tertiary institutions closing schools and replacing them with distance learning at home (Distancing Learning). This has been going on for 5 months, even after the government regulation on 'New Normal' students are still encouraged to distancing learning because the spread of Covid-19 has not stopped. As reported by the official website for the acceleration of handling of covid-19 in Indonesia covid19.go.id, which states that as of Agustus 18, 2020, there were 143,043 positive covid-19 patients in Indonesia [1].

Based on this, teachers are required to be able to conduct distance learning so that the material is conveyed well. Distance Learning aims to carry out educational standards using Information Technology by using a laptop or smart device which will later connect between students and teachers or vice versa. So that by utilizing this technology the teaching and learning process can be carried out well even in the midst of the Covid-19 pandemic, because in Indonesia most of the people already use the internet, both students and adults, this is in accordance with We Are Social research, "Digital Reports 2020" which said that almost 64% of Indonesia's population is connected to the internet network, the number of internet users in Indonesia has reached 175.4 million people from the total population of Indonesia which amounts to around 272.1 million and compared to 2019, the number of internet users in Indonesia has increased by around 17 % or 25 million users [2].

Therefore, every teacher tries to use online learning media. Online learning is learning that uses an internet network with connectivity and the ability to create interactions in learning [3]. Various online learning media that are widely used by teachers, one of which is the telegram application. The telegram application is a cloud-based messenger application with high security and speed of access, telegram is actually not much different from the WhatsApp application but its users are not as many as the WhatsApp application. This application is available for various devices such as mobile phones with Android, IOS or Windows Phone systems and not only runs on mobile devices but can also run desktop systems such as Windows and Linux [4]. Telegram has several advantages more than just chatting or messanging but it provides speed, security, is easy to use and can be accessed for free [5].

Similar to face-to-face learning, distance learning that uses online learning media must meet psychological aspects that can contribute to the success of students in understanding mathematics well, namely habits of mind. This mathematical thinking habit is an attitude that is expected to emerge and become an integral part of students when learning mathematics. With the habits of mind in students, students can be formed to be good thinkers and can survive when they face problems in life.

One of the abilities of the mind referred to is the tendency of the mind from Costa and Kallick, which can be applied in all situations and can be used by all levels of developmental age. Habits of Mind can be defined as a habit of thinking consisting of various kinds of thinking habits that show the peak of individual intelligence, besides that the tendency of the mind is also an indicator of academic abilities related to success [6]. Habits of Mind (HoM) is also said to be able to help individuals organize learning methods and help find solutions to problems in classroom learning and in everyday life. Identify 16 descriptions of Habits of mind [6], namely:

Table 1. Habits of Mind Indicators

|  |  |  |
| --- | --- | --- |
| No | *Habits of Mind* | Deskripsi |
|  | *Presisting* | Berpegang teguh pada prinsip, tekun dalam menyelesaikan masalah atau tugas sampai selesai dan tetap fokus pada tujuan. |
|  | *Managing implusivity* | Berfikir secara matang dan tidak tergesa-gesa dalam bertindak. |
|  | *Listening with understanding and emphaty* | Dapat menerima pandangan orang lain dengan bijak. |
|  | *Thinking flexibility* | Berfikir lebih luwes, mampu membuat cara pandang alternatif. |
|  | *Metacognitif* | Ketahui tindakan yang diambil akan berpengaruh sepeti apa pada lingkungan. |
|  | *Striving for accuracy* | Lebih teliti dalam penyelesaian masalah dan mencari cara untuk meningkatkan kemampuan. |
|  | *Questioning and problem posing* | Menemukan pemecahan masalah. |
|  | *Applying past knowledge to new situations* | Belajar dari pengalaman, mentransfer pengetahuan yang telah dipelajari pada situasi baru. |
|  | *Thinking and communicating with clarity and precision* | Berusaha berkomunikasi dengan lisan dan tulisan secara akurat. |
|  | *Gathering data through all sense* | Menggunakan semua indra dalam berfikir, seperti: sensorik, taktik, kinestetik, pendengan dan visual. |
|  | *Creating, imagining, and innovating* | Menggunakan cara yang berbeda untuk menghasilkan ide-ide baru. |
|  | *Responding with wonderment and awe* | Memiliki rasa ingin tahu dan kekaguman. |
|  | *Taking responsible risk* | Mampu mengambil resiko dan bertanggungjawab pada pilihan yang telah diambil. |
|  | *Finding humor* | Memahami akan pentingnya tersenyum, tertawa dalam menikmati segala sesuatu. |
|  | *Thinking interdependently* | Mampu bekerjasama dalam tim. |
|  | *Remaining open to continuous learning* | Tidak cepat puas diri, terus belajar menambah pengetahuan menjadi lebih baik. |

Based on the above problems, a study was conducted to determine the effect of online learning media during the Covid-19 pandemic on the habits of mind of students at SMAN 1 Cilimus, Kuningan Regency, West Java.

1. **Research Methods**
2. Population and Research Sample

The population of this study was all students of SMAN 1 Cilimus in the academic year 2020/2021. The sample in this study were 35 students of SMAN 1 Cilimus class XI MIPA 1, the sample used was purposive sampling technique, namely the sampling technique with special consideration or deliberate sampling by the researcher.

1. Method of Collecting Data

This research is a quantitative study that aims to obtain an overview of online learning media on students' habits of mind as an effort to break the chain of the spread of covid-19. This research was conducted by conducting a survey to students regarding the use of online learning media. The survey was carried out by distributing a questionnaire using the google form where the link was shared via the Telegram Channel application to students.

Data retrieval techniques are the tools selected and used by researchers to make it easier to collect data to make it more systematic and directed. The data collection technique used was a questionnaire to collect data on online learning media and students' habits of mind. The following is a summary of the data collection techniques:

Table 2. Data Collection Techniques

|  |  |  |  |
| --- | --- | --- | --- |
| No | Variable | Data Collection Technique | Skore Range |
|  | Online Learning Media (X) | Likert Model Questionare | 1-4 |
|  | *Habits of Mind* (Y) | Likert Model Questionare | 1-4 |

The questionnaire given to students is a questionnaire that represents an indicator of the research variables, namely the habits of mind of 16 statements. After the questionnaire was validated, it was distributed to students and the results were analyzed using SPSS 19 for Windows.

1. **Results and Discussion**

The data analysis process in this study uses linear regression analysis to determine the effect of learning media on habits of mind. Regression tests were performed using SPSS software. The following is a table of the results of research on the Effect of Learning Media during the Covid-19 Pandemic on the habits of mind of students in Mathematics Learning.  
Table 3. Results of the Regression Coefficient

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Model | | | Unstandardized Coefficients | | | | Standardized Coefficients | | t | | Sig. | |
| B | | Std. Error | | Beta | |
|  | (Constant) | | 13,254 | | 11,227 | |  | | 1,181 | | ,246 | |
| Media Pembelajaran | | ,860 | | ,259 | | ,501 | | 3,324 | | ,002 | |
| Table 4. Tes Result F | | | | | | | | | | | |
| Model | | Sum of Squares | | df | | Mean Square | | F | | Sig. | |
| 1 | Regression | 216,877 | | 1 | | 216,877 | | 11,047 | | ,002a | |
| Residual | 647,866 | | 33 | | 19,632 | |  | |  | |
| Total | 864,743 | | 34 | |  | |  | |  | |
|  | | | | | | | | | | | |

Based on the analysis with SPSS in table 3, the equation is 13.25 + 0.86X. After that, with the F test analysis as shown in table 4, the value of Sig = 0.002 <0.05 (α) is obtained so that H0 is rejected, which means that online learning media has an effect on students' habits of mind in mathematics learning.

The results of the X (online learning media) significance test on Y (habits of mind) are shown in table 5. Based on the correlation significance test, the correlation coefficient (R) is quite strong, namely 0.501 and has a positive relationship. A positive relationship is seen based on the number of positive correlation coefficients. Based on the description above, it can be seen that there is a strong positive relationship between online learning media and students' habits of mind. The magnitude of the influence of learning media on the habits of mind of students can be seen in the value of determination (R2), which is 0.251. Thus, the coefficient of determination is 25.1% while the remaining 74.9% is contributed by other variables that are not measurable in this study.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Table 5. Result of the Significance Test of The Correlation Coefficient | | | | |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | ,501a | ,251 | ,228 | 4,431 |
|  | | | | |

From the results obtained, it can be seen that online learning media is able to influence students' habits of mind. Online learning media are currently very much needed because of the limitations of face-to-face learning, so that online learning media can bridge the learning process effectively and efficiently. Based on the results of a survey conducted by researchers, students find it easy to use the Telegram application because this application is the same as using other Massanger applications. The channel feature found on Telegram is also felt by students and teachers to be more effective in providing and understanding material. In this feature the teacher can see who has seen the material that has been given and students can download the material or video material without having to stream while viewing it.

Other findings indicate the need to develop instructional media or strategies that use habits of mind indicators. One of the important things is that habits greatly influence individual success, one of which is the habits of mind (habit of thinking). Habits of mind implies that behavior requires discipline of mind that has been trained to form good habits. This can be understood because all actions that a person takes come from the consequences of habitual thinking.

1. **Conclusion**

Based on the results of data analysis, it was concluded that online learning media during the Covid-19 pandemic could affect the habits of mind of students, this was discovered by researchers after conducting a direct survey of 35 students at SMAN 1 Cilimus in the 2020/2021 school year. Online learning media using the telegram application turns out to be able to support student learning when they have to do distance learning. The important implication obtained by the writer is that thinking habits carried out continuously through various activities to explore problems support students' ability to be able to solve problems.

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