

Manogari Sianturi (Student Difficulties Investigation in Physics Subject During Pandemic at SMA Kristen Makedonia, West Kalimantan)

by Library Referensi

Submission date: 08-Jan-2025 05:50PM (UTC+0700)

Submission ID: 2561046995

File name: ct_During_Pandemic_at_SMA_Kristen_Makedonia,_West_Kalimantan.pdf (255.45K)

Word count: 4358

Character count: 23686

Student Difficulties Investigation in Physics Subject During Pandemic at SMA Kristen Makedonia, West Kalimantan

Alpi Yanti¹, Ngia Masta², Taat Guswanto³, Manogari Sianturi⁴
{alfiyanti926@gmail.com¹, ngia.masta@uki.ac.id², taat.guswanto@uki.ac.id³,
manogari.sianturi@uki.ac.id⁴}

Physics Education Study Program, Faculty of Teacher Training and Education, Universitas Kristen Indonesia Jakarta¹²³⁴

Abstract. Students' difficulties during pandemic can be shown in technical, learning process, internal factors, and external factors. This study aims to investigate student difficulties and the affect among indicators in physics learning at SMA Kristen Makedonia during pandemic. This is descriptive quantitative research, by using random sampling technique with Slovin method. The students' responses collected questionnaire and the affection among indicator have been investigated by using linear regression. The results obtained: 58.1%, students have no difficulty with technical indicator; 53.8%, students have no difficulty with learning process indicator; 61.0%, students have difficulty with internal factors indicator; 52.7%, students have no difficulty with external factors indicator. Based on linear regression test by using SPSS show that only learning process indicator affected the internal factors indicator. This students' difficulties investigation can be used as consideration to overcome the learning loss during pandemic in physics subject.

Keywords: Student difficulties; Physics subject; Distance learning

1 Introduction

7
Coronavirus disease 2019 (Covid-19) originating from Wuhan, Hubei Province, China has spread rapidly throughout the world. On March 11, 2020, the World Health Organization (WHO) even declared this incident a global pandemic (Cucinotta and Vanelli, 2020). Because of this we are required to self-quarantine at home to reduce and break the chain of spread of the virus. This situation causes all activities in various sectors to be hampered, one of which is in the education sector.

The Ministry of Education and Culture then issued a circular that regulates online learning and working from home in order to prevent the spread of coronavirus disease (Covid-19). The learning system, which was originally based face-to-face in the classroom, had to change to a virtual learning system through the internet network (online learning). The world of education requires educators and students to quickly adapt to existing changes. Online learning connects students with their learning resources who are physically separated or even far apart but can communicate, interact or collaborate either directly/synchronously or indirectly/asynchronously (Ningsih, 2020).

With the online learning system, students have more time to study, they can study anytime and anywhere. Online learning is also ideally able to facilitate students to interact with teachers and peers, through several applications that can support these activities (Khusna, et al., 2020). However, learning activities carried out at home at this time cannot be said to be an ideal learning condition, because both students and teachers still encounter many obstacles and shortcomings. So that this non-ideal condition can also be said as an emergency condition that must still be lived (Arifa, 2020).

In the implementation of online learning, of course, there are many difficulties faced by teachers and students. There are four obstacles faced by the world of education during the COVID-19 pandemic, namely: 1) limited internet control; 2) inadequate facilities and infrastructure; 3) limited internet access; and 4) Unpreparedness of funds in emergency conditions (Aji, 2020). Other obstacles experienced by students include internet quotas which are quite expensive and difficult internet access (Amelia, Y., & Darussyamsu, R., 2020).

Learning physics is one of the subjects that has had an unfavorable impact during the Covid-19 pandemic. Many students think physics is a scary and difficult subject because they have to memorize, apply concepts and analyze phenomena in the surrounding environment. Physics learning is still focused on face-to-face learning, online learning has never been applied. This online learning is a new thing for physics learning methods in schools, especially being a challenge for educators (Bagaskara, RF, 2021).

Both at the junior high school level and at the high school level the boring learning at school is physics learning (Pathoni, 2015). Besides being boring, learning physics is often considered difficult by most students at school (Pasaribu, Hendri and Susanti, 2017). Learning physics is said to be difficult and boring because most of the material is in the form of concepts (Yanti, 2019). Physics learning also requires a lot of media to convey material (Masyithah, 2017). The difficulties experienced by the majority of students in online learning are difficulties in implementing learning.

Based on the description that has been stated above, the researcher wants to conduct a study to find out the difficulties of students in online-based physics learning at Macedonia Christian High School, Ngabang City, West Kalimantan.

2 Method

11

The main text should be written using Times New Roman, 10pt, fully justified. Italics can be used for emphasis and bold typeset should be avoided. Type of research used in this study is descriptive research with a quantitative approach about students' difficulties in online-based physics learning at Macedonia Christian High School, Ngabang City, West Kalimantan. Quantitative research is a type of research in the form or in the form of numbers from the results of statistical calculations. Descriptive quantitative research is research that aims to describe the circumstances or phenomena that occur.

The method used in this study is a survey method. Descriptive research with survey methods is research that only describes what is or occurs in a particular field or area (Arikunto, 2010). This research was conducted at Macedonia Christian High School, Ngabang City, West Kalimantan in class XI MIA and XII MIA. To determine the number of samples in this study, the Slovin method in Supriyanto and Iswandiri (2017) was used. The Slovin method is a method for calculating the minimum sample size that can be taken from the research population. The calculation using the Slovin method is formulated as follows:

$$n = \frac{N}{1 + Ne^2} \quad (1)$$

Description:

N : Number of samples = 77 people

N : Total Population = 96 people

E : Maximum fault tolerance (error tolerance) = 5% or 0.05

This research was done by spreading the questionnaire using the form google online to 77 respondents are students of class XI and XII Christian n High School MIA Macedonia which consists of four classes: XI MIA 1, XI MIA 2, XII MIA 1 and XII MIA 2.

Table 1. Grid of Research Questionnaire Instruments

| No | Indicator | Sub Indicator | Number Statement | | Total |
|--------------|------------------------------------|--|------------------|-------------|-----------|
| | | | + | - | |
| 1 | Technical | Availability of internet service | 1, 2, 3 | | 3 |
| | | Facilities and accessibility | 4, 5, 6, 7 | | 4 |
| | | Inability of students in online learning | 8, 9, 10 | | 3 |
| 2 | Implementation of learning Teacher | Competence in online learning | 11, 12, 13 | | 3 |
| | | Students' participation | 14, 15, | 16 | 3 |
| | | Assignment | 17, 18, 19, 20 | | 4 |
| 3 | Internal Factors | Motivation and students' interest | 24, 25, 26 | 21, 22, 23, | 6 |
| | | Economic | 27 | | 1 |
| 4 | External Factors | Support from parents | 28, 29 | | 2 |
| | | Support from the environment | 30, 31 | | 2 |
| Total | | | 5 | 26 | 31 |

The data analysis technique used in this study is a descriptive quantitative technique. The percentage of student responses was calculated using Microsoft Excel 2019 with statistical calculations of the percentage of data processing techniques calculated from the following equation (Hidayatulloh, 2021).

$$P = \frac{f}{N} \times 100\% \quad (2)$$

Description:

P : Percentage sought (Relative Frequency)

f : Frequency

N : Number of Respondents

To determine the influence between indicators in this study, Linear Regression Test was used using IBM SPSS Version 26. Analysis between indicators was used to determine whether or not there was an influence or influence between indicators.

3 Result and Discussion

3.1 Questionnaire Analysis Results

The results of the research on students' difficulties in online-based physics learning at Macedonian Christian High Schools in this study were obtained from an instrument in the form of a questionnaire containing 31 statements.

Questionnaire distributed by sending a link google forms via group Whatsapp to students of class XI and XII MIA with a total of 77 people. After the questionnaire was distributed, the data was then processed and analyzed to find out the difficulties experienced by students in online-based physics learning at Macedonian Christian High School. Here are the results of the data collected in the Christian High School Macedonia on July 24, 2021 based on the individual indicators:

- a. The results of the inquiry Difficulties Students in Learning Physics-Based Online on Technical Indicators

Based on the results in Table 3.1 can be seen that, the difficulties of students in learning physics-based online for technical indicators as a whole shows an average result of 53.7%, meaning that students do not agree if they are declared to have technical difficulties during online-based physics learning, because not all students experience this. In the technical indicators there are three sub-indicators, namely the availability of internet services, facilities and accessibility, and the inability of students in online learning. This indicator contains 10 statements and all of them are negative statements.

Table 2. Results Percentage of Technical Indicators

| Statement | Respondents | | | | | f | Index (%) |
|---|-------------|----|----|----|----|------|--------------|
| | STS | TS | KS | S | SS | | |
| A. Sub-Indicator of Internet Service Availability (-) | | | | | | | |
| 1. I have problems with the internet network when learning physics based online because my area is far from internet coverage | 12 | 15 | 25 | 10 | 15 | 232 | 60 |
| 2. I run out of quota during online-based physics learning | 17 | 19 | 17 | 12 | 12 | 214 | 56 |
| 3. My home location is far from the internet, which makes me lazy to participate in online learning activities | 33 | 16 | 15 | 3 | 10 | 172 | 45 |
| Average index | | | | | | | 53.7% |
| B. Sub Indicator Facilities and Accessibility (-) | | | | | | | |
| 4. I do not have a special room/place that supports online learning activities | 17 | 11 | 12 | 11 | 26 | 249 | 65 |
| 5. I have difficulty in online learning because I do not have my own cell phone/laptop | 37 | 15 | 12 | 10 | 3 | 158 | 41 |
| 6. Learning resources provided by the school are not complete | 20 | 26 | 21 | 8 | 2 | 177 | 46 |
| 7. Learning resources suggested by the teacher are difficult to access | 18 | 23 | 16 | 12 | 8 | 200 | 52 |
| Average index | | | | | | | 51.0% |
| C. Student Disability in Development learning online (-) | | | | | | | |
| 8. I do not proficient to operate applications in learning online | 22 | 22 | 13 | 12 | | 8193 | 50 |
| 9. I'm having trouble understanding the material physics for learning only through the chat room only | 3 | 12 | 12 | 27 | 23 | 286 | 74 |
| 10. I'm having trouble understanding the material physics when studying independently at home | 2 | 3 | 11 | 19 | 42 | 327 | 85 |
| Average index | | | | | | | 69.7% |
| Average technical indicators | | | | | | | 58.1% |

b. Questionnaire Results of Student Difficulties in Online-Based Physics Learning Implementation Indicators.

Online-based physics learning for overall learning implementation indicators shows an average result of 53.8%, meaning that students do not agree that they have difficulties in implementing learning during the online-based physics learning process. In the indicators of learning implementation, there are three sub-indicators, namely teacher competence in online learning, student participation, and assignment. This indicator contains 10 statements, 8 negative statements and 2 positive statements.

Table 3. Percentage Results of Learning Implementation Indicators

| Statement | Respondents | | | | | f | Index (%) |
|--|-------------|----|----|----|----|-----|--------------|
| | STS | TS | KS | S | SS | | |
| A. Teacher Competency Sub-Indicators (-) | | | | | | | |
| 11. Teachers do not master technology about online learning | 32 | 22 | 20 | 2 | 1 | 149 | 39 |
| 12. Teacher explanations in online-based physics learning are not interesting | 8 | 17 | 24 | 18 | 10 | 236 | 61 |
| 13. More than two times the teacher was late in starting physics learning activities | 30 | 15 | 18 | 12 | 2 | 172 | 45 |
| Average | | | | | | | 48.3% |
| index | | | | | | | |
| B. Student Participation Sub-Indicator (+) | | | | | | | |
| 14. I gave feedback/feedback to the teacher about the material being taught in online learning | 2 | 6 | 28 | 21 | 20 | 180 | 47 |
| 15. I attend every online physics learning activity | 2 | 2 | 12 | 17 | 44 | 132 | 34 |
| Sub-Indicator of Student Participation (-) | | | | | | | |
| 16. I have difficulty being actively involved in online physics learning because I am unable to understand the material presented by teacher | 6 | 8 | 22 | 19 | 22 | 274 | 71 |
| Average | | | | | | | 30.5 |
| index | | | | | | | |
| C. Sub Indicator Assignment (-) | | | | | | | |
| 17. I feel burdened by the physics assignment that the teacher gives during the lesson online because it has to be handwritten and submitted inform <i>soft file</i> | 14 | 18 | 21 | 14 | 10 | 219 | 57 |
| 18. The physics assignment given is difficult to do | 3 | 8 | 26 | 28 | 12 | 269 | 70 The |
| 19. number of questions given is too much | 9 | 17 | 28 | 15 | 8 | 227 | 59 |
| 20. The assignment time is too long brief | 10 | 14 | 19 | 21 | 13 | 244 | 63 |
| Average | | | | | | | 62.3% |
| index | | | | | | | |
| Average index of learning implementation indicators | | | | | | | 53.8% |

c. Questionnaire Results of Student Difficulties in Online Based Physics Learning on Internal Factors Indicators

Based on the results of the study in table 3.3, it can be seen that the difficulty of students in online-based physics learning for indicators of internal factors as a whole for negative statements shows an average result of 61.0%, meaning that students agree that they have internal difficulties in online-based physics learning. In the indicator of internal factors, there are sub-

indicators of student motivation and interest with 6 statements, 3 negative statements and 3 positive statements.

Table 4. Results of Percentage of Internal Factors Indicators

| Statement | Respondents | | | | | <i>f</i> | Index (%) |
|--|-------------|----|----|----|----|----------|--------------|
| | STS | TS | KS | S | SS | | |
| A. Sub-Indicators of Student Motivation and Interest (-) | | | | | | | |
| 21. I am not excited when online-based physics learning starts | 14 | 16 | 26 | 12 | 9 | 217 | 56 |
| 22. I think online-based physics learning difficult and boring | 4 | 14 | 20 | 21 | 18 | 266 | 69 |
| 23. Online-based physics learning makes me inactive during the learning process | 5 | 16 | 22 | 16 | 18 | 257 | 67 |
| Average index | | | | | | | 64% |
| B. Sub-Indicator of Student Motivation and Interest (+) | | | | | | | |
| 24. I am confident to express my opinion about physics material when learning online | 8 | 32 | 19 | 13 | 5 | 256 | 66 |
| 25. I enjoy online learning | 15 | 16 | 29 | 6 | 11 | 249 | 65 |
| 26. Learning physics online makes me master new technologies | 1 | 5 | 16 | 35 | 20 | 163 | 42 |
| Average index | | | | | | | 57.7% |
| Average The average index of internal factor indicators is | | | | | | | 61.0% |

d. Results of Student Difficulty Questionnaires in Online-Based Physics Learning on External Factors Indicators

Based on the results of the study in table 3.4, it can be concluded that it is known that students' difficulties in online-based physics learning for external factor indicators as a whole show an average result of 52.7%, meaning that students do not agree that they have external difficulties in online-based physics learning. In the external factor indicator, there are 3 economic sub-indicators, support from parents and support from the environment consisting of 5 statements and all of them are negative statements.

Table 5. Results of Percentage of External Factors Indicators

| Statement | Respondents | | | | | <i>f</i> | Index (%) |
|---|-------------|----|----|----|----|----------|--------------|
| | STS | TS | KS | S | SS | | |
| A. Economic Sub-Indicators (-) | | | | | | | |
| 27. During online learning, sometimes I can't afford to buy quotas due to family economic limitations | 20 | 12 | 18 | 15 | 12 | 218 | 57 |
| Average index | | | | | | | 57.0% |
| B. Sub Indicator Support from Parents (-) | | | | | | | |
| 28. My parents do not support and encourage me during online learning at home | 45 | 10 | 12 | 8 | 2 | 143 | 37 |
| 29. My parents do not provide facilities that support me in participating in online learning | 42 | 12 | 13 | 8 | 2 | 147 | 38 |
| Average index | | | | | | | 37.5% |
| C. Sub Indicator Support from the Environment (-) | | | | | | | |

| | | | | | | | |
|---|----|----|----|----|----|-----|--------------|
| 30. I am lazy to participate in online based physics learning because there are no friends around me to discuss | 12 | 16 | 11 | 13 | 25 | 254 | 66 |
| 31. My neighbors are often noisy when I am attending online-based physics learning | 25 | 6 | 14 | 4 | 28 | 235 | 61 |
| Average index | | | | | | | 63.5% |
| Average external factor indicator index | | | | | | | 52.7% |

3.2 Linear Regression Test Between Indicators

Linear Regression Test Results between indicators using IBM SPSS Version 26. In this test the Internal Factor indicator is used as the dependent variable because the indicator shows that students experience difficulties in the online-based physics learning process caused by internal factors.

a. Linear Regression Test Between Technical Indicators and Internal Factor Indicators

This linear regression test is used to see the extent of the influence between technical indicators and internal factor indicators on students' difficulties in online-based physics learning.

Table 6. Linear regression coefficients

| | | Coefficients ^a | | | | |
|-------|------------|-----------------------------|------------|---------------------------|-------|------|
| | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| Model | | B | Std. Error | Beta | | |
| 1 | (Constant) | 10.384 | 1.405 | | 7.390 | .000 |
| | Teknik | .276 | .047 | .563 | 5.902 | .000 |

From the table above, it can be seen that the Constant (a) value is 10.384 while the Engineering value (b/ regression coefficient) is 0.276 so that the regression equation can be written:

$$Y = a + bX$$

$$Y = 10.384 + 0.276X$$

Information:

- The constant of 10.384 means that the consistent value of the Internal variable is 10.384.
- The X regression coefficient of 0.276 states that for every 1% tethering of the technical value, the Internal value increases by 0.276. The regression coefficient is positive, so it can be said that the direction of the influence of the variable X on Y is positive.

Decision making in the Simple Regression test:

- Based on the significance value: the coefficients table obtained a significance value of $0.000 < 0.05$ so it can be concluded that the Trust(X) variable has an effect on the Participation variable (Y).
- Based on the t value: it is known that the tcount value is $5,902 < ttable 7,390$ so it can be concluded that the Trust(X) variable has no effect on the Participation variable (Y)

b. Linear Regression Test Between Learning Implementation Indicators and Internal Factor Indicators.

This linear regression test is used to see the extent to which the influence between the indicators of the implementation of learning and the indicators of internal factors on students' difficulties in online-based physics learning.

Table 7. Linear regression coefficients

| | | Coefficients ^a | | | | |
|-------|--------------------------|-----------------------------|------------|---------------------------|-------|------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 7.282 | 1.452 | | 5.016 | .000 |
| | Pelaksanaan Pembelajaran | .403 | .051 | .672 | 7.856 | .000 |

From the table above, it can be seen that the Constant (a) value is 7.282 while the Engineering value (b/ regression coefficient) is 0.403 so that the regression equation can be written:

$$Y = a + bX$$

$$Y = 7.282 + 0.403X$$

Information:

- The constant of 7.282 means that the consistent value of the Internal variable is 7.282.
- The X regression coefficient of 0.403 states that for every 1% increase in the value of the implementation of learning, the Internal value increases by 0.403. The regression coefficient is positive, so it can be said that the direction of the influence of the variable X on Y is positive.

Decision making in the Simple Regression test

- 1) Based on the significance value: the coefficients table obtained a significance value of $0.000 < 0.05$ so it can be concluded that the Trust(X) variable has an effect on the Participation variable (Y).
- 2) Based on the t value: it is known that the tcount value is $7.856 < t_{table} 5.016$ so it can be concluded that the Trust variable (X) has an effect on the Participation variable (Y).

c. Linear Regression Test Between External Factor Indicators and Internal Factor Indicators

This linear regression test is used to see the extent of the influence between external factor indicators and internal factor indicators on student difficulties in online-based physics learning.

Table 8. Linear regression coefficients

| | | Coefficients ^a | | | | |
|-------|------------|-----------------------------|------------|---------------------------|--------|------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 14.321 | 1.323 | | 10.828 | .000 |
| | Eksternal | .306 | .095 | .349 | 3.221 | .002 |

4

From the table above, it can be seen that the Constant (a) value is 14,321 while the External value (b/ regression coefficient) is 0.306 so that the regression equation can be written:

$$Y = a + bX$$
$$Y = 14.321 + 0.306X$$

Information:

- The constant of 14.321 means that the consistent value of the Internal variable is 14.321.
- The X regression coefficient of 0.306 states that for every 1% tethering of the External value, the Internal value will increase by 0.306. The regression coefficient is positive, so it can be said that the direction of the influence of the variable X on Y is positive.

Decision making in the Simple Regression test

- 1) Based on the significance value: the coefficients table obtained a significance value of $0.002 < 0.05$ so it can be concluded that the Trust variable (X) has an effect on the Participation variable (Y).
- 2) Based on the t value: it is known that the tcount value is $3,221 < t_{table} 10,828$ so it can be concluded that the Trust(X) variable has no effect on the Participation variable (Y).

4 Conclusions

Based on the research results obtained, it can be concluded that students often experience difficulties in online-based physics learning, including internal factor indicators. This indicator is most often experienced by students in online-based physics learning. Students have difficulty in learning physics based online on internal factor indicators. In this case, students have difficulty because learning physics is difficult and boring, students are less active in participating in physics learning, and students are also less confident in expressing opinions about the physics material presented. Of the four indicators used, the results showed that there was an influence between indicators of learning implementation and indicators of internal factors.

References

- [1] Cucinotta, D., & Vanelli, M. (2020). WHO declares COVID-19 a pandemic. *Acta Bio Medica: Atenei Parmensis*, 91(1), 157.
- [2] Ningsih, S. (2020). Persepsi Mahasiswa Terhadap Pembelajaran Daring Pada Masa Pandemi Covid-19. *JINOTEP (Jurnal Inovasi Dan Teknologi Pembelajaran): Kajian Dan Riset Dalam Teknologi Pembelajaran*, 7(2), 124-132.
- [3] Khusna, A., Dyana, N. P., & Arif, L. (2020). Persepsi Siswa Terhadap Sistem Pembelajaran Daring Di SMP Muhammadiyah 1 Sidoarjo. *Prosiding Konferensi Nasional Administrasi Negara Sinagara 2020*.
- [4] Arifa, F. N. (2020). Tantangan Pelaksanaan Kebijakan Belajar Dari Rumah Dalam Masa Darurat Covid-19. *Jakarta*.
- [5] Aji, R. H. S. (2020). Dampak COVID-19 pada pendidikan di Indonesia: Sekolah, keterampilan, dan proses pembelajaran. *Salam: Jurnal Sosial dan Budaya Syar-i*, (7), 5, 395-402.
- [6] Amelia, Y., & Darussyamsu, R. (2020). Persepsi siswa terhadap pembelajaran online mata pelajaran biologi di masa pandemi Covid-19. *Bioilmi: Jurnal Pendidikan*, 6(2), 86-93.
- [7] Bagaskara, R. F. (2021). Analisis Dampak COVID-19 Pada Pembelajaran Fisika di SMA Negeri Kota Tangerang Selatan (Bachelor's thesis, FITK UIN SYARIF HIDAYATULLAH JAKARTA).
- [8] Pathoni, H. Rohati dan Nazarudin. (2015). Peningkatkan Pemahaman Konsep Fisika Dan Aktifitas Mahasiswa Dengan Model Pembelajaran Inquiry Terbimbing Media Animasi. *Jurnal Inovasi Dan Pembelajaran Fisika*, 2(2), 119-122.

- [9] Pasaribu, D. S., Hendri, M., & Susanti, N. (2017). Upaya meningkatkan minat dan hasil belajar fisika siswa dengan menggunakan model pembelajaran talking stick pada materi listrik dinamis di kelas X SMAN 10 Muaro Jambi. *Edufisika: Jurnal Pendidikan Fisika*, 2(01), 61-69.
- [10] Yanti, F., Astalini, A., & Kurniawan, W. (2019). Pengembangan Media Pembelajaran Fisika Menggunakan SWiSH Max4 Memahami Konsep Momentum Impuls dan Tumbukan Di SMA. *Edufisika: Jurnal Pendidikan Fisika*, 4(01), 92-100.
- [11] Masyithah, D. C., & Pathoni, H. (2017). Pengembangan Multimedia Fisika Berbasis Model Pembelajaran Inkuiri Terbimbing dengan Menggunakan Adobe Flash CS6 pada Materi Fluida Dinamis Untuk Siswa SMA Kelas XI. *Edufisika: Jurnal Pendidikan Fisika*, 2(01), 51-60.
- [12] Hidayat, M. (2021). Identifikasi Kesulitan Siswa Dalam Pembelajaran Online Pada Mata Pelajaran Fisika Kelas XI MIPA di SMAN 11 Muaro Jambi (Doctoral dissertation, Universitas Jambi).
- [13] Isnaini, D. (2020). Kesulitan Siswa Kelas VII Dalam Pembelajaran Matematika Berbasis Daring Di SMP Negeri 2 Tuntang Tahun Pelajaran 2019/2020. Skripsi Pendidikan Matematika.
- [14] Astalini, A., Kurniawan, D. A., & Sumaryanti, S. (2018). Sikap siswa terhadap pelajaran fisika di sman kabupaten Batanghari. *JIPF (Jurnal Ilmu Pendidikan Fisika)*, 3(2), 59-64.
- [15] Mundilarto. 2012. Pola Pendekatan Mahasiswa dalam Memecahkan Soal Fisika. Disertasi. Bandung: Pasca Sarjana Universitas Pendidikan Indonesia.
- [16] Ali Sadikin, A. H. (2020). Pembelajaran Daring di Tengah Wabah Covid-19. *Jurnal Ilmiah Pendidikan Biologi*. Vol. 6 No.2: hlm. 214-224
- [17] Yusdira Amalia, E. K. A., Usmar, A., & Walid, A. (2021). Analisis Kesulitan Belajar Siswa Pada Mata Pelajaran Matematika Melalui Sistem Pembelajaran Daring Di Sekolah Menengah Pertama Negeri 08 Kota Lubuklinggau (Doctoral Dissertation, UIN Sulthan Thaha Saifuddin Jambi).
- [18] Sudarsana, I. K. (2020). Pembelajaran Dalam Jaringan dan Upaya Memutus Pandemi Covid-19. COVID-19: Perspektif Pendidikan, 1.
- [19] Achmad, M. (2014). Pengaruh Lingkungan Belajar, Kebiasaan Belajar dan Motivasi Belajar Terhadap Hasil Belajar Perakitan Komputer Siswa Kelas X Program Keahlian Teknik Komputer dan Jaringan di SMK Ma'arif 1 Wates Tahun Ajaran 2013/2014.
- [20] Wahyu Kurniawati, U. P. Y. (2016). Pengaruh Dukungan Orang Tua Dan Motivasi Belajar Terhadap Prestasi Belajar IPS Siswa Kelas V SD Se-Gugus Kartini Kecamatan Buayan Kabupaten Kebumen. Universitas PGRI Yogyakarta.
- [21] Seno, W. P. B. (2020). Analisis Kesulitan Siswa Dalam Pembelajaran Daring Materi Statistika Mata Pelajaran Matematika Pada Mts Negeri di Grobogan.
- [22] Fauzy, A., & Nurfauziah, P. (2021). Kesulitan Pembelajaran Daring Matematika Pada Masa Pandemi COVID-19 di SMP Muslimin Cililin. *Jurnal Cendekia: Jurnal Pendidikan Matematika*, 5(1), 551-561.
- [23] Karlina, B. (2015). Pengaruh Manajemen Fasilitas Terhadap Mutu Layanan Diklat Di Pusat Pengembangan Dan Pemberdayaan Pendidik Dan Tenaga Kependidikan Bidang Mesin Dan Teknik Industri (PPPPTK BMTI) BANDUNG (Doctoral dissertation, Universitas Pendidikan Indonesia).
- [24] Hidayatulloh, A. (2021). Persepsi Siswa Terhadap Pembelajaran Daring Pada Mata Pelajaran Fisika. *JURNAL SANGKAREANG MATARAM*, 8(1), 63-66.
- [25] Sari, Pusvyta. 2015. Memotivasi Belajar dengan Menggunakan E-learning. *Jurnal Ummul Qura* 6(2): 20-35
- [26] Dani, R., Latifah, N, A dan Putri, S, A. (2019). Penerapan Pembelajaran Berbasis Discovery Learning Melalui Metode Talking Stick Untuk Meningkatkan Pemahaman Konsep Gerak Lurus. *Jurnal EduFisika*, 4(2),24-30.
- [27] Kurniawan, D. A., Astalini, A., & Kurniawan, N. (2019). Analisis Sikap Siswa SMP terhadap Mata Pelajaran IPA. *Lentera Pendidikan: Jurnal Ilmu Tarbiyah dan Keguruan*, 22(2), 323-334.
- [28] Utami, S, A., Hendri, M dan Darmaji. (2017). Hubungan Lingkungan Belajar Terhadap Hasil Belajar Fisika Kelas Xi Mia Sman 1 Muaro Jambi. *Jurnal EduFisika*, 02(02), 58-67.
- [29] Bahrn, S., Alifah, S., & Mulyono, S. (2018). Rancang Bangun Sistem Informasi Survey Pemasaran Dan Penjualan Berbasis Web. *TRANSISTOR Elektro Dan Informatika*, 2(2), 81-88.
- [30] Arikunto, S. 2010. "Prosedur Penelitian Suatu Pendekatan Praktik". Jakarta: Rineka Cipta.

- [31] Supriyanto, W., & Iswandari, R. (2017). Kecenderungan Sivitas Akademika dalam Memilih Sumber Referensi untuk Penyusunan Karya Tulis Ilmiah di Perguruan Tinggi. *Berkala Ilmu Perpustakaan Dan Informasi*, 13(1), 79.
- [32] Ismail, I., & AlBahri, F. P. (2019). Perancangan E-Kuisisioner menggunakan CodeIgniter dan React-Js sebagai Tools Pendukung Penelitian. *J-SAKTI (Jurnal Sains Komputer Dan Informatika)*, 3(2), 337-347.
- [33] Sugiyono. 2009. "Metode Penelitian Kuantitatif, Kualitatif dan R&D". Bandung: Alfabeta.
- [34] Sugiyono. 2017. "Metode Penelitian Kuantitatif, Kualitatif dan R&D". Bandung: Alfabeta, CV.

Manogari Sianturi (Student Difficulties Investigation in Physics Subject During Pandemic at SMA Kristen Makedonia, West Kalimantan)

ORIGINALITY REPORT

19%

SIMILARITY INDEX

19%

INTERNET SOURCES

18%

PUBLICATIONS

3%

STUDENT PAPERS

PRIMARY SOURCES

| | | |
|---|--|----|
| 1 | jurnal.stiepemuda.ac.id Internet Source | 5% |
| 2 | jurnal.stie-aas.ac.id Internet Source | 2% |
| 3 | Venasya Permata Zamrud. "The Influence of the Role of Parents on the Learning Achievement of Students of SDN Margorejo III Surabaya", BASICA Journal of Arts and Science in Primary Education, 2024 Publication | 2% |
| 4 | www.enrichment.iocspublisher.org Internet Source | 1% |
| 5 | journal.iain-manado.ac.id Internet Source | 1% |
| 6 | Robby Irvawan, Ade Sutarya. "Analysis of the Effect of Principal Leadership and Job Satisfaction on Teacher Performance (Case Study of SMK Bina Nasional Informatika | 1% |

Bekasi Regency)", Abiwara : Jurnal Vokasi
Administrasi Bisnis, 2021

Publication

| | | |
|----|---|-----|
| 7 | eprints.umsida.ac.id Internet Source | 1 % |
| 8 | A.H.G. Kusumah, C.U. Abdullah, D. Turgarini, M. Ruhimat, O. Ridwanudin, Y. Yuniawati. "Promoting Creative Tourism: Current Issues in Tourism Research", CRC Press, 2021 Publication | 1 % |
| 9 | T. Muhtarom. "HOW THE IMPACT OF SELF REGULATION ON FEAR OF MISSING OUT (FOMO) AND INTERNET ADDICTION ON ELEMENTARY SCHOOL PRE SERVICE TEACHER STUDENTS?", Elementary School: Jurnal Pendidikan dan Pembelajaran ke-SD-an, 2022 Publication | 1 % |
| 10 | repository.umsu.ac.id Internet Source | 1 % |
| 11 | www.coursehero.com Internet Source | 1 % |
| 12 | repository.iainpalopo.ac.id Internet Source | 1 % |
| 13 | inspiree.review Internet Source | 1 % |

14

Arwanto. "Transformation geometry
mathematic connection analysis based on
Etnomatics", AIP Publishing, 2022

Publication

1 %

15

www.researchgate.net

Internet Source

1 %

Exclude quotes On

Exclude bibliography On

Exclude matches < 1%