

## EVALUATION OF THE EFFECTIVENESS ON DISTANCE LEARNING DURING THE COVID-19 PANDEMIC AT POLITEKNIK PELAYARAN MALAHAYATI

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### ABSTRACT

This aim of this study is to determine the effectiveness on distance learning during the Covid-19 Pandemic at Politeknik Pelayaran Malahayati. The type of research that will be used is descriptive research. The descriptive type in this study was to describe the effectiveness on distance learning during the Covid-19 Pandemic in the Politeknik Pelayaran Malahayati. Descriptive research is research conducted to determine the value of independent variables, either one or more (independent) variables without making comparisons, or connecting one variable to another. The Covid-19 pandemic has changed the education system in Indonesia into distance learning using online media. This is done in order to reduce and stop the chain of distribution. The use of information technology in distance learning during the Covid-19 pandemic at Politeknik Pelayaran Malahayati was considered effective by cadets/I in terms of 5 indicators, namely (1) cadet characteristics during long distance learning, (2) cadets' understanding of long distance learning material, (3) Learning tools used by lecturers in long distance learning, (4) Interaction in long distance learning, and (5) cadets' learning achievement. On the other hand, there are still learning weaknesses, namely internet network constraints, the physical usefulness of physical learning is lacking, and the type of task is monotonous. In theoretical courses, long distance learning is very understandable and effective, but practical courses that require direct skills are quite effective, there are still some difficulties for cadets. Educators have a very decisive role in the success of this online learning. Educators must create creative, innovative, and recreational learning methods that stimulate cadets to be willing to be actively involved in online learning and feel the meaning of distance learning.

Keywords: Effectiveness, Distance Learning, Covid-19 Pandemic, Vocational College

### 1. Introducing

The outbreak of the Corona Virus (Covid-19) that has hit parts of the world has affected the life of people from all over the world. Corona virus is a respiratory infection disease such as flu. Several types of corona viruses cause more serious diseases such as Middle East Respiratory Syndrome (MERS), Severe Acute Respiratory Syndrome (SARS), and Pneumonia. A new type of Corona Virus discovered in Wuhan, China, in December 2019, was later named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV2), and caused Coronavirus Disease-2019 (COVID-19).

The spread of the Corona Virus is very fast in various countries. Indonesia is one of the countries infected with Covid-19. Covid-19 prevention efforts are carried out by the government to prevent the spread of covid-19 and reduce the

impact that distance learning is highly recommended for public universities/private universities that have been confirmed to have suspected of Covid-19. Politeknik Pelayaran Malahayati (Polteknik) as a Vocational College conducts Long Distance Learning (LDL) carried out and requires all cadets to study practical and theoretical lecture material with the guidance of lecturers through online using various existing platforms. There are several challenges that arise during LDL, therefore a study is needed to see and find out the achievement of curriculum targets during the Covid-19 Pandemic. Distance learning online at Politeknik Pelayaran Malahayati has advantages and disadvantages in its use. Therefore, the implementation of LDL online needs to know the extent of the effectiveness of LDL so that it can be evaluated to determine new

improvement steps and as a result it will be better and integrated in the future.

Politeknik Pelayaran Malahayati (Poltekpel) as a Vocational College under the Ministry of Transportation, the Human Resources Development Agency responded to government policies in preventing the spread of Covid-19 by implementing learning and working from home or long distance learning (LDL) which was informed to all campus residents through a circular issued on December 28, 2020. LDL requires all cadets to attend the learning which was conducted online in both theoretical and practical courses.

Poltekpel is one of the Vocational Colleges that prepares students to have jobs with maximum applied skills of shipping science that are equivalent to undergraduate programs. The LDL which is carried out within the Poltekpel is an effort to improve the competence of cadets in receiving the best lectures in the conditions of the Covid-19 pandemic. Vocational higher education is programmed to produce graduates who have mastery of science and technology, independent, skilled and trained in accordance with the demands of the industrial world or the world of work. Vocational education aims to equip us with applied or practical skills. The composition of the curriculum is 60% practical and 40% theory.

The effectiveness in this study can be measured through student responses to online questionnaires with indicators of effectiveness of cadet characteristics, cadets' understanding of the material, learning tools used, interaction in LDL and student achievement results. This questionnaire is intended to obtain answers or information about the effectiveness of distance learning during the Covid-19 pandemic at the Politeknik Pelayaran Malahayati

## 2. Research Method

The type of research that will be used is descriptive research. The descriptive type in this study was to describe the effectiveness of distance learning during the Covid-19 Pandemic in Politeknik Pelayaran Malahayati. Descriptive research is research conducted to determine the value of independent variables, either one or more (independent) variables without making comparisons, or connecting one variable to another. The documentation method in this study was used to obtain a list of names and the number of cadets and to determine the data of cadet achievement, IPS and GPA which were obtained.

## 3. Result And Discussion

The effectiveness of long distance learning at Politeknik Pelayaran Malahayati was carried out based on the responses obtained from 193 active cadet respondents at Poltekpel. Determining the effectiveness of LDL in Politeknik Pelayaran Malahayati during the Pandemic is focused on 5 indicators, namely (1) the characteristics of cadets during LDL, (2) cadets' understanding of LDL material, (3) Learning Tools used by lecturers during LDL, (4) Interaction during LDL, and (5) cadets' learning achievement. On variables 2, 3 and 4 there are questions to determine the effectiveness in the form of a questionnaire. The questions were given to respondents are classified from responses to answers on a Likert scale from 1 to 5. Scale 1 means that respondents give answers "strongly disagree" to the questions asked. Scale 2 means that the respondent gives a "disagree" answer to the question asked. Scale 3 means that the respondent gives an answer "Quite agree" to the question asked. A scale of 4 means that the respondent gives an "agree" answer to the question posed. The scale means that the respondent gives a "strongly agree" answer to the question asked.

The following is a description of each indicator:

### 1. Characteristics of cadets during LDL

Based on Table 4.1, the respondents who were taken for this research were 193 cadets level one for the academic year 2021-2022 from all majors at Politeknik Pelayaran Malahayati. Characteristics of cadets during LDL can be described and seen from the activities of cadets during LDL. From the data analysis in Figure 4.1 shows that the activities of cadets during LDL are completing tasks by 81% or as many as 156 cadets, while for activities to help parents 29 cadets or 15% who chose, while the remaining 1.8% of cadets chose playing activities and 1.8% chose other activities.

Physical obstacles experienced by cadets during LDL were physical constraints during LDL were eyestrain by 26% or as many as 50 cadets/i, while for unhealthy bodies 0.4% chose, while the remaining 70% of cadets chose no complaints and 6.2% chose others. In LDL, there are several obstacles experienced by cadets, namely the constraints of facilities and infrastructure during LDL is the location is difficult to reach the internet network by 9.3% or as many as 18 cadets, while for monotonous learning media 18% chose, while the rest 71% of cadets chose limited quota and 2.2% chose others. It can be concluded that the cadets experience problems in facilities and

infrastructure due to the limited internet quota of 137 cadets.

## 2. The cadet's understanding of the LDL material

The effectiveness of cadets' understanding of the material taught by lecturers during PJJ can be seen from the percentage of respondents' results

on 7 questions related to cadets' understanding. The following is a table of questions and the percentage gain for each score.

Table 1. List of Variable Questions Comprehension of cadets

No	Statement Lists
PA1	I can listen, see, read, pay attention, and conclude the material given by the lecturer during LDL
PA2	I can ask questions and give opinions in the discussion forum during LDL
PA3	I can listen, see, hear, ask questions, argue and conclude the practical material given by the lecturer during LDL
PA4	I can complete the practical material assignments given by the lecturer during LDL
PA5	I can concentrate on following LDL from the lecturers
PA6	I can complete assignments independently and on time during LDL
PA7	LDL motivates me to be enthusiastic about learning because I can study in the place and atmosphere that I want.

Descriptive analysis to find out respondents' perceptions of cadets' understanding of the material during LDL at Poltekpel Malahayati is presented in the following figure:

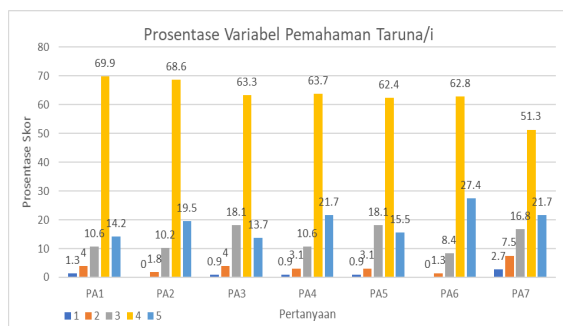


Figure 1. Cadets' Understanding

Based on Figure 4.4, it can be seen that the majority of respondents have a score of 4 for each question item. Percentage for PA1 (69.9%), PA2 (68.6%), PA3 (63.3%), PA4 (63.7%), PA5 (62.4%), PA6 (62.8%), PA7 (51.3) obtained the average percentage gain on this understanding variable is 63.14 at a score of 4, then the variable understanding of cadets towards the PJJ material is effective which can be interpreted if the cadets

can understand practical and theoretical lecture material during LDL given by the lecturer.

## 3. Learning Tools are used by lecturers in LDL

The effectiveness of learning tools are used by lecturers during LDL can be seen from the percentage of respondents' results on 3 questions relating to learning tools used by lecturers for LDL diving following a table of questions and the percentage of each score

Table 2. List of Device Variable Questions

No	Statement Lists
PB1	Media and LDL Applications are used by lecturers (e-learning, zoom, etc.) are very helpful in making it easier for me to understand the material and practical learning (presentations, case studies, practice, etc.).
PB2	The LDL material is delivered by the lecturer is in accordance with the learning objectives.
PB3	Lecturers deliver material using learning resources that are in accordance with the latest information technology.

Descriptive analysis to determine respondents' perceptions of the learning tools used by lecturers during LDL at the Politeknik Pelayaran Malahayati is effective or not presented in the following figure:

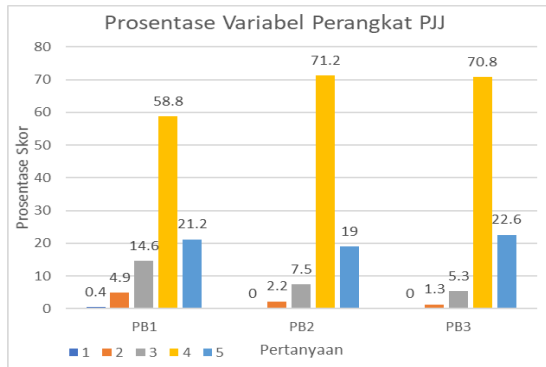


Figure 2. Learning Tools are used

Based on Figure 2, it can be seen that the majority of respondents have a score of 4 for each question item. The percentages for PB1 (58.8%), PB2 (71.2%), PB3 (70.8%) obtained the average percentage gain on the Learning Device variable used was 66.9%, the Learning Device variable used during LDL is effective which can be interpreted that the learning tools used by lecturers during LDL are effective and help cadets in learning.

4. Interaction in LDL

The effectiveness of interaction between lecturers and cadets during LDL can be seen from the percentage of respondents' results on 3 questions. The following is a table of questions and percentage gains for each score. list of Interaction variable Questions in LDL

Table 3. List of Interaction Variable Questions in LDL

No	Statement Lists
PC1	I am very happy with the attitude and behavior of the lecturers during LDL, so that it makes me even more enthusiastic to take part in learning
PC2	I can interact well in discussions with lecturers during LDL
PC3	I'm not bored during LDL with a predetermined duration.

Descriptive analysis to determine respondents' perceptions of the learning tools used by lecturers

during LDL at the Politeknik Pelayaran Malahayati is effective or not presented in the following figure:

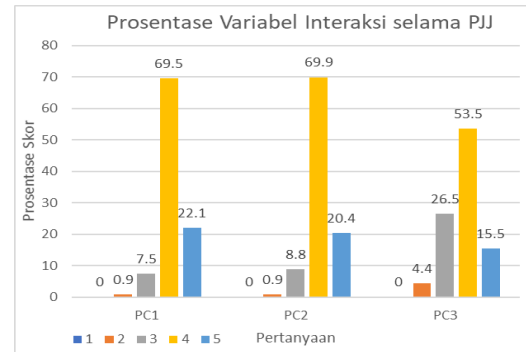


Figure 3. Learning Tools are used

Based on Figure 3, it can be seen that the majority of respondents have a score of 4 for each question item. The percentage for PC1 (69.5%), PC2 (69.9%), PB3 (53.5%) obtained the average percentage gain on the Learning Device variable used was 64.3% at a score of 4, then the lecturer interaction variable and cadets during LDL is effective which means that lecturers and cadets can interact well together during LDL.

5. Cadets Achievement

The achievement of cadets' learning achievement can be seen from the average GPA and SAI during LDL. In this study, to see the academic achievement of cadets, it is seen from the average semester achievement index and cumulative achievement index of all majors at cadets level 1 cadets for the 2021/2022 academic year.

Table 4. Results of Semester Achievement Index (SAI) and Grade Point Average (GPA)

STUDY PROGRAM	SEMESTER	PRACTICAL SCORE	THEORY SCORE
DIPLOMA III OF NAUTICAL STUDY	ER COMM ULATIV	3,34	3,37
DIPLOMA III OF SHIP ENGINEERING	ER COMM ULATIV	3,31	3,41
DIPLOMA III SHIP ELECTRICITY SYSTEM	ER COMM ULATIV	3,34	3,34
	ER COMM ULATIV	3,30	3,32
	ER COMM ULATIV	3,21	3,23

The D-III Department of Nautical Studies in theory courses has an average social studies average of 3.37 and a GPA of 3.38 for social studies practical courses of 3.34 and a GPA of 3.33. This shows that social studies in practical courses are lower than theoretical subjects. The D-III Department of Ship Engineering in the theoretical course has an average social studies score of 3.41 and a GPA of 3.34 for social studies practical courses of 3.31 and a GPA of 3.34. The D-III Department of Ship Electrical System in the theoretical course has an average social studies average of 3.32 and a GPA of 3.23 for social studies practical courses of 3.30 and a GPA of 3.21. This shows that the GPA in practical and theoretical subjects is lower than the practical and theoretical SAI scores.

#### 4. Conclusion

The Covid-19 pandemic has changed the education system in Indonesia into long distance learning using online media. This is done in order to reduce and stop the chain of distribution. The use of information technology in long distance learning during the Covid-19 pandemic at the Politeknik Pelayaran Malahayati was considered effective by cadets in terms of 5 indicators, namely (1) cadet characteristics during LDL, (2) cadets' understanding of LDL material, (3) Learning tools used by lecturers in LDL, (4) Interaction in LDL, and (5) cadets' learning achievement. However, there are still learning weaknesses, namely internet network constraints, the physical usefulness of physical learning is lacking, and the types of tasks are monotonous. In theoretical courses, LDL is very understandable and effective, but practical courses that require direct skills are quite effective but there are still some difficulties for cadets. Educators have a very decisive role in the success of this online learning. Educators must create creative, innovative, and recreational learning methods that stimulate cadets to be willing to be actively involved in online learning and feel the meaning of distance learning.

For further research, it is hoped that the data collection process is not only based on the questionnaire instrument, but it is necessary to conduct direct interviews with respondents to ensure the truth of the data obtained. Expanding the research objects and samples as a whole in the Polteknepel environment. Conducting the evaluations and more detailed studies on indicators and variable measurements, so that the

questions are used actually measure variables accurately/validly.

#### References

- Aubyn, M. S. (2008). Study on the efficiency and effectiveness of public spending on tertiary Education. *Third report: Technical University of Lisbon. European Communities.*, ISBN 978-92-79-13365-7 .DOI: 10.2765/30348.
- CDC USA. (2021, Februari 22). *Symptoms Centers for Disease Control and Prevention.*. Retrieved from U.S. Department of Health & Human Services: <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>
- Ceraolo, C., & Giorgi, F. M. (2020). Genomic variance of the 2019-nCoV coronavirus. *Jornal Of Medical Virology Wiley, J Med Virol.* 92:522–528.
- Cromley, Jennifer. (2000). Learning to Think, Learning to Learn: What The Science Of Thinking And Learning Has To Offer Adult Education. . *Produced under a National Institute for Literacy. National Institute for Literacy.*
- Darsono, H., Fitri, N. A., Rahardjo, B., Imanuela, M. Z., & Lasambouw, M. C. (2020). Efektivitas Pembelajaran Jarak Jauh saat Pandemi Covid-19. *Prosiding the 11th. Industrial Research workshop and nasional Seminar*, (pp. 26-27). Bandung.
- Dewantara, J. A., & Nurgiansah, T. H. (2021). Efektivitas Pembelajaran Daring di Masa Pandemi COVID 19 Bagi Mahasiswa Universitas PGRI Yogyakarta. *Jurnal Basicedu Volume 5 Nomor 1*, 367-375.
- Eggen, P., & Kauchak, D. (2012). *Strategi dan Model Pembelajaran: Edisi Keenam*. Jakarta Barat: Indeks.
- Gagne, B. d. (2014). Principle of Instructional Design. . . *Duolingo Effectiveness Study. Final Report.*, Second. Edition, Holt, Rinehart and Winston; New York Grego, John & Vesselinov, Roumen.
- Gomes, F. C. (2000). *Managemen Sumber Daya Manusia ;Edisi I*. Yogyakarta: Andi Offset .
- Handayani, D., Hadi, R. D., Ishbaniah, F., Burhan, E., & Agustin, H. (2020). Penyakit Virus Corona 2019. *Jurnal Respirologi Indonesia, J Respir Indo Vol. 40 No. 2 April 2020.*
- Ihsanuddin. (2020, 3 3). *Fakta Lengkap Kasus Pertama Virus Corona di Indonesia*. Retrieved from nasional.kompas.com: <https://nasional.kompas.com/read/2020/03/0>

- 3/06314981/fakta-lengkap-kasus-pertama-virus-corona-di-indonesia?page=all
- Kemendikbud. (2020). PANDUAN PEMBELAJARAN JARAK JAUH Bagi GURU selama Sekolah Tutup dan Pandemi Covid-19 dengan semangat Merdeka Belajar. *DIREKTORAT JENDERAL GURU DAN TENAGA KEPENDIDIKAN*.
- Kemendes. (2020). Frequently Asked Questions (FAQ) COVID-19. *Coronavirus Disease 2019 (COVID-19)*, 1-9.
- Kementerian Pendidikan Tinggi Republik Indonesia. (2020). Surat Edaran Direktur Jenderal Pendidikan Tinggi Republik Indonesia. *Pencegahan Penyebaran Corona Virus Disease (COVID-19) di Perguruan Tinggi*, 1-2.
- Kozloff, M. A. (1999). Direct Instruction In Education. *University of North Carolina at Wilmington. Achievement Charter Systems*.
- Lukiyadi. (2008). Efektivitas Sistem Belajar Jarak Jauh dalam Penyelenggaraan Program Pendidikan Guru Sekolah Dasar. *Universitas Terbuka di UPBJJ Surabaya*, Didaktika, Vol.2 No.2 Maret: 304--312.
- Miarso, Y. (2004). Menyemai Benih Teknologi Penelitian. Jakarta: Pranada Media.
- Morrison, G. R., Ross, S. M., Kalman, H. K., & Kemp, J. E. (2011). *Designing Effective Instruction Sixth Edition Gary*. United States of America : John Wiley fc Sons, Inc ISBN 13 978-0-470-52282-0.
- RISTEKDIKTI. (2016). *Panduan Teknologi Pembelajaran Vokasi*. Jakarta: Direktorat Jenderal Pembelajaran dan Kemahasiswaan Kementerian Riset Teknologi dan Pendidikan Tinggi .
- Sari, D. R., & Amrozi, F. (2020). Analisis Efektivitas Pembelajaran Jarak Jauh (PJJ) di Politeknik Penerbangan Surabaya. *Jurnal Penelitian Politeknik Penerbangan Surabaya*, Edisi XXVIII, Vol 5, No 2.
- Sekertariat Nasional, K. (2020). PEDOMAN PELAKSANAAN BELAJAR DARI RUMAH SELAMA DARURAT BENCANA COVID-19 di Indonesia. *Surat Edaran Sekretaris Jenderal Satuan Pendidikan Aman Bencana*, 1-16 No.15 Tahun 2020 .
- Slameto. (2001). *Belajar dan Faktor-Faktor yang Mempengaruhinya*. Jakarta: PT Rineka Cipta.
- Suharsimi, A. (2006). *Prosedur Penelitian Suatu Pendekatan Praktik*. (Jakarta: PT. Rineka Cipta, hlm. 118.
- Tanzeg, A. (2009). *Pengantar Metode Penelitian*. Yogyakarta: Teras,h-57.
- Trianto. (2009). *Mendesain Model Pembelajaran Inovatif Progresif*. Jakarta: Media Kencana.
- WHO. (2020). Transmisi SARS-CoV-2: implikasi terhadap kewaspadaan pencegahan infeksi. *Pernyataan keilmuan Worl Healt Organization*, 1-10.
- WHO, W. H. (2020, July 31). Convened Global Study of the Origin of SARS-CoV-2 Terms of References for the China Part. *Terms of references – FINAL DRAFT*, 1-9.