

## **Student's Perception Regarding E-Learning in Pandemic Covid-19: A Case Study at Maria Bintang Laut Junior High School**

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### **ABSTRACT**

COVID-19 causes schools to close and applies e-learning. Framed within the quantitative method, this study was aimed to identify students' perceptions of online learning. A questionnaire consisting of six statements was given to 1 student in grades 7 and 8. The population in this study amounted to one hundred and fifty-nine. The sampling in this study amounted to one hundred forty-two students and using a random sampling technique. The data were analyzed using the Statistical Program for Social Sciences (SPSS) v.20. Before data analysis was carried out, the research instruments were examined using the Product Moment Pearson correlation to assess its validity and reliability. The test results indicated that the instrument used was sufficiently valid and reliable, with each indicator having a count-r > r-table (0.514). The study results show that student responses to the first statement about online learning implementation show that more than 50% of students respond positively. 59% of students agree with the application of online learning. The study results imply that students in remote areas also have good perceptions of online learning implementation. Therefore, preparations need to be made to implement online learning optimally.

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## **INTRODUCTION**

COVID-19 was declared a global public health emergency of worldwide concern by the World Health Organization (WHO) on January 30th, 2020, and a pandemic on March 11th, 2020 (Cucinotta & Vanelli, 2020). The first two cases of COVID-19 in Indonesia were announced by the President of Indonesia, Joko Widodo, on March 2nd, 2020 (The Jakarta Post). By May 8th, more than 12.776 cases and 930 deaths were reported in all 34 provinces (UNICEF, 2020). Considering the viruses spreading at various educational institutions, the Indonesian Minister of Education and Culture finally issued Circulation Letter Number 4 2020. Through the letter, the

Indonesian Ministry of Education and Culture emphasizes learning from home, ranging from the early childhood institution to the university or other higher institutions during the pandemic of Covid-19.

The spread of the Covid-19 pandemic brings many impacts on various sectors in human life, including education. The changing of the education system is perceived all over the world. The World Economic Forum announced that COVID-19 has resulted in school closures all over the world. Over 1.2 billion children in the globe are out of the classroom. This results in changing the traditional learning method in which learning is conducted face-to-face in the classroom into virtual or e-learning. Over 120 countries have enforced social distancing through school closures, affecting 1.6 billion students worldwide (Azzi & Shmis, 2020). Indonesia closed all schools in early March, leaving nearly 60 million students out of school (UNICEF, 2020). Schools were asked to facilitate home-based learning using government and private digital platforms that provide free distance and online learning content and opportunities across the country.

Online learning is the acquisition of knowledge that occurs through electronic media and technology. Stern (2018) pointed out that online learning refers to e-learning or electronic learning, gaining knowledge through media and electronic technologies. In line with this, (Howlett et al., 2009) pointed out that e-learning means using information and technology to improve the learning process's quality. Many scholars have defined online learning as the use of information and communication technologies to enable access to online learning/teaching resources (Arkofur & Abaidoo, 2015); (Abbad et al., 2010); (Zhang et al., 2004). The Organization for Economic Co-Operation and Development (OCED), online learning is defined as using information and communication technologies in various educational processes to promote and enhance learning in higher education institutions and includes information and communication technology as a complement to traditional classrooms (OECD, 2005). It can be concluded that online learning is a learning process that is carried out using learning tools such as smartphones or computers connected to the internet network. The presentation of learning resources can be done by utilizing available software to facilitate learning through interactions between people and systems.

Since online learning is conducted remotely, to conduct learning, both students and teachers need learning instruments to support the teaching and learning process to take place. Nedeva (2010) pointed out that online learning using electronic applications and processes to learn. Dewi (2020) proposed that virtual learning can be done using online learning applications such as WhatsApp, Schoology, Google Classroom, Zoom, *Rumah Belajar*, video conference, live chat, etc. Besides online learning applications, the availability of tools for learning instruments is equally to support online learning. The term e-learning refers to the attainment and use of knowledge predominantly facilitated and distributed by electronic means (Arkofur & Abaidoo (2015). Therefore, e-learning depends on computers and networks. However, it is likely to progress into systems comprising various channels, such as wireless and satellite, and technologies such as cellular phones.

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multimedia materials are heavily used in e-learning systems, a high-bandwidth network is an essential requirement for efficient content access. Tao et al. (2006) proposed that this new learning environment, based entirely on electronic networks, has enabled university learners to obtain individualized support and have learning schedules convenient for them and different from other learners. Online learning relies on the availability of instruments that support the learning process and adequate internet access. Without smartphones, laptops, computers, and a good internet network, the online learning process cannot be carried out as expected.

Regarding the implementation of online learning, there are challenges to overcome. Some students struggle to participate in online learning; this gap is seen across countries and between income brackets within countries, according to the OECD data, only 34% in Indonesia. In comparison, 95% of students in Switzerland, Norway, and Austria have a computer to use for their schoolwork. While some governments and schools have been providing digital equipment to students in need, such as in Australia, New South Wales, many are still concerned that the pandemic will widen the digital divide. There is a massive difference between people from privileged and disadvantaged backgrounds in the US: while nearly all 15-year-olds from a wealthy family said they had a computer to work on, almost 25 per cent of those from deprived backgrounds did not. Family economic factors are one of the determinants of the implementation of online learning for students. Those who have good economic conditions do not face difficulties in implementing this online learning. Students with economic family backgrounds who are less well off experience difficulties in the application of online learning.

Referring to the Indonesian Ministry of Education regulations, online learning is chosen as a solution to be applied to every education unit level during the pandemic. In some cases, the implementation of online learning can not easily be conducted in several schools. For learners who live in remote areas in Indonesia, online learning is only a discourse echoed through this pandemic without actual practice. The lack of an instrument for online learning and communication facilities in several Indonesian regions is an issue for implementing online learning. This is because Indonesia is not optimally implementing e-learning for some reasons, such as limited access to the internet and lack of online learning instruments.

There were several studies have been conducted to analyze the implementation of online learning in Indonesia. Rahardjo et al. (2016) conducted a study to analyze the relationship between internet access and usage in improving students' self-directed learning using a structural equation model method. The survey was carried out in seven Indonesian Open University Surakarta Regional Office districts, with a sample size of 320 respondents. The results show that internet use is still lacking due to limited internet facilities that influence students' knowledge and access to the internet. In her study, Pratiwi (2020) dealt with online learning activities at a Christian university after stipulating all learning activities carried out from home in online mode. Results, online learning activities at this university have been practical by utilizing Zoom, Google Classroom, Schoology, and Edmodo applications. Internet connectivity issues mostly cause the barrier in applying online learning. Good internet connectivity is needed so that learning runs smoothly.

In terms of perception, Rasmitadila et al. (2020) explored primary school teachers' perceptions of online learning in a program developed in Indonesia called school from home during the COVID-19 pandemic. Data were obtained through surveys and semi-structured interviews with

sixty-seven (67) class teachers in primary schools. The data analysis used thematic analysis of qualitative data. The findings revealed four key themes: namely instructional strategies, challenges, support, and motivation of teachers. This study's instructional strategies included objectives, learning steps, methods, media, time, and learning assessments. Teachers' challenges in an online environment during school from home include four sub-themes: technical obstacles, student conditioning, students' participation, and online teaching experience. Support from colleagues, principals, and schools was badly needed to make learning from home run smoothly. The last theme found in this study is motivation. Three things have influenced teacher motivation during school from home: a teacher's spirit in carrying out online learning, a teacher's enthusiasm, and the duties and obligations of a teacher. Instructional strategies, challenges, support, and teachers' motivation are essential factors that support online learning success. Without the presence of one aspect, the online learning process cannot be carried out correctly.

Setyawan et al. (2020) explored significant obstacles in conducting online learning in college students. The findings showed that the learners' three main barriers to online learning are the availability and sustainability of internet connection; the second is the media for accessibility. The last is the compatibility of the tools to access the media. The results of the current study suggest that accessibility is still the primary factor influencing online learning success. Online learning for the English Language Education Study Program at STKIP Pamane Talino, and potentially Indonesia, requires more friendly platforms to increase learners' participation. Mostly for students who reside in rural areas with limited internet connections and other support systems.

Smart and Kapel (2006) examined students' perceptions of integrating online components in two undergraduate business courses where students completed online learning modules before class discussion. The results indicate that participants in an elective course rated the online modules significantly better than those in a required course. Overall, the elective course participants rated the online modules marginally positive, while those in the required course rated them marginally negative. Lasfeto and Ulfa (2020) emphasized the relationship between self-directed learning and students' social interaction in an online learning environment. This study showed a significant relationship between students' self-directed learning readiness (SDLR) and their social interaction, and there were different social interactions between students based on their SDLR levels.

Although many studies have been conducted to explore the exciting phenomena behind online learning implementation, there are still many untested problems related to online learning, especially in remote areas (*outermost, lagging, leading*) in eastern Indonesia. The 3T area is an underdeveloped, main, and outermost area in Indonesia. Most of the 3T areas are gateways to Indonesian borders. The regions far from the provincial capital have hampered economic growth due to uneven infrastructure development. SMP Maria Bintang Laut is a private school under the Stella Maris Foundation, located in Ponu Village, Biboki Anleu District, North Central Timor Regency, East Nusa Tenggara Province. The school is located on the border between Indonesia and Timor Leste. North Central Timor Regency is one of the districts included in the 3T area list. Still, in 2020 the North Central Timor district will no longer be included in the 3T area category. However, the Biboki Anleu sub-district, where the school is located, is still arguably left behind because some areas do not have infrastructure facilities, which is not sufficient.

The outbreak of the Covid-19 pandemic in early 2020 forced schools in Indonesia to conduct online learning. However, due to students' and teachers' several obstacles, this school's learning process is carried out by conducting home visits to provide students with lessons. Besides, psychologically, students like e-learning activities. Students feel more comfortable if they do not meet face to face with the teacher directly. Thus students can focus more on the material presented by the teacher. This phenomenon is interesting because the echo of online learning can only be implemented in several Indonesian regions; for students in a remote area, online learning is only a discourse without practice. Even online learning has been introduced for a long time in educational institutions. For students, especially in remote areas, online learning still becomes a hot issue amidst the current massive technological developments.

Limited access to the internet still becomes the barriers to implementing online learning (Rahardjo et al., 2016; Pratiwi, 2020; Setyawan et al. (2020). Moreover, (Rasmitadila et al., 2020) state that various parties' support is an essential factor in determining online learning implementation. Lasfeto and Ulfa (2020) highlighted the relationship between self-directed learning and learners' social interaction in an online learning environment. No study was conducted to explore students' perception regarding online learning implementation, especially in remote areas. This study aims to bridge the gap in this field and provide a new vision region of online learning in remote areas. For this reason, the following question is searching for an answer: What is students' perceptions of online learning? From this statement, the purpose of this study is to see student perception and expectation of e-learning.

## **METHODS**

This research was a quantitative method. Data collection was done using a questionnaire; it was distributed to 142 students at Maria Bintang Laut junior high school, a private school located in North Central Timor regency, East Nusa Tenggara province. The study was conducted at the beginning of the second semester in 2019-2020. One hundred fifty-nine respondents filled out the questionnaire, but only 142 could be analyzed further. One hundred fifty-nine students determined the sample because it is only given to 7 and 8-grade students only. At that time, 9th grade was off. Overall, the research sample consisted of 142 Maria Bintang Laut students. The number of male respondents was 70 (49%), and 72 (51%) female students participated in this study. Due to the distance of student settlements and time constraints, not all students participated in this study. Only grade 7 and 8 students were taken as the research sample.

The study is designed as survey research because it investigates the learner's perception of online learning in various variables. Babbie (1990), as cited in Creswell (2008), proposed that survey research provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying that population sample. It includes cross-sectional and longitudinal studies using questionnaires or structured interviews for data collection, with the intent of generalizing from a sample to a population.

On May 11<sup>th</sup>, 2020, a questionnaire was distributed to 142 students when a teacher was doing a home visit. A letter of permission from the headmaster was given to convince them to fill the questionnaires. The questionnaire was written in the Indonesian language to get accurate information from respondents. The questionnaire consists of two parts. In the first part of the

survey, students were asked to enter their demographic details (gender, year of study) and state whether they had online learning instruments (mobile phones). In the second part, respondents were given six questions regarding their perception of online learning in terms of perceived usefulness and ease of use using Davis's theory (1986). The Likert Scale questionnaire with five responses, including strongly disagree, not agree, neutral, agree, and strongly agree, in online learning activities. Six developed statements were stated in Indonesian and then translated to English in this article. All statements were evaluated to get validity and reliability. The survey data was analyzed using the Statistical Program for Social Sciences (SPSS) v.20. Students' perception was analyzed by using descriptive statistics, namely percentage. Students' responses were analyzed using the content analysis technique. All statistical components were analyzed by using the SPSS program.

## **RESULTS AND DISCUSSION**

### **Validity and Reliability**

Before data analysis was carried out, the research instruments were examined using the Product Moment Pearson correlation to assess its validity and reliability. The test result indicated that the instrument used was sufficiently valid and reliable, with each indicator had a count- $r > r$ -table (0.514). The results of the validity and reliability of students' perception regarding online learning are presented in the following table:

Variables	r-table	r-count	Valid/ Not Valid
The opinion about the implementation of online learning	0.601	0.514	Valid
I believe that online learning is suitable for my learning style	0.719	0.514	Valid
I know learning allows me to study whenever and wherever	0.792	0.514	Valid
I believe that online learning facilitates my learning needs	0.829	0.514	Valid
I believe that online learning is an effective learning process	0.787	0.514	Valid
I have a great willingness to accept online learning in the future	0.828	0.514	Valid

Table 1: Instruments validity

### **Respondents Characteristics**

The characteristics of junior high school students are shown in Table 2. Among the 142 students, male 70 (49%) were males, and 72 (51%) were females. Among the respondents, 89 (63%) students were in their first year in the school, and 53 (37%) were in the second school year. 43 (30%) of the learners pointed out that they possess a mobile phone; meanwhile, 99 (70%) learners state that they did not possess a mobile phone. The characteristic of the respondents can be seen in the following table:

Respondent												
Sex		Class							Year in School		Possess smartphone	
M	F	7A	7B	7C	7D	8A	8B	8C	1 <sup>st</sup>	2 <sup>nd</sup>	Yes	No
70	72	21	21	25	22	21	18	14	89	53	43	99
49%	52%	15%	15%	17%	15%	15%	13%	10%	63%	37%	30%	79%

Table 2: Study population characteristics

### Data Analysis

Based on Table 3, it is known that the majority of students gave positive responses to each item of the statement. There were more than 50 students who agreed and strongly agreed with every statement. Students selected all statements with varying percentages.

NO	STATEMENTS	PERCENTAGE				
		SD	NA	N	A	SA
1	The opinion about the implementation of online learning	6	29	24	68	15
		4%	20%	17%	48%	11
2	Perception regarding online learning is suitable for learner's learning style	4	42	30	49	17
		3%	30%	21%	35%	11%
3	The point of view about online learning allows students to study whenever and wherever	3	33	24	63	19
		2%	23%	17%	44%	14%
4	The perception that online learning can facilitate my learning needs	11	28	17	65	21
		8%	19%	12%	46%	15%
5	The opinion that online learning is an effective learning process	7	30	23	68	14
		5%	21%	16%	48%	10%
6	Perception to accept online learning in the future	5	31	21	72	13
		3%	22%	15%	51%	9%

Table 3: Student responses to the questionnaire. Frequency distribution (%) and frequency response

Student responses to the first item's online learning implementation statement showed that more than 50% of students responded positively. 48% of male students agree with the application of online learning. Meanwhile, 35% of female students agreed with the implementation of online learning during the Covid-19 pandemic. Furthermore, 20% of male students answered disagree, and 30% of female students also answered disagree. This shows that students' interest in online learning is very high. Unfortunately, the application of e-learning during the Covid-19 pandemic was very challenging, especially in eastern Indonesia. Although the current technological evolution allows many things to happen, including in the learning process, on the other hand, students in the 3T region only have the desire to learn online. It cannot be denied that the transition from conventional learning models to e-learning is not as smooth as desired. Based on OECD

data, only 34% in Indonesia have computers to do school work. From the data collected in this study, 99 (79%) students did not own smartphones. In line with this, based on the US's OECD data, there is a significant gap between those from fortunate and disadvantaged backgrounds: while nearly all 15-year-olds from privileged backgrounds say they have a computer to work with, nearly 25 % of those with unlucky backgrounds do not. Various obstacles, such as facilities and infrastructure, are still the obstacles behind online learning implementation. In line with this, (Rahardjo et al., 2016; Setyawan et al., 2020) proposed that internet connectivity issues mainly cause the barrier in applying online learning. Rural schools face many different challenges from urban, suburban, and urban school constraints of rural areas with high socioeconomic populations. The lack of computer and internet access at home, limited learning facilities, and infrastructure development still far from expectations have made schools take the policy to conduct door-to-door learning. The solution to this problem is that the teacher makes home visits to distribute teaching materials to students.

A total of 66 (46%) students state that online learning is suitable for their learning style; meanwhile, 46 (32%) pointed out that online learning is not fit with their learning style. 21 (14%) was neutral; they could not determine whether online learning is suitable. Identifying and adapting the learning styles and skills required to participate in online courses can be challenging for learners. Mayes et al., 2011; Luyt, 2013, as cited in (Kebritchi et al., 2017), stated that mostly the learners need to be self-motivated and self-directed. Online instructors should be ready to help learners who lack the required learning skills. It is crucial to acknowledge online learning in this 21st era. The learners need to engage in using technology. Online learning provides different opportunities to make the learning process more fun and enjoyable. E-learning is a beneficial feature of the openness of opportunities to implement innovative learning environments, where learners are required to be active, independent, self-reflective, and collaborative. Many students agree that it is fitted their learning style. Since the traditional meeting is a routine activity without a new learning method, the learners feel bore, and the learning process becomes a burden for them. It is acceptable that every person has his or her learning style. Therefore, technology provides excellent opportunities for making learning more useful for everyone with different needs. Besides, by using technology in the classroom, both students and learners can develop their skills essential for the 21st century.

Regarding the easiness of online learning, 82 (58%) proposed that online learning is easy for them, while 36 (25%) of the learner proposed that online learning is not easy. 24 (17%) respondent was neutral. A high number of respondents state that online learning allows them to study wherever and whenever. Online learning enables the learner to work at his or her own pace. Learners are free to set their learning time since they are not tied down to a fixed scheduled. Therefore, online learning is a more practical option for learners. Compared with classical learning (i.e., face-to-face learning, seminars, and lectures), e-learning has clear advantages because it gives the flexibility of place and time during the learning process. Online settings, as compared with traditional face-to-face settings, offer learners more control over their learning materials. Online learners may choose the sequence, pace, and amount of content and may follow a more individualized approach (Kebritchi et al., 2017).

A high per cent of the students; 61% agreed that online learning facilitates their learning needs, 17 (12%) learners were neutral. Moreover, 27% of students disagreed that online learning can



facilitate their learning needs. Regarding the online learning can facilitate their learning needs; a high percentage of the respondent agreed about this option. The young generation in this 21st era is familiar with information and technology. Therefore, the digital environment for them is a natural cultural and technological background of life, as they master digital technologies earlier than reading and writing. It is easy to work in search engines (Yandex, Google, Yahoo, Bing, Wolfram, Alpha,) instantly receiving a ready-made answer, which undoubtedly does not contribute to the development of memory and analytical, communicative abilities (Kamahina et al., 2019).

A high percentage of 62% of learners state that they agreed that virtual learning is an effective learning method. Meanwhile, a low percentage of 26 % of respondents disagreed that online learning is an effective method to apply. The result showed that many students agree that online learning is sufficient for them. In an online classroom community, students feel that they are connected through mutual trust. They belong, and they matter to one another. The class members feel that their needs will be met through their shared commitment to one another. Students feel they belong accepted by the group and develop friendships with members of the group. According to Aviv (2000) cited by Polnick (2005), asynchronous threaded discussions, if appropriately coordinated, allow students to help one another reach a goal. It encourages students to support one another, has a great desire to be successful, and create positive interpersonal relationships when group members interact with each other for assistance. This positive learning climate allows students to move from academic outsiders to active participants in their academic learning (Polnick, 2005).

Regarding students' perception of accepting online learning in the future, a high number of 60% of the learners agreed to receive online learning, while 25 % of the respondents pointed out that they disagreed to accept online learning implementation. Moreover, 21 (15%) of the learners were in neutral choice regarding the implementation of online learning in the future. Regarding the application of online learning in the future, many respondents agree and strongly agree to perceive the learning method. Online learning gives the learners complete control over their learning; they can work at their speed. Online learning also provides a more comfortable learning environment. By immersing themselves in online learning, their technical skills will improve.

However, online learning requires much preparation, such as instruments or tools for learning and internet access. Therefore, a small number of respondents disagree with the application of learning from home. The availability of the learning instruments is the issue. Learners who do not have online learning instruments, such as smartphones, absolutely can not join online learning. Based on the respondent's data, 99 (79%) students do not possess a smartphone. Muzid & Munir (2005) state that willingness, ability, human resources, aspect facilities and infrastructure, up to date information, fast access, and (hopefully free) and socialization. In the developed world, where infrastructure is in place, social, organizational, and social aspects must be government-focused to foster further e-learning development (OECD, 2005). In line with this, Sari (2012) said that many teachers work and live in dispersed geographical locations in Indonesia, including remote areas.

## CONCLUSION

The Statistical Program for Social Sciences (SPSS) v.20 shows that 48% of male students agree with e-learning and 35% of female students agree with e-learning. These results indicate students' perceptions that e-learning is in great demand. Students hope that e-learning can be applied optimally. A total of 66 (46%) students state that online learning is suitable for their learning style; meanwhile, 82 (58%) proposed that online learning is easy for them. A high per cent of the students, 61%, agreed that online learning facilitates their learning needs.

Moreover, 62% of learners state that they agreed that virtual learning is an effective learning method. Regarding students' perception of accepting online learning in the future, a high number of 60% of the learners agreed to receive online learning in the future. The results show that the Stella Maris Foundation students need to study online to be a refresher on traditional learning methods.

This research was conducted with junior high school student respondents. There are still many other important issues that need to be explored, including parents' and teachers' online learning implementation in remote areas. This research can be a pathway for other researchers to research other school levels in remote and rural areas to improve education quality.

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