



# Dynamics of E-Learning During the Pandemic at Higher Education Institutions in Papua

Suratni<sup>1\*</sup>, Rivaldhy N. Muhammad<sup>2</sup>, Lestari Wulandari S<sup>3</sup>, Rif'iy Qomarrullah<sup>4</sup>, Muhammad Sawir<sup>5</sup> 

<sup>1,2</sup> UPBJJ Universitas Terbuka, Jayapura, Indonesia

<sup>3,4</sup> Universitas Cenderawasih, Jayapura, Indonesia

<sup>5</sup> Universitas Yapis Papua, Jayapura, Indonesia

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## ABSTRAK

Covid-19 memberikan dampak signifikan dalam proses belajar mengajar. Penelitian ini bertujuan untuk mengevaluasi proses belajar mengajar selama pandemi, hal yang menarik dan berbeda adalah penelitian ini dilaksanakan dalam pembelajaran secara daring di Papua. Penelitian ini menggunakan metode deskriptif kualitatif, subyek penelitian adalah mahasiswa dan dosen di Papua, Indonesia. Penelitian ini dilakukan melalui tiga tahapan, yaitu: pengumpulan data; reduksi data; dan verifikasi serta penegasan kesimpulan. Instrumen yang digunakan adalah wawancara, dokumentasi foto melalui aplikasi Whatsapp. Analisis data dalam penelitian ini menggunakan metode triangulasi (pengukuran keabsahan data). Hasil penelitian ini yaitu: Pertama, e-learning saat pandemi sulit berjalan baik hal ini dipengaruhi oleh fasilitas seperti jaringan dan perangkat komunikasi; Kedua, dampak dari e-learning yakni kedekatan emosional antara dosen dan mahasiswa kurang terjalin baik, pembelajaran bersifat monoton dan lebih banyak tugas dalam bentuk perintah; Ketiga, e-learning memberikan manfaat yakni memaksa percepatan penguasaan teknologi pembelajaran berbasis digital di Papua, konten media sosial dimanfaatkan lebih massif. Simpulan dari penelitian ini adalah terdapat beragam pendapat dosen dan mahasiswa dalam e-learning saat pandemi mulai dari infrastruktur, kualitas interaksi, dan kebermanfaatannya yang diterima. Dampak penelitian ini yakni pentingnya untuk lebih meningkatkan pembangunan sarana-prasarana pembangunan terutama untuk menunjang peningkatan pendidikan di Papua, dan penanganan khusus untuk memajukan Indonesia Timur.

## ABSTRACT

Covid-19 has had a significant impact on the teaching and learning process. This study aims to evaluate the teaching and learning process during the pandemic, the interesting and different thing is that this research is carried out in online learning in Papua. This study uses a qualitative descriptive method, the research subjects are students and lecturers in Papua, Indonesia. This research was conducted through three stages, namely: data collection; data reduction; and verification and confirmation of conclusions. The instruments used are interviews, photo documentation through the Whatsapp application. Data analysis in this study used the triangulation method (measurement of data validity). The results of this study are: First, e-learning during the pandemic is difficult to run well, this is influenced by facilities such as networks and communication devices; Second, the impact of e-learning is that the emotional closeness between lecturers and students is not well established, learning is monotonous and there are more tasks in the form of orders; Third, e-learning provides benefits, namely forcing the acceleration of mastery of digital-based learning technology in Papua, social media content is used more massively. The conclusion of this research is that there are various opinions of lecturers and students in e-learning during the pandemic, starting from the infrastructure, the quality of the interaction, and the benefits received. The impact of this research is the importance of further increasing the development of development facilities, especially to support the improvement of education in Papua, and special handling to advance Eastern Indonesia.

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## 1. INTRODUCTION

Learning can run effectively if students are able to develop the potential that exists in themselves through creative learning activities (Bureekhampun et al., 2021; Udayani et al., 2021). A pleasant learning process can occur if there is a reciprocal relationship between lecturers and students and is a part that occurs as a result of the interaction process of science (Andriyani & Suniasih, 2021; Saputri, 2018). Then, this form of knowledge interaction takes the form of mastery of skills, behavior, and the formation of attitudes and beliefs in students from elementary school to college students (Costa & Broietti, 2021; Nyandarai & Egbuonu, 2018). Therefore, it also means that the teaching and learning process (PBM) is intended to facilitate students to be able

to learn well (Ormanci et al., 2022; Patricia Aguilera-Hermida, 2020). However, conventional learning (face to face) especially practical material at universities, but then changed when the world was hit by a massive virus outbreak. The virus first appeared in December 2019 and is known as coronavirus diseases (Covid-19) (Laksana, 2021; Singhal, 2020). The Covid-19 pandemic requires all humans on this earth to keep their distance, including Indonesia (Mercier et al., 2021; Wandik et al., 2021). Indonesia has implemented various policies, one of which is implementing social distancing (Alber & Dabour, 2021; Jones et al., 2020). Education is also affected by the social distancing and physical distancing policies (Ida & Maksum, 2021; Sharpe et al., 2020). One of the impacts of social distancing also occurs in the learning system in universities (Aspan & Viwattanakulvanid, 2021; Suhartinah, 2021). Circular of the Minister of Education and Culture of the Republic of Indonesia (Mendikbud) No. 4 of 2020 describes the implementation of teaching and learning during the Covid-19 pandemic. The Minister of Education and Culture asked to carry out the teaching and learning process indirectly or remotely. Based on a circular letter, the Minister instructed schools to universities to be able to carry out online learning. The method of delivering learning material based online or online is a process of delivering learning material using technology in the learning process that is open, flexible, and distributed so that it is not limited to space and time. (Lestariyanti, 2020; Pamungkas T. et al., 2021).

Online learning is a learning method in the classroom where direct interaction between lecturers and students is limited in a virtual space that is limited so that it moves face-to-face directly in class (Alonso et al., 2022; Quintana et al., 2021). Lecturers are facilitators in learning so that it runs in a conducive, innovative, and energetic manner (Dhawan, 2020; Kim & Park, 2021). Therefore, with good facilitation from the lecturers, students will then gain motivation and influence the improvement of learning outcomes. Student learning motivation is a determining factor for the success of the teaching and learning process (Han & Resta, 2020; Holt, 2021). Then the higher the motivation shown by the student, the lower the student's intention to cheat. Furthermore, facing this situation, the policy makers in the education sector then took a policy to regulate online learning (Ahmed et al., 2021; Daniel Hermawan, 2021). Therefore, the use of online-based platforms encourages education stakeholders to reorganize the possibilities for teaching and learning as well as structuring the learning environment. Online learning must be carried out anywhere, the teaching and learning process is flexible, that is, it can be carried out anywhere by being carried out independently with real media so that students are easier to understand and practice in real life. Barriers to learning during the pandemic, especially in Jayapura City, include: (1) The curriculum does not support technology-based applications; (2) Lack of student access to technology infrastructure and internet connection; (3) Lack of motivation of students and teachers to use e-learning; (4) Teachers are not ready, especially the preparation of online-based practical and theory materials; (5) Hours of virtual learning lead to exhaustion, stress and saturation. Then, excessive online learning can cause physical and mental health problems, including eye and neck strain, anxiety, depression, and can lead to obesity (due to lack of movement of students). In general, in the Papua region, the barriers to online learning during the pandemic are: (1) Internet network that often experiences disturbances; (2) Stacked tasks, difficulty focusing, limited credit or quota owned; and (3) Applications that are considered complex. Furthermore, several research results show that: (1) Distance learning increases the risk of student stress, while in urban areas there are not many problems, but for rural areas there are often network constraints (Fahmalatif et al., 2021; Nazir & Khan, 2021); (2) Barriers to learning in universities during the pandemic, namely high costs, low interest, lack of training and preparation for online learning (Achmad et al., 2021; Mohebi et al., 2021); and (3) enthusiasm for online learning is higher than online learning (Al-Balas et al., 2020; Doaa & Amer, 2021). All countries on earth, including Indonesia, must make the decision to close schools to reduce the spread of the Covid-19 virus. The government is currently moving to change the online learning system that can be done at the home of each student. This situation requires educational institutions, educators and students to use existing platforms to support online learning activities. Online learning is expected to be effectively applied as a solution so that teaching and learning activities can still run even though the situation does not allow for face-to-face learning in the classroom. Based on these dynamics, evaluation is an important and inseparable part of an activity or learning activity, if the learning aims at developing potential and supporting student achievement, then the evaluation aims as a provider of information to determine the process and level of success in online learning, especially the implementation of learning, at universities in Papua Province. Furthermore, as literacy reinforcement, several things related to online learning were added, including: (1) The resilience and readiness of students contributed significantly to the online learning process, in addition to the need for teachers to continue to foster interest in learning (Dover & Rodríguez-Valls, 2018; Nurtjahjanti et al., 2021); and (2) Students are enthusiastic about virtual learning delivered by the teacher if the media and methods displayed are very interesting (Apriyanto & S, 2021; Azhiimah et al., 2021). Then, specifically, the evaluation function in teaching and learning administration is to find out: (1) the learning evaluation planning process; (2) Implementation of learning evaluation; (3) Monitoring of learning evaluation; (4) Processing of learning evaluation data; (5) Reporting on the results of the learning evaluation; (6) The use of learning evaluation results. Although the two things above talk about evaluation, they both have different treatments and the results that have been obtained.

Therefore, the researcher then attempts to analyze and describe the phenomenon of problems regarding the dynamics of e-learning during the pandemic at higher education institutions in Tanah Papua using a qualitative approach to learning effectiveness from the perspective of educators and students. This research explicitly aims to, namely: (1) evaluate the administration of online learning during the Covid-19 pandemic, especially in higher education institutions; (2) Obstacles and weaknesses experienced by educators and students when learning online. Then, from the results of this study, it was obtained the benefit that it could be a reference for higher education policy makers, especially in Papua and the eastern part of Indonesia, then through this research educators and students can obtain references in better online learning, and become a source of study for parties, especially local governments in making policies related to restrictions on social activities as well as contributing solutions to obstacles or obstacles that occur.

## 2. METHOD

This research is descriptive qualitative, using a case study approach (Aboda, 2022; Shenoy & V. T., 2022). This research focuses intensively on one particular object which is studied as a case (Wamsley et al., 2017; Zhu et al., 2022). Case study data can be obtained from all parties concerned, in other words in this study collected from various sources (Malik, 2022; Sawkat, 2021). This study involved 300 students and lecturers from three universities in Jayapura Papua namely: Distance Learning Implementation Unit of the Open University (UPBJJ UT) Jayapura, Cenderawasih University (Uncen), and Yapis Papua University (Uniyap). The research was conducted in January 2020. The researcher took the location in this place because the institution represents the leading higher education in Papua Province. Research data collection was carried out by conducting interviews through the Whatsapp application and meeting directly when collecting assignments. The time in this research is flexible according to the situation and conditions of the research subject so that the research can run effectively and support the accuracy of the data obtained. Researchers use semi-structured interview techniques, and documentation in the form of photos to collect research data (Prasanti, 2018; Rutter et al., 2021). Interviews were conducted by asking informants to explore and obtain information related to the required data. As for the interviews using interview guidelines, so that researchers can develop research questions in accordance with the desired information needs (Roca et al., 2022; Rowlands, 2021). The indicators used in the observation instrument in the study are as follows: (1) The role of the lecturer in the learning carried out; (2) the strategies used by lecturers in learning; and (3) the supporting factors and inhibiting factors for learning carried out during the Covid-19 pandemic. The instruments grid used by researchers is observation guidelines that presented in Table 1; interview guidelines that presented in Table 2; and documentation guidelines that presented in Table 3.

**Table 1.** Observation Guidelines Grid

Elements That Rated	Aspect	Indicator	Item	Number of Questions
Lecturer's role	Supervision	Lecturer do supervision strategy that done in learning	1	1
	Development	Lecturers develop predetermined learning strategies	2	1
Strategies carried out by lecturers	Lecturer teaching strategy	Lecturers use learning strategies that are appropriate to the current situation	4,5	2
	College student	Lecturer checks student condition before doing activity learning	3	1
	Media learning	Lecturers use media learning that in accordance with the situation at the time this	6,7,8	3
	Activity learning	Lecturer always say activity learning to students	9,10, 11,12	4
Factor inhibitor and factor supporter	Evaluation	Lecturer do evaluation learning to students	13,14	2
	Lecturer	Facility	19,15	2
		Endorsement	18	1
		Obstacle	16,17	2
	College student	Have inner barrier follow activities learning (gadgets, quota, signal)	20	1

**Table 2. Interview Guidelines Grid**

Component	Sub Component	Question Items	
		Lecturer	College student
Strategy learning	Strategy implementation learning online that in accordance	2,4,1,5,7,8,11	1,5,7,8
	Problem in delivery strategy learning online at the moment this	3,2,4,6	2,4,6
	Disadvantages and strategy advantages learning online used	5,6,7,10,12	10
	Media that used in activity learning online	8,9	9
	Management school about learning activities at the time pandemic	1,3	3
Pandemic Covid-19	The impact of the pandemic on higher education institutions	9,13	11

**Table 3. Documentation Guidelines Grid**

Observed Aspects	Looking for Indicators
Lesson Planning	Determine the application used in the delivery of learning through online Prepare tools and supporting materials for online-based learning Prepare an online-based learning implementation plan
Learning Implementation	Carry out preliminary learning activities Carry out core learning activities Carry out learning closing activities
Learning Assessment	Determining the form/aspect in the assessment Determine the form of online assignment

The interview technique was carried out to obtain data directly from informants about what obstacles were felt during the online learning process from home during the Covid-19 pandemic. Meanwhile, in analyzing the data, the researcher used the following steps: (1) Data collection; (2) Data reduction; and (3) Verification and confirmation of conclusions (Adhimah, 2020; Vidić et al., 2022). Furthermore, in this study using the data triangulation method as a technique for measuring the validity of the data and finally drawing conclusions (Al-Bana et al., 2022; Pratiwi, 2017). The research procedure used in this study is divided into three stages, namely the pre-field stage, the field work stage, and the data analysis stage. The pre-field stage, at this stage the researcher prepares a research design in the form of an understanding of the methods and techniques in research. Choosing a research field, exploring and assessing the field in the form of field orientation with the intent and purpose so that researchers try to recognize all elements of the social, physical, and natural environment as well as field introductions are also intended to assess the situation, situation, setting, and context whether there is conformity with the problem, prepare research equipment in the form of equipment needed or used in research such as research permits, stationery and other equipment to support research. Field work stage, at this stage the researcher understands the research background first. Researchers need to prepare themselves to start conducting research in order to obtain data or information needed in research. The data obtained came from interviews and observations made to lecturers at the designated research sites. Researchers made an analysis to get more in-depth results regarding the online learning process carried out by lecturers during the Covid-19 pandemic and what factors were supporting and inhibiting lecturers and students in the implementation of online learning. during the Covid-19 pandemic. After the data was obtained, the researcher compiled the data descriptively and in depth so that the data that had been obtained could be studied properly. Data analysis stage, in qualitative research the data obtained comes from various sources of data collected through various data collection techniques, and is carried out continuously until the data is saturated. Data analysis carried out by researchers is to process data that has been collected and obtained while in the field, both in the form of informants and documents at the previous stage, then compiled into a study.

### 3. RESULT AND DISCUSSION

#### Result

Based on the research results obtained from semi-structured interviews, observations, and documentation conducted online, the findings are as described in the syntax flow in Figure 1.

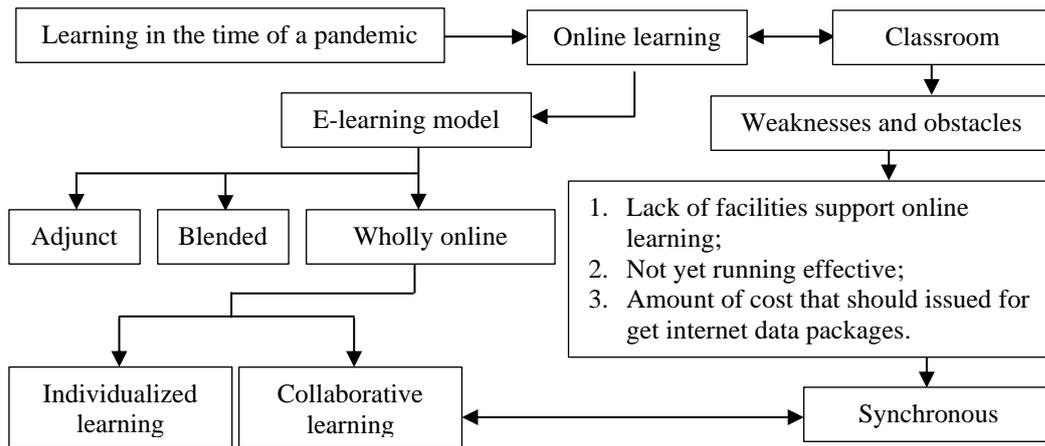


Figure 1. Syntax of Online Learning Research Findings

Based on the research conducted, the researcher describes the results of data analysis and research findings in the Table 4.

Table 4. Research Findings

Categories	Indicators	Descriptions	Examples of Responses	Codes
Online learning planning	Online learning implementation design	Interview activities with research informants to dig deeper into the data obtained	“At this time of online learning, I always make preparations for online learning which are usually made in the semester learning plan (RPS). I made this online RPS in the form of one activity in each semester according to the course consisting of 16 face-to-face meetings”	R1
	Preparation of learning media	Learning media in the form of learning videos sent via whatsapp groups and google classroom, learning videos are made based on the material that will be studied by students	“The learning task itself is sent via videos that are sent via google classroom or whatsapp, so the learning media that you make is based online, namely the learning videos that you send through the whatsapp group and google classroom”	R2
	Preparation of teaching materials	The next lesson plan is to prepare teaching materials in the form of learning videos that have been made by the lecturer	“The teaching and learning process currently uses an online learning system and lecturers are required to innovate a lot, for example in making learning videos as material to be delivered to students from home”	R3
Implementation of the online learning process	Learning apps	Lecturers use whatsapp and google classroom in online learning	“Assignments use the google classroom application but for the learning itself it is sent via videos sent via google classroom or whatsapp and for face-to-face usually using the Zoom application”	R4
	Readiness of lecturers in learning	Implementation management online learning runs optimally and effectively	“The learning itself is running, but for online learning to be effective or not, I say it is not effective, because students are required to study from home so that learning cannot be face-to-face or face-to-face”	R5
	Availability of	Universities in Jayapura	“In my opinion here (universities)	R6

Categories	Indicators	Descriptions	Examples of Responses	Codes
	internet network	City are sufficient to support the implementation of online learning	have access to the internet network so that lecturers in carrying out online learning on campus use wifi, if from home use a private network. In addition, students are also given quotas by the Ministry of Education and Culture so that when we study anywhere (in Jayapura City) we remain safe"	
	Application Constraints	The obstacle that often occurs is the limited quota for access the whatsapp and google classroom application	"The difficulty of conveying material to students when the signal does not exist and if the student does not have a quota internet and old models of cellphones, so to access whatsapp and google classroom, students can't even do the assignments given online but the lecturer understands by giving extra time"	R7
	Barriers to online learning	All kinds of factors that are inhibiting (making slow) or even blocking and keep something from happening	"It is difficult to convey the material, especially when there are parents who do not have cellphones or do not understand technology. Not to mention those who have cellphones but have to work so that children can't learn or get lessons from teachers who are sent via WhatsApp"	R8
	Solutions for obstacles and obstacles	The solution to the obstacles and barriers to online learning	"Cooperation with student guardians to motivate their children to study at home and ask if there are still those who do not understand the material presented, and provide relief for weekly assignments for those who do not have mobile phones and collect them directly to campus"	R9
Implementation of the online learning process by students	Student responses about the implementation of online learning	Students are not used to implementing online learning through WhatsApp and Google groups classroom	"My opinion about online learning that is being carried out at this time is very saturated because I can't meet with friends on campus as there is no Covid-19 pandemic that is happening like now. But there's also the joy of being closer to family at home like playing with family"	R10
	Student readiness in online learning	The learning process through the whatsapp group and google classroom	"We prepare everything needed for learning, such as cellphones, books, pencils, ballpoints and so on, usually before the learning process takes place the lecturer tells us to watch learning videos"	R11
Forms of online learning evaluation	Evaluation of learning carried out through the application	In the implementation of online learning, the lecturer gives assignments to students and will send back assignments that have been graded	"All children have the same ability to understand the material, we will also give a value according to what the students are doing"	R12

Online learning is an inevitable choice for educational institutions during the Covid-19 pandemic, this learning method can be a solution so that the teaching and learning process can continue. Some of the findings in this study indicate that online or online learning at universities in Jayapura Papua has several obstacles, such as an unsupported network or signal. Based on interviews carried out directly with lecturers and students at the Faculty of Social and Political Sciences (FISIP) of Yapis Papua University (Uniyap) it shows that online is done with several applications such as the following interview excerpts: "...we use the google classroom and whatsapp applications, but there are some teacher friends who use applications such as Instagram". Then interviews with lecturers and students at the Faculty of Sports Science (FIK) Universitas Cenderawasih (Uncen) stated that: "... learning is less effective, this is because students only listen and watch videos, students do not understand and do not understand especially practical materials" . Furthermore, based on excerpts from interviews of lecturers and students at UPBJJ UT Jayapura, the findings were: "...lecturers are unable to understand the character of students, because one hundred percent of lectures are through Microsoft teams (online) media, this is different from the period before Covid-19, ...there are still meetings live". Almost the average lecturer in Jayapura City conveys the obstacles to implementing online learning where there are other difficulties where students who attend lectures are often absent on the grounds that permission has a special agenda or is sick, then the telecommunication network signal is often constrained, especially in mountainous areas and cellphone facilities (HP. ) which still many do not use the type of android (smartphone) or the absence of laptop/computer facilities. In general, an outline can be drawn, namely that the learning process which was initially carried out face-to-face has turned into online learning because of Covid-19, the various parties involved have to adjust so that the learning process continues. Of course, online learning still has obstacles because most teachers and students have never done online learning. Obstacles are not only felt by lecturers and students, parents also experience difficulties during this online learning process, this is due to the additional cost of internet data packages and lecture equipment facilities. This online learning has both positive and negative impacts. Lack of public knowledge and differences in knowledge about technological advances make differences in the learning process in the community. The problem of online learning is not just the use of technology.

The target in implementing learning in the 2020/2021 academic year, each university is still very nervous about the significant pattern of meeting implementation. Then, in 2021/2022, reflecting on the previous academic year, universities made many efforts so that learning proceeds according to the expected target regarding the quantity of time, although it has not completely addressed the problem. Interviews with various informants stated that the psychological nuances were different between conventional lectures at Uncen and Uniyap, as well as hybrid models (conventional and online) such as at UPBJJ UT before the Covid-19 pandemic and after the outbreak of the virus. Many informants recounted that the face-to-face atmosphere provided a more complete reciprocal interaction of knowledge. Lack of knowledge about platforms that support learning will certainly have an impact on the lecture process. Students will feel bored because learning interactions only use the Whatsapp application or online tutorial applications continuously. The use of online-based communication applications that have limited features makes lecturers only provide material in the form of videos or orders to read material in material books owned by students. The collection of assignments is still considered to still use conventional methods, namely assignments are written in books, then photographed and sent online applications. This is more practical in terms of time effectiveness, but with such a method it makes lecturers' time inefficient to correct assignments from students. As a teacher, I find it difficult to create fun learning for students. However, the dilemma of implementing online-based learning does not always bring losses or negatives, there are positive things to be gained during the pandemic. Based on excerpts from interviews with lecturer informants, information was obtained, namely: "...we were initially very confused with full online learning, starting from filling out attendance, preparing teaching materials, teaching to collecting assignments, everything had to be online, ...more troublesome and had to go back and forth to explain to students how to follow . "...but now we are more familiar and documents of lectures, research, and service activities are now stored digitally and are neater and concise, it doesn't take a lot of space". Then, based on student quotes, the answers were obtained, namely: "...we are confused, what model we study in, never meet friends and lecturers, ...assignments are all collected online, buying cellphones and packages, it's really troublesome. ...now we are more independent and can use sophisticated cellphones, get a lot of information from abroad, can watch youtube channels, open facebook, instagram, very happy". Online learning requires students to use digital technology-based infrastructure to support the learning process. Online learning changes exams that should be carried out in normal conditions by students to only send videos of the practices carried out. Other things that can be obtained are changes in learning patterns from conventional and then replaced with technology. There are very opportunities if it can be maximized by lecturers and students, especially the speed of interaction access and there is a giant laboratory with millions of unlimited references.

## Discussion

Specifically, this research has an important agenda as a goal to analyze and describe the phenomenon of problems regarding the dynamics of e-learning during the pandemic at higher education institutions in Papua. The results of the research can be drawn findings, namely: First, the change in conventional and hybrid learning to full online learning has a significant impact, while the things that influence are especially facilities such as networks and communication tools; Second, psychologically-socially, the emotional closeness between conventional learning is better than online learning, face-to-face learning with lecturers accelerates the transfer of learning process; and Third, the pandemic period provides benefits, especially the acceleration of mastery of digital-based learning technology, including in Papua, social media content is used more massively. Based on this description, further explanations can be given as follows: The first premise, these findings are in line with the results of research which states that various weak points in emergency distance learning during the Covid-19 pandemic are the readiness of digital devices and networks, teacher competence, and learning models that seem improvised due to minimal preparation (Iivari et al., 2020; Sipiior, 2020; Valverde-Berrococo et al., 2021). The widespread spread of Covid-19 has forced the government to close schools and encourage distance learning at home. Various initiatives were carried out to ensure that learning activities continued even in the absence of face-to-face sessions. There are several things that must be considered in distance learning in universities, among others, the quality of lecturer resources must be improved, both in terms of content and methodology, as well as the use of information technology. In addition, students' conditions must also be considered, including an adequate internet network, data quota, laptops and cellphones. Technology, more specifically the internet, smartphones, and laptops are now widely used to support distance learning. One of the largest telecommunications service providers in Indonesia recorded an increase in broadband flows during the Covid-19 crisis, which was caused by the sharp increase in the use of distance learning platforms. Then, this disruption to the traditional education system has harmed students who come from underprivileged families and who are in the Papua region. They are students who, even under normal conditions, already face barriers to accessing education. Now they need to face the additional barriers that inequalities have created to access technology infrastructure. The second premise, these findings are in line with the results of research which states that one of the weak points of online learning is limited direct communication and interaction, so a special approach is needed to overcome these shortcomings (Kapilan et al., 2021; Putri et al., 2020; Williams et al., 2021). The absence of direct (offline) learning is a new experience. The learning process shifted to using online media as a virtual communication medium. The convenience of the interaction of the parties involved, students, lecturers, campus parties, must be built and realized together through communication in the midst of a crisis to reduce entropy or uncertainty. Online education offers a new culture of learning. Students can study independently, access learning materials anytime and from anywhere. As something new, online learning requires adaptation to new communication patterns. Various obstacles also emerged. The online learning process presents discomfort and stuttering, including various communication and cultural barriers. The reality of virtual communication is a symbolic reality, not an objective reality. Therefore, it is not easy for everyone, including students, to adapt to these situations. The policy of closing educational institutions is an effort to contain the spread of the Covid-19 pandemic. This situation has an impact on all elements of education, millions of students and university students, Indonesia is no exception.

The third premise, the findings are in line with research which states that the Covid-19 pandemic has provided a way for educational institutions to accelerate access to distance learning mastery. Then the education sector fought against the pandemic crisis with a different approach, and digitalization was processed from challenges into opportunities (Kabasawa et al., 2021; Pokhrel & Chhetri, 2021; Pravat Kumar Jena, 2020). The world is currently being troubled by the spread of the Corona Virus Disease (Covid-19) outbreak. The whole world is busy with various efforts to prevent Covid-19. Human life in all areas of life is disturbed, as well as in the field of education. Schools in various countries that were originally conducted face-to-face have now turned into online schools, both primary schools, secondary schools and universities. All countries on earth, including Indonesia, must make the decision to close schools to reduce the spread of the Covid-19 virus. The government is currently moving to change the online learning system that can be done at the home of each student. However, there are still things to be aware of that the use of online forums for video calling applications such as Zoom, makes people focus more on real-time face-to-face chat (synchronous communication), which is very tiring. Based on the discussion of this research, several things can be obtained, namely lecturers as teachers should improve new skills so that they are digitally literate or learning technology. Then on the family side or students' parents, it is necessary to understand the online learning process. Therefore, transparent information is needed by educational institutions to students' families. This is also related to standard operating procedures (SOP) or lecture mechanisms, schedules, and other information. Thus, families and communities have empathy and provide support (time, place, attention) for the implementation of online learning. Covid-19 is a virus that attacks the human respiratory system. Symptoms of Covid-19 include respiratory symptoms such as fever, shortness of breath, and dry cough. The government is taking action by limiting movement outside the home in order to break

the chain of the spread of Covid-19 by using a social restriction system or keeping a distance from other people, staying away from gatherings, and avoiding mass gatherings, and it is best to stay at home. Educational activities are temporarily closed, as a substitute for face-to-face learning activities that are transferred to online learning activities. In online learning, students receive learning materials through text, images, audio, video and interpersonal interactions through various online applications. One of the main functions of digital media in contemporary society is to facilitate the sharing of knowledge. One of the keys to the development of digital infrastructure in the field of knowledge is the digitization of libraries or knowledge collections as digital resources for education. Creative and academic initiatives are also increasing in the public sphere in the context of knowledge sharing. However, on the other hand, there are new problems related to the limitations of technology and the ability to use technology.

Effective learning requires professional lecturers who not only master the fields of science, teaching materials, learning methods, motivate students to have high skills and broad insight into the world of education, but also must have a deep understanding of human nature and society in general. Based on the description above, there are several implications that must be considered in the application of online learning to improve the quality of education in Papua, including: (1) Disen must prepare teaching materials that are not just a collection of a few words, but are varied with several creative learning models/methods so that students are not bored especially when learning does not interact directly with their friends, or in other words the teacher's ability to bring the offline classroom atmosphere to the virtual; (2) Students need to be facilitated with learning materials that they can download which in their spare time they can still study them again. In addition, it provides opportunities for them to be able to greet each other as in offline classes, therefore additional time is needed outside of class hours so that students and teachers can communicate more intimately with each other to maintain social relations; (3) Lecturers as facilitators can direct students to find more learning resources because various content related to subject matter can be accessed via the internet, so that learning is no longer focused on one learning resource. Students with their abilities can combine some of the subject matter obtained so that they can exchange knowledge with each other, both between students and between students and their lecturers; (4) The learning process is inseparable from the monitoring of the extent to which the development of students in understanding teaching materials, therefore lecturers must have benchmarks related to what conditions students are declared to have met the aspects to be declared worthy of understanding the subject matter. This can be done with the help of applications that support the monitoring process such as (google classroom, whatsapp, edlink, and others); and (5) identical exams as instruments to determine student understanding must be modified as best as possible by lecturers in online learning because there is no direct supervision carried out and there are several opportunities to find answers because of the wide open access on the internet, therefore the assessment given at least does not again in the form of contextual questions but more applicable to make it easier for teachers to provide objective assessments.

#### 4. CONCLUSION

Based on the background, research results and discussion, a conclusion can be drawn that the implementation of online learning during the pandemic has an impact, especially the unpreparedness of educators, educational institutions, as well as the government and students in dealing with this situation. Constraints and obstacles that arise include: the infrastructure, facilities, and methods used have not yet found an adequate formulation. Then, other things that become the weak point of online learning are the lack of closeness between lecturers and students and the increased saturation point resulting in less enthusiastic learning. However, online learning, which seems to be forced due to an emergency situation, turns out to also provide benefits and advantages, especially the process of accelerating the control and distribution of technology networks, especially in the Papua region.

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