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Process and Evaluation of Online Learning in the Introduction to Management Course of Logistics Engineering Study Program, Universitas Pendidikan Indonesia

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A B S T R A C T

Covid-19 Pandemic in recent years forces urgent application of online learning in all levels of education. The implementation of online learning, especially at the higher level of education, uses various kinds of learning media, including Zoom application, Google Classroom, Google Meet, Youtube, Quizizz, Whatsapp, and several other applications. Introduction to Management is one of the compulsories first semester courses for students of the Logistics Engineering Study Program, UPI. This study wants to know how the process and evaluation of online learning affect the overall education in introduction to management course. Observation and sociometry methods in the form of evaluation rubric was used to get the data needed regarding how the students interact with their group when they do assignments. The problems in online learning such as power outages, internet network problems, packets running out can be resolved by balancing the use of video conference and WhatsApp media. The distribution of the evaluation rubric given to students at the end of the lecture is better to know it earlier, so that cases of inactivity of one of the students in group assignments can be anticipated.

A R T I C L E   I N F O

1. INTRODUCTION

It has entered its second year, the Pandemic named Corona Virus 2019 or commonly abbreviated as COVID-19 is still attacking the whole world, including in Indonesia. This highly contagious disease is caused by the acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The danger of this virus is because its transmission is very fast and easier than the SARS outbreak that has hit the world. To date, cases of COVID-19 disease recorded in Indonesia have reached 1.4 million cases, and 38 thousand deaths have died (Arifin & Anas, 2021). The potential for the spread of this virus is very high because transmission can occur through the air (droplets) when we breathe, let alone cough and or sneeze.

In an effort to prevent the spread of COVID-19, (Bonardi, Gallea, Kalanoski, & Lalive, 2020) in his journal explained, "Globally there are two alternative health strategies with non-pharmaceutical interventions, the first is the herd immunity strategy and the second strategy is locking approach. The herd immunity strategy is carried out by isolating patients, while the lockdown strategy is carried out by forcing most people to do all their activities at home, otherwise known as WFH (work from home).

This policy was also carried out in Indonesia to break the chain of the spread of the corona virus or COVID-19. Restrictions, restrictions and movement of people cause community activities to be disrupted because most activities must be carried out at home, one of which is the world of education. In this case, a change is needed to the design of the direct or face-to-face teaching and learning activity model to minimize the spread of the COVID-19 outbreak. Circular regulation from Kemendikbud No. 2 of 2020 and No. 3 of 2020 concerning the prevention and handling of the corona virus disease (COVID-19) requires educational institutions to do online learning (Robandi, D., 2020).

The urgent application of online learning 'forces' all levels of education to quickly adapt to how to use technology in teaching process, which was previously conventional turned into face-to-face learning in a network (online learning). This is very difficult to implement considering that not all levels of education are fully prepared. However, according to the Circular regulation of the Minister of Education and Culture Number 9/2018 regarding the use of 'Rumah Belajar' shows that in fact online learning media are already available, plus several private parties have sprung up to provide online guidance facilities or services such as Ruang Guru, Zenius, Kahoot, etc (Budiyanto & Sholeh, 2021).

The implementation of online learning, especially at the university level, uses various kinds of learning media, including Zoom application, Google Classroom, Google Meet, Youtube, Quizizz, Whatsapp, and several other applications (Abidah et al., 2020). In the UPI environment, learning facilities are also prepared, namely by utilizing the Integrated Online Learning System (SPOT). SPOT is an online learning application program intended for lecturers and students in the UPI environment where one of its uses has been integrated with Google Meet, so that teaching and learning activities can be carried out by means of video conferencing. It is hoped that learning by using video conferencing facilities can replace education methods that was originally face-to-face (offline) to online learning.

The change of the education methods which was originally face-to-face (offline) to online learning however is considered difficult by both educators and students. Educators must be creative as to how conveying material through online learning while the quality need to be maintained and adjusted to the level of education. (Atsani, 2020) states "The success of a country's development is one of the benchmarks for the success of education. Through education, it will give birth to the next generation who are intelligent and emotional, skilled, and independent to achieve the development of the nation."

The online learning activities has entered the 3rd semester. The Department of Logistics Engineering under the Faculty of Technology and Vocational Education, Universitas Pendidikan Indonesia is one of the departments that was newly established in 2020. Since its first established, teaching and learning activities methods have implemented online learning. The ability of each individual is highly tested here because most of the lecturers in the Logistics Engineering department are relatively new, and most of it are not from an educational background.

2. METHODS

The study started by reviewing some literature regarding online learning methods and its media. Observation and sociometry methods in the form of evaluation rubric was used to get the data needed regarding how the students interact with their group when they do assignments.

2.1 Online Learning

In UU Nomor 20 Tahun 2003 pasal 1 Ayat 15, online learning is an education process in which students are separated from educators and learning process uses various learning resources through communication technology, information, and other media. According to (Tejedor et al., 2021), there are several key aspects of online learning which include: physical separation of teachers and students, learning occurs in the context of educational institutions, technical media is used, teacher and student communication, face-to-face meetings are possible, and industrial models of administration are used. Online learning is an education where educators and students are separated across space and time (Simamora, 2020)

Online learning has evolved from a correspondent form to e-learning education across space and time. An organized educational process that bridges the gap between students and educators and is mediated by the use of technology, and minimal face-to-face meetings. Online learning offered across space and time so students have the flexibility to study at different times and places, and to use a variety of learning resources (Paudel, 2021).

E-learning education can be defined as individual or group learning using information and communication technology, provide flexibility to students to be able to learn anytime, anywhere, and with anyone. This learning can also be combined with face-to-face learning which is commonly called blended learning, which is considered innovative because it provides a new nuance in the teaching and learning process that is different from ordinary face-to-face learning.

Online learning has several principles (Silalahi & Hutauruk, 2020), including the following:
a. There is a separation between educators and students across space and time so that more emphasis is placed on independent learning
b. TIT-based learning interactions using various ICT learning resources and other media
c. Organized systematically in one organization according to the applicable rules
d. Limited face-to-face contact is possible

Practical implications of the online learning principles (Gopal & Anggarwal, 2021):
a. Has a wide range across time and space
b. Provide flexibility of learning for students across space and time
c. Bulk and organized
d. Utilizing technology and communication

The existence of online learning itself is actually nothing new. The University of Chicago, United States of America, for example, has been using this method since 1892. Online learning systems continue to be developed using various technologies, ranging from radio, television, to internet technology. The development of ICT supports the development of this online learning method (Ghafur, 2021), with the widespread use of internet by public, the emergence of digital content related to education is also growing. In 1996, John Bourne developed an online learning education called Asynchronous Learning Network Web which refers to the ability to provide education anytime and anywhere through the internet network (AECT (2001) (Lin & Gao, 2020). The development of online learning in Indonesia began in 1950 with the emergence of correspondence courses for teachers, then the emergence of the online learning system which was implemented at the education level in 1984 known as the Open University, HYLITE Program in 2007, development of online learning in Indonesia in 2014 The development of online learning education from generation to generation can be seen in more detail in Figure 1.
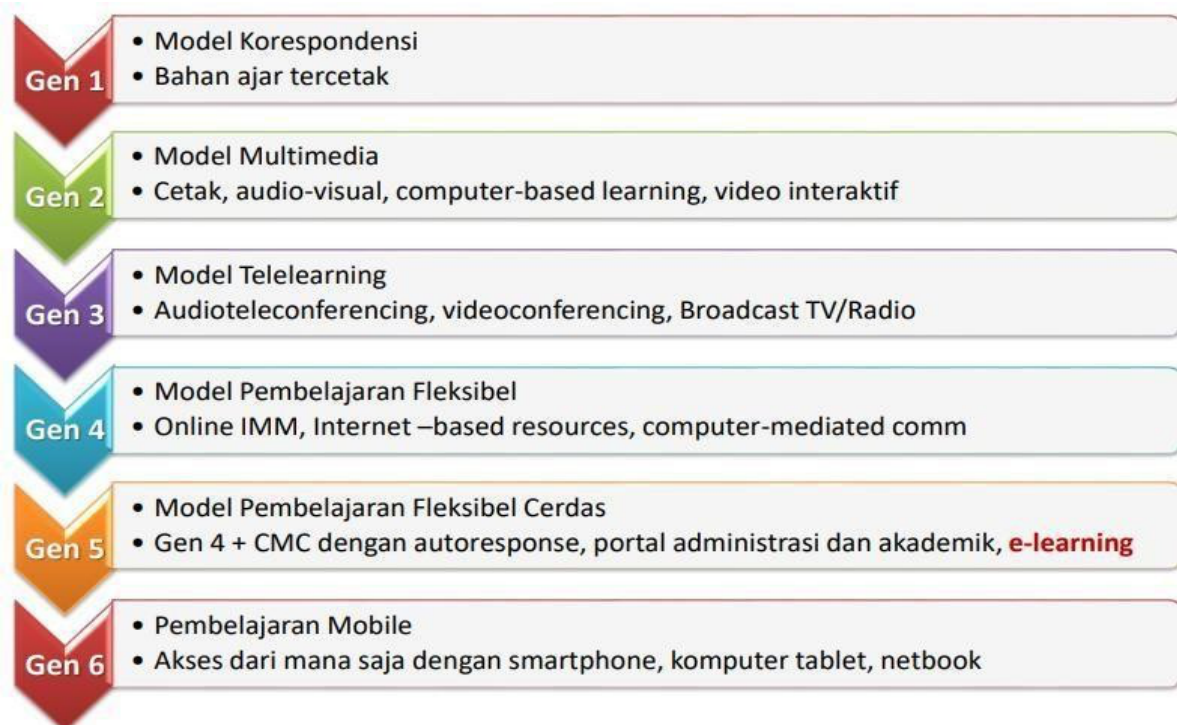

Figure 1. Development of online learning education in Indonesia (taken from document Menristekdikti about "Kebijakan Pendidikan Jarak Jauh dan E-Learning di Indonesia"2016)

2.2 Online Learning Media

The success of education is one aspect that can show the success on the development of a nation. In the education process, conditions are not always stagnant, making educators have to be ready to adapt, especially when the current conditions where the world is being shocked by the existence of the COVID-19 pandemic, educational institutions are forced to transform their learning media. The success or failure of the learning process is largely can be determined by the media used. Media is anything that can be used to transmit messages from sender to receiver so that it can stimulate students' thoughts, feelings, concerns and interests in such a way that the learning process occurs (Tamrin et al., 2017). Online learning media can be interpreted as media that are equipped with controllers that can be operated by the user, so that the user can control and access what they needs.

(Kristanto et al., 2017) explain, "there are three components in online learning, namely: (a) learning models, (b) instructional and learning strategies, (c) online learning media." These three components form an interactive link, in which there is a learning model structured as a social process that informs the design of the online learning environment, leading to the specification of instructional and learning strategies that specifically enable learning through the use of learning technologies. The advantages of using online learning media are independent learning and high interactivity, able to increase memory levels, provide more learning experiences, with text, audio, video and animation, all of which are used to convey information, and also provide convenience in conveying, updating contents, downloads, students can also send emails to other students, post comments on discussion forums, use chat rooms, and video conference to be able to communicate directly (Saputra et al., 2021).

Among the various kinds of online learning media, there are several media that are usually the choice, such as:

2.2.1 WhatsApp Groups

WhatsApp is an instant messaging application for smartphones using an internet data plan. The advantage of this media lies in the features it has, such as sending documents in the form of pdf, word, excel, or powerpoint. This makes it easier to form online learning because of the ease of sharing learning materials into groups that have been created previously. In addition, the Voice Notes feature or voice recording makes it easier for educators to explain a material to students (Sahidillah & Miftahurrisqi, 2019).

2.2.2 Video Conference

This internet-connected distance interactive learning allows educators and students to interact face-to-face even though they are not in one place. The purpose of using video conferencing is to make the online learning process more comprehensive in explaining, understanding and discussing subject matter because two-way interactions between students and educators can occur directly allowing discussions related to learning materials to occur, especially when students have difficulty understanding a material. Some alternative media that provide video conferencing services include: Cisco Webex Meetings, Zoom Cloud Meetings, Skype, Google Meet, etc. (Kristóf, 2020).

2.2.3 Online Learning Applications

Online learning applications or commonly called LMS (Learning Management System) such as Google Classroom, Moodle, Edmodo, Sevima EdLink, SPOT UPI.

2.2.4 Online Learning Applications

Online learning applications or commonly called LMS (Learning Management System) such as Google Classroom, Moodle, Edmodo, Sevima EdLink, SPOT UPI. The application media makes it easier for educators to manage learning and deliver information precisely and accurately to students. The features commonly found in this media include assignment, grading, and communication systems.

Along with the use of online learning media, several problems also appear. Online learning media are all very dependent on the internet, as well as existing facilities and infrastructure. Cecep Darmawan, Education Policy Observer from UPI said, "The problem with online learning is actually classic, as not all areas are covered by the internet. Not to mention the problems of people with middle to lower economies that must also be considered." In addition to the internet, the readiness of human resources is also a problem. The readiness relates to the ability of educators and learners to use and manage all technological systems used in each distance learning process (Efriana, 2021).

Technology, information and communication literacy is an important factor in online learning. Competence and literacy in the use of existing technology is a major influence on the effectiveness and efficiency of the teaching and learning process (Latip, 2020). Not to mention in his research, (Yustika & Iswati, 2020) stated that ogy than the ICT literacy is influenced by the level of generation and age of technology users where the younger generation is easier to manage technololder generation.

3. RESULTS AND DISCUSSION
3.1. Online Learning Process in the Introduction to Management Course of Logistics Engineering Study Program UPI

Introduction to Management is one of the compulsory first semester courses for students of the Logistics Engineering Study Program, UPI. In the course of learning activities, all meetings are conducted online, by collaborating with the use of video conference zoom meeting media, whatsapp groups, SPOT UPI and quizizz. The purpose of introductory management is to provide students with theoretical and practical knowledge of Management and expand knowledge of Management in terms of theories, concepts, processes, techniques, and mechanisms to develop student skills in the application of Management concepts.

The use of media zoom meetings, and WhatsApp groups is carried out throughout online learning activities, while the use of Quizizz media is carried out occasionally when there is a quiz, and SPOT UPI is used during mid-semester exams and end-semester exams. Zoom meetings are used when presenting lecture material, discussions related to assignments, and presentations from students. WhatsApp groups are used to help condition lectures such as the distribution of lecture materials and also discussion of material outside of class hours if needed. In giving lecture materials, almost every meeting ends with giving assignments. There are tasks that are individual or group. This is to see how students understand the material that has been given as well as to see how students can work together in solving a problem. Of the several assignments given, the assignment with the case study method is given to provide an overview of how the material is applied in real-world conditions. In each group assignment, at the end of the lecture meeting, one group will present the results of their discussion in the zoom meeting, and a discussion related to the material will take place. The interesting thing is that there are differences in the process of delivering teaching materials and the learning process through zoom meetings and WhatsApp. There are more discussionswhen discussing case studies in zoom meetings than WhatsApp, while discussions related to theories given in learning are less in zoom meetings than when the learning process uses WhatsApp media.

Management itself means "to manage or administer". It can be said that management is a form of coordination and administration to achieve a certain goal through the application of available resources. The application of management itself is not exclusive, it can only be applied in organizational life, but can also be applied in everyday life. Therefore, some of the assignments given aim to see how students apply the management knowledge they have learned in lectures compared in their daily lives. For example, one of the functions of management is planning. The initial stage of planning in achieving a certain goal is to make a strategy. The important thing in strategy making is knowing how the existing strengths, weaknesses, opportunities and threat are, so that the strategies implemented can run well. Giving assignments to find out their strengths, weaknesses, opportunities and threat of each individual student as student encourages their understanding so that in carrying out their lectures they know the stages of the strategy they must apply.

Another example, in carrying out group assignments, the application of management knowledge related to coordination, leadership, conflict management, should be able to assist students in setting strategies so that common goals can be achieved properly. At the end of the semester, an evaluation rubric is given to students, to see how they are doing in group task activities. This evaluation is given in the form of an assessment (sociometry), each student is required to evaluate their peers and also himself by giving score. The evaluation rubric that must be filled in is given the following conditions, "In lecture activities, in each assignment and group discussion, give a score for each peers and make it as the table 1 with the provisions, the total number of scores for each column is 100, the value in each column is 100. The columns are multiples of 5, and none of them can be the same. For example, (50+30+20=100) is true, and (40+30+30=100) is false."

Table 1. Evaluation Rubric

Name	Active	Leadership	Insight
Member 1			
Member 2			
Member 3			
Total	100	100	100

The purpose of this evaluation rubric is used to see how students are able to assess themselves and their group colleagues in doing group assignments. In addition, from the total number of scores given, it is possible to see how each individual from each of these students contributes to the work of their group assignment

3.2. Online Learning Process in the Introduction to Management Course of Logistics Engineering Study Program UPI

Along with the ongoing online learning process, the assignments given from lecturers to students was complained because in almost every lecture, assignments were given. Another problem is when the online learning process is carried out using video conference, such as power outages, internet network problems, data plan running out, making online learning activities using video conference less effective. Effectiveness here is related to the absorption of material for each student to be hampered due to these problems. WhatsApp groups are one solution to answer these problems, because the system built by instant messaging via WhatsApp does not require direct interaction between students and educators, when there is a pause, students who experience some network-related problems are still able to follow the learning process.However, the drawback of using WhatsApp media itself is a disciplinary problem from the students themselves, because in video conference media, educators can see students directly by requiring them to activate their videos, so that teaching and learning interactions can be established unlike WhatsApp media. Nevertheless, sometimes when the video is activated by students gives the effect the network they use becomes a little slow. Therefore, the balance of use between video conference and WhatsApp media is one of the answers to these challenges.

From the results of the evaluation rubric given to students in this introduction to management course described at the end of sub-chapter 3.1, it is very diverse. Some of them students give scores that 'play it safe' where, the distribution of scores given is even. There are cases where an individual is very dominant in group assignments, which is indicated by the very high distribution of scores given by himself and his group mates. On the other hand, there are also cases that show individuals who are very less contributing to their group assignments, which is indicated by the very low distribution of scores given to both themselves and their group mates. From the results of the assessment of each student in each column of the evaluation rubric (table 1) then ranking is carried out, then the sum of the rows is carried out. From there, the final scores becomes a consideration material for evaluating the assessment to the contribution of students in group work assignment. After clarifying the groups with very low contribution scores, it was found that these individuals were rarely involved in group discussions, and sometimes did not even answer when asked for their opinion or given their part of the task. This indicates that perhaps, the lack of direct interaction affects the difficulty of establishing communication in group assignments, especially if the individual concerned cannot even be contacted.

For individuals whose contribution is very dominating, it also shows a relationship that is in harmony with their learning achievements. Seen from individual assignments and exams, understanding of the lecture material is very high compared to other students. Seeing the distribution of this evaluation rubric, it is better to know it early, so that cases of inactivity of one of the students in group assignments can be anticipated.

4. CONCLUSION

The online learning education process in the introduction to management course on Logistics Engineering study program at FPTK UPI is carried out by balancing the use of video conference and WhatsApp media so that problems with the use of video conferencing that students usually complain about, such as power outages, internet network problems, data plan running out can be resolved. With the use of WhatsApp groups that do not require direct interaction between students and educators. On the other hand, the lack of using WhatsApp media such as discipline from students can be overcome through video conferencing media by requiring them to activate their videos, so that teaching and learning interactions can be established unlike WhatsApp media.

Seeing the distribution of the evaluation rubric given to students at the end of the lecture, it is better to know it early, so that cases of inactivity of one of the students in group assignments can be anticipated.

5. REFERENCE

Abidah, A., Hidaayatullaah, H. N., Simamora, R. M., Fehabutar, D., Mutakinati, L., & Suprapto, N. (2020). The impact of covid-19 to indonesian education and its relation to the philosophy of "merdeka belajar". *Studies in Philosophy of Science and Education*, *1*(1), 38-49.

Arifin, B., & Anas, T. (2021). Lessons learned from COVID-19 vaccination in Indonesia: experiences, challenges, and opportunities. *Human Vaccines & Immunotherapeutics*, *17*(11), 3898-3906.

Atsani, K. L. G. M. Z. (2020). Transformasi media pembelajaran pada masa Pandemi COVID-19. *Al-Hikmah: Jurnal Studi Islam*, *1*(1), 82-93.

Budiyanto, A., & Sholeh, A. N. (2021). Analysis SWOT Strategy of the Ministry of Education and Culture's Rumah Belajar. *Jurnal Mandiri: Ilmu Pengetahuan, Seni, dan Teknologi*, *5*(1), 31-45.

Bonardi, J. P., Gallea, Q., Kalanoski, D., & Lalive, R. (2020). Fast and local: How lockdown policies affect the spread and severity of covid-19. *Covid Economics*, *1*(23), 325-351.

Dong, E., Du, H., & Gardner, L. (2020). An Interactive web-based dashboard to track COVID-19 in real time. The Lancet Infectious Diseases, 20(5). 533–534.

Efriana, L. (2021). Problems of online learning during Covid-19 pandemic in EFL classroom and the solution. JELITA, 2(1), 38-47.

Ghafur, H. (2021). Analysis of ICT development supporting the e-learning implementation on Nadhatul Ulama universities in Indonesia. Journal of Social Studies Education Research, 12(4), 121-143.

Gopal, R., Singh, V., & Aggarwal, A. (2021). Impact of online classes on the satisfaction and performance of students during the pandemic period of COVID 19. Education and Information Technologies, 26(6), 6923-6947.

Kristanto, A., & Mariono, A. (2017). The Development of Instructional Materials E-Learning Based on Blended Learning. *International Education Studies*, *10*(7), 10-17.

Kristóf, Z. (2020). International trends of remote teaching ordered in light of the Coronavirus (COVID-19) and its most popular video conferencing applications that implement communication. Central European Journal of Educational Research, 2(2), 84-92.

Latip, A. (2020). Peran literasi teknologi informasi dan komunikasi pada pembelajaran jarak jauh di masa pandemi Covid-19. *EduTeach: Jurnal Edukasi dan Teknologi Pembelajaran*, *1*(2), 108-116.

Lin, X., & Gao, L. (2020). Students' sense of community and perspectives of taking synchronous and asynchronous online courses. Asian Journal of Distance Education, 15(1), 169-179.

Paudel, P. (2021). Online education: Benefits, challenges and strategies during and after COVID-19 in higher education. *International Journal on Studies in Education (IJonSE)*, *3*(2).71-76

Robandi, D. (2020). An analysis of education policy in the pandemic COVID-19. *E-Tech*, *8*(1), 393209.

Sahidillah, M. W., & Miftahurrisqi, P. (2019). WhatsApp sebagai Media Literasi Digital Siswa. Varia Pendidikan, *31*(1), 52-53

Silalahi, T. F., & Hutauruk, A. F. (2020). The application of cooperative learning model during online learning in the pandemic period. Budapest International Research and Critics Institute-Journal (BIRCI-Journal), 3(3), 1683-169.

Simamora, R. M. (2020). The Challenges of online learning during the COVID-19 pandemic: An essay analysis of performing arts education students. *in Learning and Teaching*, *1*(2), 86-103.

Saputra, N., Hikmah, N., Yustitia, V., Saputra, M., Wahab, A., & Junaedi, J. (2021). Implementation of Online Learning Using Online Media, During the Covid 19 Pandemic. Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences, 4(2), 1802-1808.

Tamrin, M., Azkiya, H., & Sari, S. G. (2017). Problems faced by the teacher in maximizing the use of learning media in Padang. *Al-Ta Lim Journal*, *24*(1), 60-66.

Tejedor, S., Cervi, L., Pérez-Escoda, A., Tusa, F., & Parola, A. (2021). Higher education response in the time of coronavirus: perceptions of teachers and students, and open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(1), 43.

Yustika, G. P., & Iswati, S. (2020). Digital literacy in formal online education: A short review. *Dinamika Pendidikan*, *15*(1), 66-76.