The Effectiveness of Online Learning and Its Influence on Student Participation

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Submission Track:	ABSTRACT
	Online learning has been implemented for more than two semesters, amid the problems of 'stuttering' technology, lecturers and students complained about the declining quality of learning and student participation. The purpose of this study was to determine the effectiveness of the implementation of online learning in the Economic Education study program at Ivet University and its effect on student learning participation. The research sample is 50 students. They were collecting data using questionnaires and interviews. The data were analyzed using an eclectic approach, combining regression and qualitative techniques. The results showed: 1). The effectiveness of the implementation of online learning with an average score of 3.81 in the high category 2). Student participation in online learning with a mean score of 4.0 in the high category and 3). Testing the hypothesis with regression techniques obtained the regression equation Y = 38.370 + 0.309.b + e, coefficient F = 4.730 with a significance of 0.035 < 0.05 and R Squares = 0.090. Conclusion: online learning affects the learning participation of students in the Economic Education study program at Ivet University. ***Keywords:*** *effectiveness, online learning, learning participation*

INTRODUCTION

Government policies through the Circular of the Ministry of Education and Culture No. 40 of 2020 concerning the Implementation of Education Policies in the Emergency Period for the Spread of *Corona Virus Disease* (COVID-19), including the determination of learning from home, at all levels of education from Early Childhood Education to Higher Education, has been implemented since the even semester of 2019/2020 and semester odd and even 2020/2021 and starting from the 2021/2022 academic year, *blended learning*, a combination of offline and online. At the beginning of the implementation of this online system, it has caused many problems both from lecturers/teachers and students who do not master technology, limited funds for data quotas, online technology-based learning tools that are not owned by some schools, educators, and students and also inadequate network infrastructure (*adequate*). This is also acknowledged by the Minister of Education and Culture Nadiem Makarim, who said the

adaptation process to *online learning* was challenging, but at least there was still learning going on rather than no learning at all (kompas.com/edu/read/2020/08/).

All components of education are faced with a difficult choice between health issues and the quality of education. The Ministry of Education and Culture took essential steps to encourage the continuity of online learning and the achievement of educational goals. By providing data quota assistance for students and educators, simplifying KI and KD through the Decree of the Head of the Research and Development Agency and Books No. 018/H/KR/2020 concerning Core Competencies and Basic Competencies of Lessons in the 2013 Curriculum in PAUD, Basic Education and Secondary Education in the Form of High Schools for Special Conditions and provides *platforms* and applications that can be accessed by educators and students to learn, such as Teacher's Room, *Quipper School*, *Google for Education*, *Edmondo*, *Microsoft Office 365,* and so on.

Technological stuttering causes educators to be unable to adapt immediately to take advantage of free applications provided by the government. The use of messaging media such as short messages, SMS, *WhatsApp,* and *email* at the beginning of online learning is the most accessible and *familiar* for educators and students to interact with because it can accommodate all students in one class. However, this application is not appropriate if used as a learning medium.

Bilfaqih and Nur Komarrudin (2015) mention that online learning is carried out through the web and can be followed by many students because it is massive and open. According to Kuntarto (2017), online learning brings together students and lecturers to carry out learning with the help of the internet.

Online learning or online learning *is* part of *e-learning*. According to Darin E. Hartley (2001) in Glori (2020), *e-learning* is a type of teaching and learning that allows the delivery of teaching materials to students using the internet, intranet, network media. or another computer. According to Romi (2007) in Niswati et al. (2017), *e-learning* is categorized as *offline* and *online. Offline e-learning* is computer-based learning or *Computer Based Training (CBT)*. Implemented through a particular program installed on the computer, it can be distributed in the form of *CD-ROM*, *flash, LCD-projector, cellphone, OHP*, radio, television, and so on, and does not require the assistance of telecommunication equipment. The content of the learning material can be in the form of writing or multimedia (video or audio). *Online e-learning* uses telecommunications technology and requires an internet network. There are two models *of online e-learning* or online learning: *synchronous e-learning* and *asynchronous e-learning.* Online learning *Synchronous* is a learning and teaching process that co-occurs at different locations, such as *video conferences* and *virtual classrooms (VC).* Some applications that are easy to use for *synchronous* are *Google Meet*, *Zoom Meeting, and video conference.*

According to Saeroji (2020), online learning is asynchronous delayed learning. Learning does not have to be *online* simultaneously but is carried out with an LMS (*Learning Management System*) where the material has been prepared by the teacher/lecturer and can be accessed by students flexibly anytime and anywhere. Teaching materials in the form of videos, *links,* material access *power points*, pictures, charts, and assignments have been prepared and given by educators through *platforms*, and students can open and study materials at any time and send assignments according to deadlines specified time. This difference in teaching and learning time allows students to study teaching materials at any time under the learning time management designed and owned by each student. Online learning applications *that can be used asynchronous*ly include Google Classroom, Edmodo, and Quizizz.

Gikas & Grant (2013) in Sadikin and Afreni (2020) state that implementing online learning requires *mobile* such as *smartphones,* laptops, computers, tablets, and iPhones that can

be used to access information anytime and anywhere. Devices *Mobile* will connect students with learning resources, both in the form *of databases* libraries *digital* and lecturers/instructors, who are physically separated but can interact, communicate and collaborate directly (*synchronously*) or indirectly (*asynchronously*).

According to the Minister of Education and Culture Nadiem Makarim, in distance learning, it is difficult to determine the level of effectiveness. The effectiveness of online learning cannot be measured in a short time because there are many obstacles, ranging from the limitations of supporting tools such as gadgets, economic problems with buying data packages, and uneven network. (Putra, 2020, https://www.medcom.id/).

Sudrajat (2008) mentions that effective learning can provide experiences that include: mental experience, physical experience, and social experience. According to Suryosubroto (2009), the effectiveness of learning can be viewed from two elements, namely: elements of teachers and students. The effectiveness of the teacher element is related to its ability to manage to learn, namely: the measure of the implementation of previously planned learning activities, and the effectiveness of the student element is shown from the level of achievement of learning objectives that have been determined through the learning process. Effective online learning, according to Setyo and Muryo (2016), is shown by: the intellectual and emotional involvement of students through learning activities: experiencing, analyzing, doing, and forming attitudes, activities, and creative students during the implementation of online learning, teachers as facilitators, coordinators, mediator, motivator and use of various methods, tools, and learning media.

Wotruba and Wright in Miarso (2004) identified the effectiveness of the learning process as good material organization, effective communication, mastery and enthusiasm for subject matter, positive attitude towards students, fair value giving, flexibility in learning approach, and good student learning outcomes. Research from the University of Oberta de Catalunya, quoted by Diningrat (2020), states that the ability of educators to design learning strategies is one of the determining factors for the success of online learning, including designing, organizing, and controlling interactive learning activities and materials to achieve learning goals.

The effectiveness of online learning in this study is based on student experience and assessment of indicators: completeness of the material, attractive presentation, interactive learning media and strategies, providing opportunities for students to interact actively, and being able to motivate students to learn more about the materials presented, and provide responses or evaluations of assignments submitted by students, which are expected to foster student participation to be active, involved and provide feedback (*feedback*) in online learning. Restiyanti and Ihalauw (2005) identified factors that influence perceptions and judgments, which can be grouped into two: a). Internal factors, including experience, wholeness, assessment and expectations/expectations, and b). External factors, among others: external appearance, nature of the stimulus, and environmental situation.

Online learning, both *synchronously* and *asynchronously,* as a form of distance learning, according to Darmawan (2016), requires several components, including (1) student learning independence, managing learning materials, study time, looking for references, actively discussing with friends to solve problems. Problems, (2) the ability of lecturers to develop knowledge and skills and facilitate students in online learning, and (3) adequate infrastructure, internet, and *smartphone/computer networks.*

According to Keith Davis in Suryobroto (2009), one's mental and emotional involvement and responsibility for achieving goals is a form of participation in an activity. According to Suryobroto (2009), student participation in learning is shown in the following activities: a). do something to understand the subject matter, b). learn, experience, and discover how to acquire

knowledge, c). feel for yourself the tasks given by the teacher d). study in groups, e). try certain concepts, f). communicate the results of thoughts, research, and appreciation of values orally or in writing.

Sanjaya and Wina (2010) identified the characteristics of student learning activities, including student involvement in finding and utilizing every learning resource relevant to learning objectives. Students interact in multiple directions, between students and students or teacher and students. The involvement of all students is evenly distributed in the question and answer process, not dominated by certain students, and the involvement of students independently to complete their tasks.

According to Paul B, Diedrich in Hamalik (2011), there are several forms of student learning activities: 1). *Visual activities*, such as reading, viewing pictures, observing demonstration or experimental activities, 2). *Oral activities*, opinion, answer questions, ask questions, presentations, discussions., 3). *Listening activitie*s, teacher explanations, discussions, news., 4). *Writing activities*, doing test questions, making material summaries, copying materials, making papers, writing conclusions, 5). *Drawing activities*: drawing maps, charts, sketches. 6). *Motoric activities*: doing physical movements, such as: assembling equipment, exercising, dancing, and making crafts., 7). *Mental activities*: remembering, contemplating, analyzing, 8). *Emotional activities*: happy, laughing, excited, crying, sad.

In Riyana, Cepi 2019, some learning *online* namely: 1). Spirit of learning, in *online* students must have a strong passion for independent learning, because the students, 2 determine student success). *Literacy* towards technology, students must understand and master the technology used as an online learning instrument, such as computers, *smartphones,* and applications used to support *online*, 3). In interpersonal communication skills, students must maintain interaction and interpersonal communication with other students. 4). Collaboration. Learning *Online* makes students learn more independently, but collaboration, discussion, and *sharing* of material from various sources with other students are needed so that students can better master the material being studied, 5). Self-study skills are needed because students have to read, listen, observe, look for material, analyze, study and conclude the material they are learning on their own.

This study is intended to obtain student assessment data about the effectiveness of the implementation of online learning carried out by the Economic Education Study Program at Ivet University and the level of student participation in online learning that has been carried out for more than two semesters so that more progressive policies can be taken to improve the quality of learning services. Online as a strategy to increase student learning participation.

METHOD

The population of this study was 50 students of the Economics Education study program, Faculty of Teacher Training and Education, Ivet University, from semesters 4, 6, and 8 who had attended online lectures for more than two semesters. The primary data collection uses a closed questionnaire method through *google form* with five categories of answer choices*;* complementary data is collected through essay questionnaires and interviews.

Test the validity and reliability of the instrument using the item validity test and *internal consistency reliability,* analyzed with the help of the SPSS program. The instrument is declared valid and reliable if the validity and reliability test results produce a correlation coefficient (r) more significant than the value of the r table at an error level of 5%.

Analysis of research data using an eclectic approach, according to Soegeng (2016), eclectic research combines the best elements of qualitative and quantitative research. The

relationship between research variables will be analyzed using linear regression techniques and equipped with qualitative data to obtain more complete research results.

RESULTS & DISCUSSION

Data analysis on the online learning effectiveness questionnaire of the Economic Education Study Program at Ivet University obtained the highest score of 68 and the lowest score of 41. The collected data are presented in table 1.

Table 1. Effectiveness of Online Learning

No.	Class Interval	Category	Frequency	Percentage
1	64 - 69	Very high	6	12
2	58 - 63	High	19	38
3	52 - 57	Enough	17	34
4	46 - 51	Less	6	12
5	40 - 45	Low	2	4
	Total		50	100

Analysis of respondents' answers to the questionnaire on the effectiveness of the implementation of online learning obtained a total score of 2858 and an average of 3.81, which can be described in the high category. Of all respondents, 50% stated the effectiveness of online learning in the very high and high categories. While 34% are in a good category and 16% are in the less and low categories, the results of this study are in line with the results of Mustakim's research (2020), which shows that 70% of students who become Respondents assessed learning mathematics using online media in the efficient and effective category, 20% said it was expected, and 10% said it was not effective.

The effectiveness of the implementation of online learning with an average score of 2.9 with a less category, on one indicator regarding the use of online applications that are less varied, on average only 2-3 applications are used in online learning, namely applications: WhatsApp, Google Classroom, page my.ivet.ac.id, Google Meet, or Zoom *Meeting*. The results of research by Aurora & Effendi (2009) show a positive and significant effect of using *e-learning* on student learning motivation. Thus, lecturers must appropriately pay attention to the selection and use of online applications/media. The more varied and exciting the online media/applications are, it is possible to increase the effectiveness of online learning.

The results of Sadikin and Afreni's research (2020) found that many students had difficulty understanding the lecture material and assignments given in online lectures because they needed direct explanations from the lecturer. Ivet University LMS has not been used optimally because existing applications manually require student input as participants. Lectures *Synchronous virtual* through *google meet* or *zoom meetings* are used in online learning to provide direct explanations of material that is difficult for students to understand and maintain direct interaction with students. However, this application requires a large data quota and an internet network. Unstable, causing students to be thrown out of the learning forum. The results of this study are in accordance with the opinion of Naserly, M (2020), which states that the use of *zoom cloud meetings* in online learning has the advantage of being able to interact directly between students and lecturers as well as teaching materials, but has the disadvantage of wasteful quota and less effective if attended by more than 20 participants.

Many factors affect the effectiveness of online learning. The results of Epriliyanti's research (2020) show that the factors that affect the effectiveness of the online learning system are: understanding the material, internet quota assistance, utilization of internet quota usage, and intensity of internet quota usage. Thus, the effectiveness of online learning comes not only

from the learning process but also from lecturer factors, student factors and other external factors, such as availability of data quotas and internet network stability.

Table 2. Participation Rate in Online Learning

No	Class Interval	Category	Frequency	Percentage
1	60 - 66	Very high	16	32
2	53 - 59	High	21	42
3	46 - 52	Enough	11	22
4	39 - 45	Less	1	2
5	32 - 38	Low	1	2
	Total		50	100

The data collected on the Economics Study Program student learning participation questionnaire in online learning are presented in table 2. The research data shows that student participation in online learning obtains an average score of 4.0, which can be categorized as high. Respondents' answers indicate that 32% of learning participated in online learning in the very high category, 42% in the high category, 20% in the moderate category, 4% in the less category, and 2% in the low category.

The results of the research above are in line with the results of research by Niswati, Indah, et al. (2017), which examined student responses to online learning methods, showing 85% of respondents responded well, 2% responded quite well, 5% of respondents responded poorly, and 8% wanted the program. *E-learning is* abolished.

Analysis of indicators asking questions online for material that is not clear, with an average score of 3.06, is included in the good category. The results showed that 6% of students never asked, 8% had, 64% sometimes asked questions, and only 18% often asked questions in online learning. The average score is between 4.28 - 4.76, with a very high category, on indicators: attendance in every online lecture, preparing to take part in online learning, reading material given by lecturers, and making and sending answers/assignments. According to Haryanto, and Joni (2021), online learning requires a strong commitment from lecturers and students, lecturers are required to monitor students one by one, and students must be committed to taking learning seriously.

The results of the correlation coefficient analysis to obtain the regression equation and the results of the research hypothesis testing are presented in table 3 and table 4. From the correlation coefficient analysis, the regression equation is obtained, Y = 38.370 + 0.309.X + e. The coefficient of constant a = 38.370 and the coefficient of b = 0.309, with a significance of < 0.05. These results indicate that there is a positive correlation between the effectiveness of the implementation of online learning (X) and student participation in online learning (Y).

Table 3. Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	B	Std.Error	Beta		
(Constant)	38.370	8.161		4.702	.000
PD	0.309	.142	.300	2.175	.035

a. Dependent Variable: PB

Table 4. ANOVA Test

Model	Sum of squares	df	Mean of squares	F
Regression	176.262	1	176.262	4.730
Residual	1788.718	48	.122	
Total	1964.980	49		

Table 4 can be described the results of hypothesis testing with regression techniques, the obtained coefficient values F = 4.730 with a significance of 0.035 <0.05, which means that there is an effect of the effectiveness of the implementation of online learning on learning participation in online learning for students of the Economic Education study program at Ivet University Semarang. The results of this study are in line with the results of Sadiah & Tetep's (2020) research, which states that there is an influence of online-based PPKN learning on student learning participation, which produces a correlation coefficient (r) = 0.639 with *a determinant coefficient* (d) = 40.8%.

The *R Square* coefficient of 0.090 shows that the learning effectiveness variable contributes to student participation in learning by 9%. This value is relatively small. Therefore, further data is needed to reveal other factors that contribute more significantly to encouraging student learning participation in online learning. The research results by Ginanjar, Eggi, et al. (2019) concluded that students who lack confidence would not dare to convey their ideas and thoughts. The results of Karomah's research (2015) concluded that the positive effect of teacher teaching skills, school environment, and learning motivation on learning participation is 51.9%, partially teacher skills contribute 7.12%, school environment contributes 8.17%, and motivation contributes 13.84% in influencing participation student learning at SMK Negeri 1 Batang.

Further research data qualitatively shows that student participation in online learning is strongly influenced by internal student factors, lecturer factors, and learning process factors. Students' internal factors include home conditions that are not conducive to learning, students' likes and dislikes for courses and supporting lecturers and their data quota. Lecturer factors, among others: are the lecturer's ability to interact and the character of the lecturer, who is pleasant and communicative with all students. Factors in the learning process that affect the low participation of students in learning include: the number of assignments and very short deadlines, the implementation of online learning is only in the form of *uploading* materials without ever being explained, the *synchronous* is monotonous, and the duration is too long which makes students bored and bored.

CONCLUSION

The results of the analysis resulted in a regression equation, Y = 38.370 + 0.309.X + e, with a significance of <0.05. The value of the coefficient F = 4.730 with a significance of 0.035 <0.05, so the hypothesis that there is an effect of the effectiveness of online learning on student learning participation in online learning for students of the Economic Education study program at Ivet University Semarang is accepted. The coefficient determinant of 0.090 shows that the learning effectiveness variable does not contribute relatively little to student learning participation. Further analysis of the results of the research above qualitatively shows that student learning participation is not only influenced by the teaching and learning process itself but is also influenced by environmental factors in which students participate in online learning, the availability of data quotas, and the stability of the internet network, as well as other factors— the character of the lecturer that students have perceived.

The results of this study provide feedback for lecturers to be more communicative with students both formally and informally and develop the positive character of lecturers by providing equal motivation, opportunity, and trust to students when interacting and communicating.

REFERENCES

Aurora, A and Effendi, H. (2009), The Effect of Using E-Learning Learning Media on Learning Motivation of Padang State University Students, *Journal of Electrical and*

Vocational Engineering (JTEV), Vo. 05 (02), 11-16

Bilfaqih, Yusuf and Nur Qomarrudin. (2015), The Essence of Online Learning Development, Yogyakarta, Deepublish

Darmawan, Deni. (2016), Development of E-Learning, Theory and Design, Bandung, PT. Rosdakarya

Diningrat Youth, Syaiputra Wahyuda Meisa (2020), Three Strategic Steps to Support Post-Covid-19 Online Learning Culture, https://theconversation.com accessed on 15 November 2020

Epriliyanti, Yashintia Arien and Vita Ratnasari. (2020), Modeling Factors Affecting the Effectiveness of the Online Learning System (SPADA) Using Binary Probit Regression (Case Study of ITS Students During the Pandemic*), Inference,* Vo. 2 No.2 , http://iptek.its.ac.id/index.php/inference/article/view/7714.

Ginanjar, Eggi, Bambang Darmawan, Sriyono. (2019), Factors Affecting the Low Learning Participation of Vocational Students, *Journal of Mechanical Engineering Education*, Vol.6, No.2, 2019, UPI, Bandung.

Hamalik, Oemar, 2011*, Teaching and Learning Process*, Jakarta: Earth Literacy

Haryanto, Jony Oktavian. (2021), Evaluation of Online Learning, *Industrycoid,* https://www.industry.co.id/read/88193/

Karomah, Aldina Nur. (2015), The Effect of Teacher Teaching Skills, School Environment and Learning Motivation on Participation in Accounting Learning for Class X Students of the Accounting Expertise Program, SMK Negeri 1 Batang Year 2014/2015, Department of Economics Education, Faculty of Economics, UNNES, https://123dok.com /document/eqoj98jz-

Kuntarto, E. (2017), The Effectiveness of Online Learning Models in Indonesian Language Lectures in Higher Education*. Indonesian Language and Literature*, Volumes . 3. (1)

Miarso, Yusuf Hadi. (2004), Sowing the Seeds of Educational Technology, Jakarta: Prenada Media

Mustakim. (2020), Effectiveness of Online Learning Using Online Media During the Covid-19 Pandemic in Mathematics Subjects, *Al Asma Journal of Islamic Education*, ISSN 2715-2812 (online), Vol. 2 No. 1.

Naserly, MK (2020), Implementation of Zoom, Google Classroom and Whatsapp Group in Supporting Online Learning in Advanced English Courses, Case Studies in 2 Semester 2 Classes, Department of Business Administration, Faculty of Economics and Business, Bina University Sa, *Akasara Public*, Vol. 2 No. 2

Niswati, Indah, et al. (2017), Relationship between Online Learning Method (*e-learning*) and Achievement Motivation of 'XX' University Students, http://journal.ubm.ac.id

Putra, Ilham Pratama. (2020), Nadiem: Measuring the Effectiveness of Online Learning Takes Time, https://www.medcom.id

Riyana, Cepi. (2019), Production of Online Based Learning Materials, UT Module. https://www.library.ut.ac.id/lib, accessed 29 October 2020

Restiyanti, Prasetijo and JOI Ihalauw. (2005), Consumer Behavior, Yogyakarta: Publisher Andi

Sadiah, Hilma Halimatus, Tetep. (2020), The Effectiveness of Online-Based Civic Education Learning on Student Participation in Learning at SMAN 11 Garut, *Journal of Civics and Social Studies*, Vol. 4 / 02, https://journal.institut Pendidikan.ac.id/index.php/journal

Sadikin, Ali, Afreni Hamidah. (2020), Online Learning in the Midst of the Covid-19 Outbreak, BIODIK, *Scientific Journal of Biology Education*, Vol.6, No.02, 2020,https://online-journal.unja.ac.id/biodik

Sanjaya, Vienna. (2010), Educational Process Standard Oriented Learning Strategy, Jakarta: Prenada Media Group

Saeroji, Ahmad. (2020), Virtual Face-to-face Online Learning Tips Through Teleconference, https://unnes.ac.id/

Setyo, Muryo, 2016, Models and Characteristics of Good and Effective Learning, https://panduanmengajar.blogspot.com/

Sudrajat, Akhmad. (2008), Konsep dan Ciri-Ciri Pembelajaran Yang Efektif, https://akhmadsudrajat.wordpress.com, diakses tanggal 20 Oktober 2020

Sugeng, Ysh, AY, 2016. Penelitian Eklektik: Kombinasi antara Pendekatan Kuantitatif dan Kualitatif, Yogyakarta: Magnum Pustaka Utama

Suryosubroto, 2009. Proses Belajar Mengajar di Sekolah. Wawasan Baru, Beberapa Metode Pendukung dan Beberapa Komponen Layanan Khusus, Jakarta: PT. Rineka Cipta