Investigating Online Learning Process in Business School: Case Study from Business School in Jakarta, Indonesia

Sekar W. Prasetyaningtyas and Agustian B. Prasetya

Abstract—The education system from elementary to higher education has undergone drastic changes during the 2019 coronavirus (COVID-19) pandemic, not only in Indonesia but around the world. This study seeks to describe online learning conditions at Binus Business School, Binus University, especially for the Master's Program, in Leadership and Ethics courses. This study aims to discuss the platforms used in this online learning condition, the advantages and disadvantages of online learning, and the suggestions to improve the online learning conditions. This research uses mixed-methods approaches to study lecturers' and students' perceptions about online teaching and learning modes and highlights the implementation of online teaching and learning modes. The respondents were graduate students and lecturers of Binus Business School. Data were analyzed descriptively, using percentages and content analysis. This research emphasizes the importance of technological innovation and interaction to support students' experience in online learning conditions.

Index Terms—COVID-19, higher education, online learning, perception.

I. INTRODUCTION

COVID-19 is a highly contagious disease caused by coronavirus 2 (SARS-CoV-2), which originated in Wuhan, China. This pandemic has affected aspects of life on all continents [1] and damaged the entire fabric of the economy and society. Estimated that 195 million jobs have been lost due to the effects of this pandemic [2]. One way to reduce the effects of this crisis is by imposing a lockdown in their respective regions [3]. Lockdown is a state of the emergency protocol implemented by the competent authority (in this case, the government) to limit people from leaving their residence. Indonesia confirmed its first corona case on March 2, 2020 [4]. Although not implementing a national lockdown, two weeks after the first case was discovered, primary education to higher education implemented an online/online learning process [5], [6]. With this change in learning mode, many teachers have to adapt to the tools used related to learning management systems (LMS) and video conferencing platforms. In Indonesia, the LMS commonly used are Google Classroom, Edmodo, and institutional LMS built by themselves. As for video conferencing, the commonly used ones are Google meet, Microsoft Teams, Zoom, and Webex [7], [8].

Since the COVID-19 pandemic occurred in Indonesia, research on COVID-19 has begun. In the field of mathematical modeling, many experts predict when the pandemic will reach its peak when it ends and models of transmission of the spread of the virus [9]-[15]. Three scenarios were developed, each differentiated by the controls. The model used April 10, 2020, and December 31, 2021, as the initial and final times. The simulation results indicated that the peak of COVID-19 cases for scenarios 1, 2, and 3 occur on the 59th day with 33,151 cases, on the 38th day with 37,908 cases, and on the 40th day with 39,305 cases. For all of the scenarios, the decline phase shows a slow downward slope and about 8000 cases of COVID-19 still active by the end of 2021 [14], [15]. Meanwhile, the consequences, in terms of the online learning process in Indonesia, especially during this pandemic, not much has been done.

Many studies have investigated the barriers caused by online learning in non-pandemic situations [16], [17]. Meanwhile, research on barriers to the use of online learning during the pandemic has not been done much. [18] started a study on barriers to e-learning in Indonesia, but the participants involved were mathematics teachers at the elementary and high school levels. Most of the research on online learning conducted does not focus on learning in higher education institutions [19], [20].

Regarding online learning, the internet to support teaching and learning programs has been implemented at Binus University since 1998. Since 2008, Binus University has started offering Online Learning programs for people who regularly attend lectures. By offering flexibility through learning methods that are not bound by place and time but remain focused to ensure the quality of graduates of this Online Learning program will be the same as for graduates who study regularly. Online learning uses an integrated LMS (learning management system) to build a network of interactions between students, lecturers, and academic supervisors [21].

Binus Business School, especially the Master's degree program as part of Binus University, also has a blended learning program intended for students constrained by distance and time to take the Master's program. Meanwhile, before the pandemic, this online learning process was not carried out for regular programs. Therefore, it is essential to research to look at the online learning process that is carried out online in the regular Master's program at Binus Business School during this pandemic, especially for the Leadership group course, considering the literature on online learning in this family is very limited.

Manuscript received November 20, 2021; revised March 23, 2022. This work was supported in part by Bina Nusantara University from January to December 2021 under a research grant entitled "Analysis of Online Learning at Binus Business School-Binus University During the COVID-19 Pandemic Period".

The authors are with the Business Management-Master Program, Binus Business School, Bina Nusantara University, Jakarta, Indonesia (e-mail: sekar.p@binus.edu, agustian.prasetya@binus.ac.id).

II. THEORETICAL BACKGROUND

A. Online Learning Process

A few hypotheses support the execution of internet learning. [22] clarify the hypothesis of constructivism. Constructivism hypothesis is a perspective on constructivism where students can be engaged with their learning. The students can likewise carry out or build information all the more independently. Learning exercises in the homeroom assume a part in expanding students' information and dealing with the study hall circumstance. Moreover, the educational program contains learning instruments, materials, and assets. The constructivism hypothesis stated that students should find and change complex data alone. It also needs to analyze new data and overhaul it if the guidelines presently do not fit [23]. It is completely encapsulated in internet realization, where students can procure data and arrange their learning. When taking care of issues, students are not generally helped by close and personal guides, yet they are urged to investigate and take care of issues or issues set freely. The fact of the matter is that students should find and change data from the teacher freely. The educator's assignment is to work with students in getting and giving data that will become meaningful information. Picking up, as per the constructivism hypothesis, is a course of framing information. The actual students make this arrangement. All learning processes aim students as learning subjects to be free when fostering their insight, planning ideas, effectively thinking, and giving significance to something being learned. The educator goes about as a facilitator and establishes an empowering climate for learning.

In the meantime, the social learning hypothesis clarifies a conduct change [24]. Web-based adapting gives an upgrade to students to be effectively associated with the learning system through virtual media. Changes likewise happen when traditional learning (face-to-face) movements to web-based were realized, which causes critical changes in learning styles and frameworks.

This hypothesis upholds another viewpoint on how learning can happen in virtual spaces in the network learning hypothesis. This assertion follows the idea of web-based realizing, where the virtual space is a spot for learning exercises where all included are carefully associated. Although students and educators don't meet face-to-face, they can do an intelligent learning process by augmenting innovation. Learning can go through different applications like the utilization of video or sound and is message-based. Admittance to open learning can eventually advance students' information, and the idea of schooling can be satisfactorily figured out.

In the meantime, the utilization of informative media is a fundamental part of training. The hypothesis of [25] expressed that educators need to consider choosing suitable learning media for students to do practical learning exercises, including goals, content, inspiration, specialized, proprietorship, and directions for use. Subsequently, educators get the appropriate media for students because not everything can be acknowledged and moved along as planned to become learning media.

Likewise, internet learning is a more open learning

framework. It likewise meets the feelings of students. [26] in their hypothesis of adapting needs, uncovered that students' adapting needs and web-based learning conditions are similar. Students frequently feel exhausted in customary learning because there is the same old thing presented in eye-to-eye gatherings. Through on the web, students face difficulties, and they gain opportunity and autonomy from internet learning.

B. Challenges with e-Learning

One issue distinguished by the two educators and students is the absence of information and abilities to utilize innovation devices supplementing their instructive practice. Numerous analysts observe that preparation – for instance, through PC courses – is central and should be given if e-learning is altogether helpful to educators and students in advanced education [27], [28]. [28] discloses that changing to work and learning examples to utilize innovation is tedious and expensive. Be that as it may, these means are essential to exploit the upsides of e-learning.

In an article by [29], a study at Sydney University in Australia shows that generally (39%) of staff and students accept that innovation foundation is the essential explanation distance schooling is hazardous in instruction reception. [30] trust that web-based learning (e.g., e-learning) can be viewed as a substitute for conventional educating. At the point when such a replacement cycle happens, there will consistently be some type of impedance. In this way, it tests colleges that old utilization types of innovation adjust and embrace recently formed advances into instructive practice.

III. METHODOLOGY

A. Research Location and Time

Researchers used quantitative and qualitative methodologies to study stakeholder perceptions during the online learning process in the regular Master's degree program in Binus Business School during the pandemic period in 2021. The data collection process was carried out in March-July 2021, which is the even semester for 2021, with the number of cluster courses leadership as many as six courses.

B. Population and Sample

All lecturers and students in the regular Master's degree program in Binus Business School are the research population. Convenience sampling is used in this study. A total of eighteen lecturers in leadership classes and one hundred and sixteen students participated as samples in a descriptive survey to assess their perceptions of online teaching. In addition, five lecturers in leadership courses and 20 students (ten boys and ten girls) were selected for semi-structured interviews to collect qualitative data on their perceptions of the teaching and learning process. All respondents are Indonesian citizens.

C. Data Collection Procedure

For quantitative analysis, the researcher developed two questionnaires to study the mode of platforms and advantages-disadvantages of the online teaching and learning mode. A semi-structured interview schedule was prepared to obtain detailed opinions and information from lecturers and students during the online learning period regarding the improvement of the online learning process. Their experiences, perceptions, and reflections regarding ongoing online learning were consolidated for qualitative analysis. Data obtained from various sources was analyzed using descriptive statistics for quantitative data and content analysis for qualitative data.

IV. FINDINGS AND DISCUSSION

This section presents findings derived after percentage analysis and content analysis. Eighteen faculty members and one hundred sixteen students participated in a descriptive survey to assess their perception of online teaching-learning. Teachers' age, gender, and designation are given in Table I; meanwhile, Table II represents data of student respondents with their age and gender.

| Age Range | Teacher | Expert Assistant | Assistant Professor | Associate Professor |
|-----------|---------|---------------------|------------------------|------------------------|
| 31-40 | 1 | 2 | 5 | |
| 41-50 | | | 3 | 1 |
| 51-60 | | | 2 | 1 |
| >60 | | | 2 | |

| TABLE II: DATA OF STUDENT RESPONDENTS | | | | |
|---------------------------------------|------|--------|--|--|
| Age Range | Male | Female | | |
| 21-25 | 18 | 29 | | |
| 26-30 | 17 | 26 | | |
| 31-35 | 9 | 10 | | |
| 36-40 | 3 | 2 | | |
| >40 | 2 | | | |

A. Online Platforms Used in Binus Business School during COVID-19 Pandemic Period

Table III portrays the details of the varied platforms of online teaching-learning modes used by the teachers and students during the COVID-19 outbreak. Binus University has developed its own Learning Management System named BinusMaya. All the teachers needed to log in on LMS to upload the study materials required by the students, start the synchronous system, clear their doubts on the discussion forum, and submit the assignments and class scores. So, it was one of the most popular means of digital education among teachers and students in Binus Business School, Binus University.

TABLE III: DIFFERENT PLATFORMS OF ONLINE TEACHING MODES USED BY THE TEACHERS AND STUDENTS

| Online Platforms | Percentage of Teachers Using | Percentage of Students Using |
|--------------------|---------------------------------|---------------------------------|
| BinusMaya | 100 | 100 |
| Zoom Meetings | 100 | 100 |
| YouTube Videos | 45 | 56 |
| WhatsApp Messenger | 100 | 100 |
| Email | 100 | 100 |
| Phone Conversation | 22 | 15 |
| Jamboard | 18 | 40 |
| Mentimeter | 25 | 30 |
| Padlet | 15 | 38 |
| Others | 10 | 40 |

As shown in Table III, all students and teachers use BinusMaya as Bina Nusantara Learning Management System in this online learning condition. Zoom and email, especially Binus Email, as the platform connected directly to BinusMaya, also acts as the leading platform used in Binus Business School. Students mostly used YouTube videos (56%) to get additional information related to the topics. At the same time, the teachers (45%) use YouTube platforms to put the video-based learning to help students engage with the topics. The teachers used other platforms such as Jamboard (18%), Mentimeter (25%), and Padlet (15%) to give interactive activities such as online quizzes and games to get higher engagement with the students. At the same time, students use those platforms to help them recall the topics The telephonic conversation was given in the class. somehow still used in the online learning process in Binus Business School. This data might relate to the older lecturers who feel more comfortable using the telephone instead of email.

B. Advantages and Disadvantages of Online Learning

To get the findings of objective two, i.e., to study the perceptions of teachers and students' perceptions of online teaching-learning during the COVID-19 pandemic, the questionnaire on the perception of teachers and students over the pros and cons of online teaching-learning has been done. Questions were taken from [31]. Fig. 1 and Fig. 2 summarize the advantages and disadvantages of the online learning process at Binus Business School.

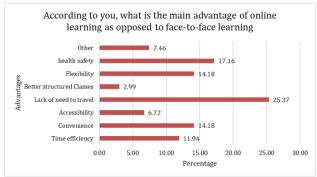


Fig. 1. Advantages of online learning.

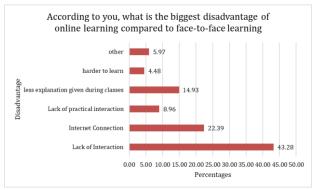


Fig. 2. Disadvantages of online learning.

C. Findings of the Objective Three

To get the findings of objective three, i.e., to discuss the suggestion for developing the online teaching process during the COVID-19 pandemic, we collected teachers' and students' responses through semi-structured interviews

during the lockdown period. As lack of interaction was the biggest challenge in this online learning condition, several suggestions were mentioned. One of the students opined that "More discussions and student's activity can be given (not for marking or score-based activity) as a means of learning motivation and engaging students as well as can have a right balance between visual learner and audio learner."

[32] laid out more systems exhaustively. Including working with student status for bunch work, giving a platform to creating abilities, building up a suitable arrangement between structure (clearness of assignment), and student independence (the adaptability of undertaking). Apart from that, sustaining the foundation of student connections and a feeling of the local area; checking exercises effectively and intently; making bunch errands pertinent for students; picking assignments that can be most appropriate for being performed by a gathering, and giving adequate opportunity to cooperative learning exercises.

Henceforth, considering the brief time frame where instructors needed to adjust to the new showing conditions, many figured out how to adapt effectively to the difficulties; however, there is still an opportunity to get better. In such a manner, our discoveries uncover that the instructive interaction was educator-focused rather than understudy-focused. When there had been an endeavor to take on a more understudy-focused interaction, students felt an excess of tension because of the considerable number of undertakings they were needed to settle.

An understudy-centered instructive cycle includes appointing more liabilities to students and more assignments. In any case, lamentably, because students were not acquainted with this kind of learning, they felt constrained, hence being more inclined to foster negative mentalities towards web-based educating and learning.

Educators utilized different instruments while conveying courses online to make the course more alluring. In any case, once in a while, criticism from students was deferred, undertakings were not compact, and instructors regularly neglected to communicate their assumptions unmistakably. The way addresses the motivation behind why the web-based instructive cycle experienced countless such issues that the customary manner by which educators used to convey the valuable piece of the course was not appropriate for the web-based climate. Consequently, because they didn't quickly adjust and foster arrangements, educators made disarray and vulnerability among students. One of the assistant professors expressed that "There is a lack of information regarding the perception of students' learning requirement about online video tutoring and other online teaching tools to be used for teaching in a distance mode. Whether students found online teaching tools sufficient enough to comprehend the theoretical portion of the course curriculum, or they were using them as a mandatory online learning medium."

Another fundamental angle that should be examined is that the internet learning stages, in some cases, couldn't uphold video gatherings, except for infrequently, in miniature gatherings, and at uncommon hours when the server was not stuffed. Notwithstanding, video gatherings were significant for students since they could substitute the actual association with their educators and partners. A few instructors figured out how to supplant face-to-face cooperation by allotting group ventures, and some of them even utilized community-educating apparatuses. With regards to students' demeanor towards utilizing the web-based learning stage, by and large, students think of it as an essential apparatus for internet instructing and learning. Students would instead utilize different stages because of the specialized issues produced, not by the stage set by the servers of the colleges facilitating it. Students favor stages that permit various clients to video convey for more broadened periods, which don't produce such countless specialized issues, along these lines working with the connection among them and their educators [31].

The current research builds up the premises for carrying out future arrangements regarding the instructive interaction, seen according to another point of view—that of the understudy and instructors. A total re-visitation of face-to-face learning may presently don't be entirely imaginable. The two students and educators have effectively confronted the benefits and impediments of web-based learning. The inquiry is, then, at that point, what will future schooling resemble?

To be sure, the pandemic has shown that there are different parts of the instructing system that, previously, couldn't be envisioned. According to an instructive perspective, the future might appear unique, and it will be an ideal opportunity to continue to another level, that of mixed learning. Mixed learning, B-learning or BL, one of the freshest theoretical ideas of the 21st century, consolidates face-to-face instructing with internet educating, subsequently making a half and half learning framework, has been widely considered by different analysts [32]. They have shown that this mixture framework offers the advantages of both training frameworks, some anticipating that it could even be the "new typical" in future instruction. Following the painful pandemic experience, this "new typical" could be executed in colleges worldwide. The college this examination zeroed in on, and numerous different colleges have the essential foundation and involvement with the field, offering hybrid learning courses generally to individuals who can't take an interest in face-to-face courses. To sum up, one thing is sure: face-to-face association can't be rejected from the instructive interaction. Students should be able to choose whether they would like to enroll in an online or physical course [33]. Campus needs to consider that, campus is not only a place for education, but it is also considered as a sanctuary for many students [34]. Simultaneously, there is no keeping that the advantages from getting e-learning, availability, solace, and efficiency may become imperative in individuals' future furious regular routines.

V. CONCLUSION AND RECOMMENDATION

During this pandemic, Binus Business faced a lot of disruptive conditions in their daily activities. Although they already have a blended learning program, the transition from a regular class to an entire online class is not as smooth as expected. Support from the university regarding the Learning Management System and other platforms such as zoom and email is beneficial. Students and Lecturers felt that this online learning condition gave advantages and disadvantages. Both parties agreed that the easiness of no need to do some transport, considering the traffic of Jakarta in the weekdays was one of the most significant advantages from the condition. However, lack of interaction is the most significant disadvantage they experienced from online learning. As for that, both parties suggested having more interactive activities that not merely focus on the score but build more interaction between students and lecturer. As for the recommendation, more variables need to be discussed in terms of online learning in process in Binus Business School. More samples from different courses were advised to get a different point of view regarding this process.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Sekar Prasetyaningtyas conceived the research and development. Collected and analyzed the data. Agustian Prasetya wrote and proofread the paper. All authors had approved the final version.

ACKNOWLEDGMENT

This study was a part of a research grant entitled "Analysis of Online Learning at Binus Business School-Binus University during the COVID-19 Pandemic Period". The research grant was awarded from Bina Nusantara University from January to December 2021.

REFERENCES

- A. Remuzzi and G. Remuzzi, "COVID-19 and Italy: What next?" *The Lancet*, vol. 395, no. 10231, pp. 1225-1228, Apr. 2020.
- [2] UNDP, "COVID-19 pandemic: Humanity needs leadership and solidarity to defeat the coronavirus," *UNDP*, Apr. 23, 2020.
- [3] E. Brouwer, D. Raimondi, and Y. Moreau, "Modeling the COVID-19 outbreaks and the effectiveness of the containment measures adopted across countries," *medRxiv*, Apr. 2020, doi: 10.1101/2020.04.02.20046375.
- [4] K. Kesehatan, "Pedoman pencegahan dan pengendalian coronavirus disease (COVID-19) (coronavirus disease (COVID-19) prevention and control guide)," Jul. 13, 2020.
- [5] A. R. Setiawan, "Scientific literacy worksheets for distance learning in the topic of coronavirus 2019 (Covid-19)," *EdArXiv*, Apr. 15, 2020.
- [6] S. Ilmiyah and A. R. Setiawan, "Students' worksheet for distance learning based on scientific literacy in the topic coronavirus disease 2019 (Covid-19)," Apr. 2020, doi: 10.31237/osf.io/fpg4j.
- [7] G. Gunawan, N. M. Y. Suranti, and F. Fathoroni, "Variations of models and learning platforms for prospective teachers during the COVID-19 pandemic period," *Indonesian Journal of Teacher Education*, vol. 1, no. 2, Art. no. 2, Apr. 2020.
- [8] D. Sulisworo, P. S. Rohmadheny, N. Fatimah, D. B. Arif, and M. F. Saifuddin, "Learning analytics to predict student achievement in online learning during Covid- 19 mitigation," vol. 24, no. 10, pp. 18, 2020.
- [9] S. Kim, Y. B. Seo, and E. Jung, "Prediction of COVID-19 transmission dynamics using a mathematical model considering behavior changes in Korea," *Epidemiol Health*, vol. 42, p. e2020026, 2020, doi: 10.4178/epih.e2020026.
- [10] F. Nda rou, I. Area, J. J. Nieto, and D. F. M. Torres, "Mathematical modeling of COVID-19 transmission dynamics with a case study of Wuhan," *Chaos Solitons Fractals*, vol. 135, p. 109846, Jun. 2020, doi: 10.1016/j.chaos.2020.109846.
- [11] N. Nuraini, K. Khairudin, and M. Apri, "Modeling simulation of COVID-19 in Indonesia based on early endemic data," *Communication in Biomathematical Sciences*, vol. 3, no. 1, Art. no. 1, Apr. 2020, doi: 10.5614/cbms.2020.3.1.1.

- [12] M. Peirlinck, K. Linka, F. S. Costabal, and E. Kuhl, "Outbreak dynamics of COVID-19 in China and the United States," *Biomech Model Mechanobiol*, vol. 19, no. 6, pp. 2179-2193, Dec. 2020.
- [13] F. Rahimi and A. T. B. Abadi, "Practical strategies against the novel coronavirus and COVID-19 — The imminent global threat," *Archives* of Medical Research, vol. 51, no. 3, pp. 280-281, Apr. 2020.
- [14] R. Resmawan and L. Yahya, "Sensitivity analysis of mathematical model of coronavirus disease (COVID-19) transmission," *CAUCHY*, vol. 6, no. 2, Art. no. 2, May 2020, doi: 10.18860/ca.v6i2.9165.
- [15] E. Soewono, "On the analysis of Covid-19 transmission in Wuhan, diamond princess and Jakarta-cluster," *Communication in Biomathematical Sciences*, vol. 3, no. 1, Art. no. 1, Apr. 2020, doi: 10.5614/cbms.2020.3.1.2.
- [16] G. Ali and R. Magalhães, "Barriers to implementing e-learning: A Kuwaiti case study," *International Journal of Training and Development*, vol. 12, pp. 36-53, Mar. 2008.
- [17] H. Beetham and R. Sharpe, *Rethinking Pedagogy for a Digital Age: Designing and Delivering e-Learning*, 1st ed. Routledge, 2007.
- [18] Mailizar, A. Almanthari, S. Maulina, and S. Bruce, "Secondary school mathematics teachers' views on e-learning implementation barriers during the COVID-19 pandemic: The case of Indonesia," *EURASIA J Math Sci Tech Ed*, vol. 16, no. 7, p. em1860, May 2020, doi: 10.29333/ejmste/8240.
- [19] D. Roisin and M. Fiona, Applied e-Learning and e-Teaching in Higher Education, IGI Global, 2008.
- [20] M. Kabilan and M. Khan, "Assessing pre-service English language teachers' learning using e-portfolios: Benefits, challenges and competencies gained," *Computers & Education*, vol. 58, pp. 1007-1020, May 2012.
- [21] A. Putranto and W. Saputra, "Penggunaan tablet di Binus online learning — Tablet usage in Binus online learning" *ComTech*, vol. 5, no. 1, pp. 163-173, 2014.
- [22] S. Capel, M. Leask, and S. Younie, Eds., Learning to Teach in the Secondary School: A Companion to School Experience, Routledge, 2019.
- [23] Trianto, Model-Model pembelajaran inovatif berorientasi konstruktivistik: konsep, landasan teoritis-praktis dan implementasinya (Construtivism-Innovative Learning Model: Concept, teorethical and practical implications), Jakarta: Prestasi Pustaka Publisher, 2007.
- [24] M. U. Farooq and C. Z. Javid, "Attitude of students towards e-learning: A study of English language learners at Taif University English Language Centre," *NUML Journal of Critical Inquiry*, vol. 10, no. 2, pp. 17-31, Dec. 2012.
- [25] R. Heinich, M. Molenda, S. E. Smaldino, and J. D. Russell, *Instructional Media and Technologies for Learning*, Merrill/Prentice Hall, 2002.
- [26] C. Kaler, "A model of successful adaptation to online learning for college-bound native American high school students," *Multicultural Education & Technology Journal*, vol. 6, pp. 60-76, Jun. 2012.
- [27] W. Bhuasiri, O. Xaymoungkhoun, H. Zo, J. J. Rho, and A. P. Ciganek, "Critical success factors for e-learning in developing countries: A comparative analysis between ICT experts and faculty," *Computers & Education*, vol. 58, no. 2, pp. 843-855, Feb. 2012.
- [28] E. Cohen and M. Nycz, "Learning objects and e-learning: An informing science perspective," *Interdisciplinary Journal of Knowledge and Learning Objects*, vol. 2, Jan. 2006, doi: 10.28945/399.
- [29] H. Forsyth, J. Pizzica, R. Laxton, and M. J. Mahony, "Distance education in an era of elearning: Challenges and opportunities for a campus-focused institution," *Higher Education Research & Development*, vol. 29, no. 1, pp. 15-28, Feb. 2010.
- [30] S. Hiltz and M. Turoff, "Education goes digital: The evolution of online learning and the revolution in higher education," *Commun. ACM*, vol. 48, pp. 59-64, Oct. 2005, doi: 10.1145/1089107.1089139.
- [31] V. Gherheş, C. E. Stoian, M. A. Fărcaşiu, and M. Stanici, "E-learning vs. face-to-face learning: Analyzing students' preferences and behaviors," *Sustainability*, vol. 13, no. 8, Art. no. 8, Jan. 2021, doi: 10.3390/su13084381.
- [32] J. Brindley, W. Christine, and L. M. Blaschke, "Creating effective collaborative learning groups in an online environment," *International Review of Research in Open and Distance Learning*, vol. 10, no. 3, Jun. 2009, doi: 10.19173/irrodl.v10i3.675.
- [33] L. Ali, "The shift to online education paradigm due to COVID-19: A study of student's behavior in UAE universities environment," *IJIET*, vol. 11, no. 3, pp. 131-136, 2021.

 [34] M. Hassan, "Online teaching challenges during COVID-19 pandemic," *IJIET*, vol. 11, no. 1, pp. 41-46, 2021, doi: 10.18178/ijiet.2021.11.1.1487.

Copyright © 2022 by the authors. This is an open access article distributed under the Creative Commons Attribution License which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited (<u>CC BY 4.0</u>).



Sekar W. Prasetyaningtyas was born in Jakarta, on 24 July 1983. She obtained her doctoral degree from IPB University, Indonesia, in 2019. She is a lecturer in the business management-master program, Binus Business School, Bina Nusantara University. Her research interests include leadership, organizational behavior, sustainability, and educational management.



Agustian B. Prasetya was born in Surakarta, on 16 August 1966. He obtained his doctoral degree from University of Indonesia, in 2010. He is a lecturer in the business management-master program, Binus Business School, Bina Nusantara University. His research interests include leadership, ethics, and business law.