

A DESCRIPTIVE SURVEY OF HOW UNIVERSITY STUDENTS ACCEPT THE ONLINE LEARNING IN THE PANDEMIC

Nurhasanah Halim¹; Retno Dwigustini^{2*}; Siti Yulidhar Harunasari¹; Susilawati¹; Ali Satri Efendi³, Herinto Sidik Iriansyah¹

¹STKIP Kusuma Negara, Jakarta, Indonesia

²Universitas Bina Sarana Informatika, Indonesia

³Lembaga Pendidikan dan Pengembangan Profesi Indonesia (LP3I), Jakarta, Indonesia

¹nurhasanah.halim@stkipkusumanegara.ac.id

^{2*}retno.rgu@bsi.ac.id

¹yulidhar1@stkipkusumanegara.ac.id

¹susilawatitoro@stkipkusumanegara.ac.id

³alisatriefendi@gmail.com

¹herinto_sidik@stkipkusumanegara.ac.id

Abstract: During the pandemic, the practice of online learning has been adopted to one solution to sustain learning in the university. Once a barrier, now the teaching delivery or the inversion of class setting is no longer the matter. It is now significant to consider how students accept the online learning. In this study, accepting or resisting the online learning was determined by analysing factors to sustain students' engagement during the online learning. A descriptive survey was taken as the research design by employing closed-ended e-questionnaires in data collection (n=263; 75% response rates). The result shows that the most engaging factor to sustain students' engagement is peer collaboration. In Indonesia, more than 50% of students have perceived that the technology in their learning is useful. This acceptance has influenced their attitude and behaviour toward the use of technology. They become more active participants in collaboration and resourceful. Teamwork, peer-teaching, and peer-assessment are compulsory to sustain students' engagement in online learning. The communities of practice (CoP) can be lecturers' first choice to sustain students' engagement in online learning to anticipate the loss of authenticity in the learning context and to trade the inexistence of concrete class, supporting facilities, and peers. This can also make the learning context authentic. By implementing these two strategies, effective constructivist online learning shall be achieved.

Key words: *online learning, students' acceptance, students' engagement, Covid 19*

SURVEI DESKRIPSI BAGAIMANA MAHASISWA MENERIMA PEMBELAJARAN ONLINE DI MASA PANDEMIK

Abstrak: Selama pandemi, praktik pembelajaran daring telah diadopsi menjadi salah satu solusi penopang pembelajaran di universitas. Meskipun dulu terkendala, kini penyampaian pengajaran atau pembalikan pengaturan kelas tidak lagi menjadi masalah. Pertimbangan bagaimana siswa menerima pembelajaran daring merupakan hal yang penting. Dalam studi ini, menerima atau menolak pembelajaran daring ditentukan dengan menganalisis faktor-faktor yang menjaga

keterlibatan siswa selama pembelajaran daring. Penelitian ini menggunakan desain penelitian survei deskriptif dengan kuesioner elektronik tertutup sebagai alat pengumpulan data (n = 263; tingkat respon 75%). Hasilnya menunjukkan bahwa faktor yang paling menarik yang menjaga keterlibatan siswa adalah kolaborasi sesama. Di Indonesia, lebih dari 50% siswa menganggap bahwa teknologi memberikan manfaat dalam pembelajaran mereka. Penerimaan ini mempengaruhi sikap dan perilaku mereka terhadap penggunaan teknologi. Mereka menjadi lebih aktif dalam kolaborasi dan cekatan. Kerja tim, pengajaran dan penilaian sejawat merupakan sebuah keharusan untuk menjaga keterlibatan siswa dalam pembelajaran daring. Komunitas praktik bisa menjadi pilihan pertama bagi dosen untuk menopang keterlibatan mahasiswa dalam pembelajaran daring sebagai antisipasi terhadap hilangnya keotentikan dalam konteks pembelajaran dan untuk mengganti ketiadaan kelas konkrit, fasilitas yang mendukung, dan teman sebaya. Pilihan ini juga bisa menciptakan konteks pembelajaran yang otentik. Dengan menerapkan kedua strategi ini, pembelajaran daring konstruktivis yang efektif akan tercapai.

Kata kunci: pembelajaran daring, penerimaan siswa, keterlibatan siswa, Covid 19

INTRODUCTION

The outbreak of COVID-19 has been transforming all aspects of life. It is especially for education who has undergone exhaustive transformation. The shift from face-to-face class to online learning has also been exhausting to lecturers and those who are in responsible to support the delivery of teaching instructions in higher education. Yet, the matter is no longer the delivery, the inversion of class setting or even the redesign of course content. It is now essential to consider how the students, who are being exposed to the online learning, perceive the online learning (Aguilera & Nightengale-Lee, 2020).

In principles, online learning is the extension of technology development which is the central aspect of students' experience in higher education (Bond et al., 2020). Disregarding online learning can put students' performance in isolation and put off their potentials. However, previous researches of university students' engagement also reported that students actively participating in several numbers online courses are less exposed to effective teaching practices and experience lower quality of interactions (Dumford & Miller, 2018).

Although many have claimed that the so-called online learning during the pandemic is merely emergency remote teaching, it is commonly acknowledgeable as online learning. First used in 1995, online learning is a term which is employed to describe the first Learning Management System (LMS). This kind of online learning is limited to the use of LMS to upload texts and pdfs

online. Distinctions and overlaps with such terms as electronic learning, blended learning, online education, online courses, etc. are frequent as ambiguity exist in each development of definitions and concept. Therefore, from several perspectives, the use of online learning and e-learning terms are interchangeable (Singh & Thurman, 2019). The term online learning has, then, developed in response to such associative elements as the learners' factors, the technology used, the real-time of learning or even the percentages in its administration. Every element used to define the term can also be independent. One thing that every definition will be in agreement is the ultimate advantage that online learning offer: flexibility. It gives students control and opportunities to be flexible in where and when they learn (Joosten & Cusatis, 2020). This flexibility covers student inability to attend in-class meeting. Yet, the effectiveness of online learning will be achieved when the prerequisite has been fulfilled, they are: information about the computer application, time management and organization, and connectivity using online technologies.

In spite the benefits offered, the drawbacks and challenges of online learning are never absent. Less engagement during students' collaboration, less conducive in students-lecturer interaction and less effective teaching practices are among of the drawbacks (Dumford & Miller, 2018). Meanwhile, the challenges can lead to both students' and lecturers' frustration. From the students' perspectives, the posted resource materials were inadequate or insufficient to promote their understanding toward the course content. On the contrary, lecturers argued that students are far from expectation. Most students showed less enthusiasm and get passive during online learning (Sarker et al., 2019). In addition, keeping up-to-date to the latest technology was not an easy job (Joshi et al., 2020). Students' disengagement is therefore detected.

However, to discuss students' engagement is more than considering it as the only one critical predictor of sustainable learning process, but also about its associative two elements: firstly, the amount of time and students' commitment to accomplish their learning goals and other instructional tasks and, secondly, how institutions use academic and non-academic tools to facilitate the involvement of students in activities relevant to their learning and development (Kuh et al., 2006). Unfortunately, in this concept of students' engagement in higher education, the socio-cultural context has not been largely attended (Kahu & Nelson, 2018) and therefore it has not reflected the environment at which the learning occurs (Lee et al., 2019).

Students' engagement in higher education is troublesome as the engagement is theorised as a form of individuals' different function which refers to the way that a group of individuals clearly pronounce their aims and how to make sense these aims (Kahn, 2014). The role of students in higher education is troublesome because participation is theorized as a kind of distributed organization that relates to how a group of people specifically articulate their interests and how these goals make sense. Another point to consider is that in higher education, students regard their tasks in basis of their emotional experiences towards the task assessment (Ketonen et al., 2019). Therefore, interventions should be in efforts targeted to the situations facilitating students' experience to foster positive emotions and reduce negative ones. The interventions could range from lecturers' helping students to locate the value and meaning of their daily learning situations to lecturers' understanding students' differences in approaches to study, learning style, etc.

This descriptive qualitative research intends to investigate how the university students accept the online learning during the pandemic in Indonesia by describing factors that sustain e-learning engagement. Just like other countries experiencing the COVID-19 lockdown (Murphy, 2020), universities in Indonesia started the 2020 academic year with "irregular" freshmen's welcome ceremony. It was in held online. Platforms of video conferencing replaced freshmen's excitement to see their campuses and to adapt with the life of university students. At some points, this adaptation has led to learning difficulties, stress, and anxiety, yet it has given the best opportunity for students to be resilient, resourceful and independent (Cahya, 2020). In addition, the shock of being isolated from campus and friends have been perceived in different manner.

Accepting or resisting the online learning refers to students' perceptions toward usefulness and easiness influencing users' attitude, intention and actual behaviour to use a new technology (Ngampornchai & Adams, 2016). However, either the acceptance or resistance can never be valid without students' engagement which is unarguable the only one critical predictor of sustainable learning process (Harunasari & Halim, 2019). There are 6 factors of student engagement in the online learning environment (Lee et al., 2019). They are *Psychological Motivation* (How students' think and feel about the online learning); *Peer Collaboration* (How students view their learning activities); *Cognitive Problem Solving* (How students respond to the practice of learning, recognizing and utilizing information in online learning environment); *Interactions with Instructors* (How Lecturer-Students and Student-Student Interaction Can Motivate Learning and

Affect the Process); *Community Support* (How the Bond or Sense of Community was Formed Among Students in the Online Courses), and *Learning Management* (How Students Manage Their Own Learning in the Online Learning).

The importance of this research is that by portraying their engagement in the online learning, there would be suggestions to the selection of effective online learning activities of to sustain students' engagement that are associated with their online learning. Inappropriate learning context and students' acceptance of online courses can cause a temporal and spatial disconnection between lecturers and learners (Sarker et al., 2019). This indeed has been a challenge to every educational institution as there will not be any return to the pre-COVID situation [10].

METHODS

A descriptive survey was taken as the research design. The descriptive research is widely used in the behavioural study. The goal is to solve problems and improve practices through observation, analysis, and description. A survey was used as the research method by employing questionnaires in data collection. Generally, the survey refers to the well-structured collection of self-report to obtain valid data that accurately assess attitudes and beliefs at predetermined population (Deutskens et al., 2004). The survey was administered online, and used web-based software to attain the efficient way of data collection for the qualitative analysis (Denzin & Lincoln, 2018).

The student respondents were selected using saturation sampling (Sue & Ritter, 2007). This method began with sampling frame containing students' contact email addresses to direct students to the e-questionnaire <https://bit.ly/2JcTiai>. The use of e-questionnaire was to reach a large number of students and avoid physical contact during the pandemic. This method is reliable in minimizing coverage error as the respondents were invited to participate in the survey. Hence, researchers need to compute response rate as the number of potential respondents has been known at the first place. The response rate can be specified as the percentage of the sample respondent that has answered and returned the questionnaire (Deutskens et al., 2004). The pre-notification text message was also used to increase the response rates (Manzo & Burke, 2012). In this research, there were 263 students' email addresses collected with 198 students answered and returned the e-questionnaire.

This has brought high response rate to the research 75% (Paolo et al., 2000) and high validity of the result (Manzo & Burke, 2012).

In the e-questionnaire, students responded to a 5-point scale of Likert commonly used to assess attitudes, personality factors, and other psychological conditions. The five points are Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), Strongly Disagree (1). The use of midpoint in this questionnaire is to give respondents considerable freedom in expressing both the direction and strength of their acceptance toward the new technology enhanced their online learning. This middle point can represent students' real attitudes in opinion measurement and reduce some response bias. The use of a five-point Likert scale is also the best option to attain information-processing perspective (Chen et al., 2015; Cohen et al., 2018).

Following a pilot test, a closed-ended questions survey was used to obtain data on students' sustainable online learning engagement. Six factors were proposed *Psychological Motivation; Peer Collaboration; Cognitive Problem Solving; Interactions with Instructors; Community Support, and Learning Management* (Lee et al., 2019) and during the survey, the items of questionnaire have been adapted to for the significance of the study. Each characteristic was represented by 2-5 measuring items in the form of positive statements.

The collected data was analysed through three parallel activities taken from the view of qualitative analysis: condensation, display and verification (Miles et al., 2014). The condensation began by transforming the survey responses into percentages and three categories only agreeing to the statements, undecided and disagreeing to the statements. Next, the researchers decided which data would be focused by sorting them from the highest to the lowest percentage of each point. After that, the data were displayed and verified.

FINDINGS AND DISCUSSION

Respondents' Demographic Data

There were 198 university students participated voluntarily in this research. The students were from two private universities in Jakarta. They were divided into three age groups: 18-20 years old; 21-23 years old and >24 years old. The student-respondents were from four different major programs. Their majors were Business Administration, English Language Education, Communication, and Management with the most students from the Business Administration. To

sum, female students at the first age-group were more responsive to the e-questionnaire in this survey. Table 1 reported respondents' demographic data.

Table 1. Respondents' Demographic Data

	Demographic Data	Percent (%)
Age	18 - 20 years old	45.5
	21 - 23 years old	41
	≥ 24 years old	13.5
Sex	Female	77.3
	Male	22.7
Study Programs	Business Administration	29.3
	English Language Education	28.9
	Communication	24.2
	Management	6.6

How Students' Feel and Think About the Online Learning

The first engagement factor reflects the thoughts or emotions of students in online learning-related motivation. This factor can reflect students' interest, expectation, and motivation. Based on the survey, 50% participants felt so enthusiastic that they were expecting for the next online classes. 43% of students were satisfied and 41% of students perceived that the online learning was useful during the pandemic. These can be seen from the three items with which most students agree the most. What unfortunate was that students have not thought that their online classes interesting and motivating their learning. This was represented by one-third of the total participants choosing the middle point in items 3 and 6. Referring to (Kuh et al., 2006), it was found that students' engagement stands in an intersection of students' reaction and the HE institutional conditions. Meanwhile, the acceptance of student for the online learning is in between.

There were several possibilities why students were not fully interested and motivated in the online learning. First, the online learning during the pandemic was the only one effective solution in the teaching delivery. It is the ultimate response to adapt with the COVID-19 lockdown (Whittle et al., 2020). The planning was insufficient since the goal was to deliver course with time-efficiency. Therefore, the students showed negative response to the online learning. Next, the lack of lecturers' technical expertise and the low provision of sufficient technology support (Tugun et al., 2020) are the needs to be fulfilled (Nunes & McPherson, 2006) to bring effective online

learning. These should be the university management's top priorities in developing better online learning during this uncertainty period of time. To sum, students felt enthusiastic and thought that their online learning was satisfying and useful. Table 2 reported students' response to the factor.

Table 2. Summary of Students' Psychological Motivation in the Online Learning

Psychological Motivation	Response Percent		
	Agreement	Undecided	Disagreement
1. Even my session has just completed, I have been looking forward to the next classes.	50	30	20
2. I am satisfied with the online class I have taken.	43	29	29
3. I find that online classes are very useful.	41	34	25
4. For me, online classes are very interesting.	39	32	29
5. Online classes can enhance my interest in learning.	33	30	37
6. Online classes motivate me to study.	31	34	35

How Students View Their Learning Activities

The second factor to sustain students' engagement in online learning is peer collaboration. This factor refers to events at which students can discuss information and address issues in collaboration. Table 3 reported that most students (82%) viewed their peers greatly support when they cannot grasp the theories, principles, concepts, etc taught or learned in the online activities. This of course includes their efforts to solve tough issues in collaboration. Students are mutually support each other during the online learning. Students were not hesitant or reluctant to ask other students' help when they failed in meaning-making about the concept taught in their online classes. Many of the students collaborate with other students to complete their online tasks or assignments. To sum, students positively viewed their learning because of the peer collaborative learning. This summary has brought forward the success of online learning during the pandemic.

Table 3. Summary of Students' Psychological Motivation in the Online Learning

Peer Collaboration	Response Percent		
	Agreement	Undecided	Disagreement
1. I get help from other students when I cannot understand a concept taught in my online class.	82	12	7
2. I try to solve difficult problems encountered with other students	81	12	9
3. I study the lesson contents in collaboration.	77	15	9
4. I work on online projects or assignments in collaboration	75	13	12
5. I attempt to answer the questions asked by other students.	69	23	8

How Students Respond to the Practice of Learning, Recognizing, And Utilizing Information in Online Learning Environment

The third factor to measure students' engagement in online learning is cognitive problem solving. This factor measures how students responded to the practice of learning, recognizing, and utilizing information in online learning environment. The practice is in the forms of task or activities engaging students to think about important concept, skill, and knowledge they need to master (Pacheco, 2020). Based on Table 4, it was reported that 60% of students have positively responded to the practice by being aware of adapting their approaches to learning with a new perspective. This awareness leads students to decide the relevance of knowledge acquired during the online classes and give opportunities for themselves to be resourceful by applying the knowledge to solve real problems in new situations. From the last items, it can be inferred that students are still not sure or in doubt whether they can use the new acquired in a larger related area. This doubt has become challenges for lecturers in online learning. The practice of online learning could disregard the authenticity of required learning condition (Lee, 2018).

The report gives insights that students' decision to adapt with the new mode of learning have quite influenced their engagement in the online learning environment. To sum, students are quite resourceful in responding to the practice of online learning during the pandemic.

Table 4. Summary of Students' Cognitive Problem Solving in the Online Learning

Cognitive Problem Solving	Response Percent		
	Agreement	Undecided	Disagreement
1. I attempt to understand the subject taught in the online class with a new perspective.	60	30	10
2. I have always attempted to apply materials taught in online classes to real problems or new situations.	59	31	11
3. I can assess the relevance of background information to value the knowledge learned in my online classes.	59	29	13
4. I can create new interpretations and elaborate ideas from the new information that I have got in my online classes.	51	36	12
5. I can do the in-depth analysis about thoughts, experiences, and theories that I have got in my online classes.	47	34	19

How Lecturer-Students and Student-Student Interaction Can Motivate Learning and Affect the Process

This factor is measured to demonstrate the behavioural participation of the learner in engaging with the teacher of the online course. Table 5 has summed students' response to interaction with instructors in the online learning. Based on this table, students agreed that modes of communication either in private or during online learning has been the support to students need in grasp the meaning of content, information, etc. taught. It also implies that students are active participants during online classes. Moreover, all the percentages exceed 50%. This also shows that students' level of engagement is high. From this character, it can be concluded that students accept the online learning during the pandemic. In fact, the environment has influenced students' motivation to engage with the learning process. It confirmed (Lee, 2018; Sarker et al., 2019) that the strong, multichannel interaction between lecturer and learner in online learning is effective in the learners' cognitive development. Therefore, interaction within the online learning has motivated students learning greatly affected the process.

Table 5. Summary of Students' Interaction with Instructors in the Online Learning

Interactions with Instructors	Response Percent		
	Agreement	Undecided	Disagreement
1. I can communicate with the lecturers in private for extra help.	65	22	13
2. I often ask lecturers about the contents of the lesson.	64	24	12

How the Bond or Sense of Community Was Formed Among Students in the Online Courses

This factor is relevant to students' psychological condition. This refers to the formation of bond or sense of community that is formed by learners who are learning in the same online courses. The summary of this factor is that students are emotionally bound in the online learning community because of their frequent interaction with other students. The sense of belonging in the online class and feeling connected are aspects that sustained students' engagement. This implied that the learning context has been appropriate, consequently the time and space gaps between lecturers and learners did not exist. Table 6 reported students' responses toward the community support in the online learning.

Table 6. Summary of Community Support in the Online Learning

Community Support	Response Percent		
	Agreement	Undecided	Disagreement
1. During online classes, I frequently interact with other students.	73	17	11
2. During online class community, I feel the sense of belonging established.	69	20	12
3. During online classes, I feel connected with other students.	60	23	17

How Students Manage Their Own Learning in the Online Learning

The last factor in sustaining students' engagement in online learning is learning management. This aspect relates to active and self-directed learning experiences in students' individual learning environment. It can be inferred that students managed their own learning schedule by planning them in advance. Yet, distractions were unavoidable. Table 7 summed students' response in the online learning management.

Table 7. Summary of Learning Management in the Online Learning

Learning Management	Response Percent		
	Agreement	Undecided	Disagreement
1. I plan a learning schedule prior to the online learning.	72	20	8
2. I study relevant material by myself after the online learning session.	68	24	9
3. I have my own systematic online learning management.	67	24	10
4. I remove all environmental distractors factors during online classes.	62	26	13

CONCLUSIONS

To conclude, the factor which mostly sustains students' engagement in online learning during the pandemic is peer collaboration. Moreover, there are two other factors to sustain students' engagement in online learning during the pandemic. They are Community Support and Learning Management. The researchers determined these three influencing factors based on the highest percentages in the positive response. The other three factors to sustain students' engagements are Interaction with Lecturers, Cognitive Problem Solving and Psychological Motivation, respectively.

The first finding was in line with (Rapanta et al., 2020) that a good online course when administered for several weeks will encourage peer collaboration. As a matter of fact, technology

provides various patterns of engagement for students which can encourage small group discussion, promote opinion exchange, peer review and the creation of an online learning society. A point to think about is that challenges in organizing group work for an online-situated learning could be overcome by careful planning, setting specific learning guidelines, and selection of relevant content material and task types (Phungsuk et al., 2017). It can be concluded that teamwork, peer-teaching or peer-assessment are compulsory in the selection of course activities.

The ubiquitous online learning provides a creative opportunity to create a group, encourage the practice of student inquiry, and provide the virtual platform for students to challenge each other and make sense the content taught in their own learning (Bryant & Bates, 2015). Frequent interaction with other students is a necessity to sustain their engagement in the online learning. The existence of concrete class, supporting facilities, and friends are unquestionably the lost community support. However, the lost in this case can be beneficial for the increase of students' active participation.

It was also found that students have begun to adapt their learning in the new online learning environment. The use of technology has extended their role in internalizing concept taught in class. They have been aware that they must be resourceful to adapt with the learning instruction in their virtual classrooms. At this point, the role of lecturer is to encourage students to think instead of relying on rote memorization. It is also essential for lecturers to mind map which problems can enable students to apply their knowledge in online learning environment (Bryant & Bates, 2015).

In Indonesia, many students accept the change with ease, yet a considerable number of students still resists because of such irrelevancies as students' interest, expectation, and motivation with the learning situation; and less opportunities to apply knowledge in the concrete world. More than 50% of students have perceived that so-called disruptive technology in their learning during the pandemic is useful. This has influenced their attitude and behaviour toward the use of technology. They have become more active participants in collaboration and resourceful.

Online learning is actually the practice of social constructivism view of learning (Bryant & Bates, 2015). The instructions, learning activities and strategies should enable student-student interaction and build learner communities (Lee, 2018). The practice of online learning should consider the authenticity of required learning condition. It needs an active individual learning management to succeed. The constructivist concept of "*learning by doing*" by Dewey results from

the combination of acting and reflecting on the consequences - reflective experience and reflective thinking (Nunes & McPherson, 2006). Based on this, communities of practice (henceforth CoP) can be lecturers' first choice to sustain students' engagement in online learning. The new normal has pushed students to be active in identifying and executing particular activities within small self-directed communities, whether real-life or study-based through interaction with others (Bryant & Bates, 2015). Lee & Brett (2015, in Lee, 2018) proposed double-layered CoP model which is a framework for online course development to link learning and practices. Figure 1 is the illustration of the framework called double-layered CoP model.

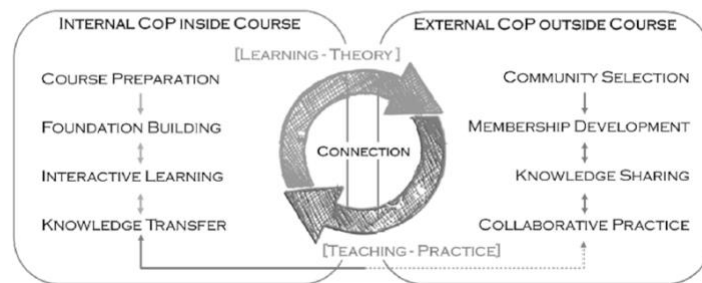


Figure 1. The Model of Double-layered CoP (Lee & Brett, 2015, in Lee, 2018)

There is no such thing as returning to the pre-pandemic learning situation (Schultz & DeMers, 2020). It is obvious that online learning has been the primary or the only means of instruction during the pandemic. Some content, knowledge or competencies might not be well adapted to the online learning (Schultz & DeMers, 2020), but situated learning theories can be the lecturers' first choice to sustain students' engagement in online learning to trade the inexistence of concrete class, supporting facilities, and peers. This can also make the authentic of learning context. By implementing these two strategies, students' resourcefulness can be improved and consequently, effective constructivist online learning shall be achieved.

ACKNOWLEDGEMENT

Nurhasanah Halim is the first author contributed to the process of constructing the research background and literature review. Retno Dwigustini is the second author contributed to the preparation of research plans, data collection assistance, and data analysis. Siti Yulidhar Harunasari is the third author contributed to the evaluation of the data analysis and interpretation. Susilawati is the fourth author

contributed to the data presentation and interpretation. Ali Satri Efendi is the fifth author contributed to the proofreading process. Herinto Sidik Iriansyah is the sixth author contributed to the systematic writing of the whole article.

REFERENCES

- Aguliera, E., & Nightengale-Lee, B. (2020). Emergency remote teaching across urban and rural contexts: perspectives on educational equity. *Information and Learning Science*, 121(5–6), 461–468. <https://doi.org/10.1108/ILS-04-2020-0100>.
- Bond, M., Buntins, K., Bedenlier, S., Zawacki-Richter, O., & Kerres, M. (2020). Mapping research in student engagement and educational technology in higher education: a systematic evidence map. *International Journal of Educational Technology in Higher Education*, 17(2), 1–30. <https://doi.org/10.1186/s41239-019-0176-8>.
- Bryant, J., & Bates, A. J. (2015). Creating a constructivist online instructional environment. *TechTrends*, 59(2), 17–22. <https://doi.org/10.1007/s11528-015-0834-1>.
- Cahya, G. H. (2020, September 4). Generation Zoom: Freshmen forced to start university life in solitude. *The Jakarta Post*. <https://www.thejakartapost.com/news/2020/09/01/generation-zoom-freshmen-forced-to-start-university-life-in-solitude.html>.
- Chen, X., Yu, H., & Yu, F. (2015). What is the optional number of response alternatives for rating scales? From an information processing perspective. *Journal of Marketing Analytics*, 3, 69–78. <https://doi.org/10.1057/JMA.2015.4>.
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). Routledge.
- Denzin, N. K., & Lincoln, Y. S. (Eds.). (2018). *The SAGE handbook of qualitative research* (5th ed.). SAGE Publications.
- Deutskens, E., Ruyter, K. de, Wetzels, M., & Oosterveld, P. (2004). Response rate and response quality of internet-based surveys: An experimental study. *Marketing Letters*, 15(1), 21–36. <https://doi.org/10.1023/B%3AMARK.0000021968.86465.00>.
- Dumford, A. D., & Miller, A. L. (2018). Online learning in higher education: exploring advantages and disadvantages for engagement. *Journal of Computing in Higher Education*, 30(3), 452–465. <https://doi.org/10.1007/s12528-018-9179-z>.
- Harunasari, S. Y., & Halim, N. (2019). Digital backchannel: Promoting students' engagement in EFL large class. *International Journal of Emerging Technology in Learning*, 14(7), 163–178. <https://doi.org/10.3991/ijet.v14i07.9128>.

- Joosten, T., & Cusatis, R. (2020). Online learning readiness. *American Journal of Distance Education*, 34(3), 180–193. <https://doi.org/10.1080/08923647.2020.1726167>.
- Joshi, O., Chapagain, B., Kharel, G., Poudyal, N. C., Murray, B. D., & Mehmood, S. R. (2020). Benefits and challenges of online instruction in agriculture and natural resource education. *Interactive Learning Environments*, 1–12. <https://doi.org/10.1080/10494820.2020.1725896>.
- Kahn, P. E. (2014). Theorising student engagement in higher education. *British Educational Research Journal*, 40(6), 1005–1018. <https://doi.org/10.1002/berj.3121>.
- Kahu, E. R., & Nelson, K. (2018). Student engagement in the educational interface: Understanding the mechanisms of student success. *Higher Education Research & Development*, 37(1), 58–71. <https://doi.org/10.1080/07294360.2017.1344197>.
- Ketonen, E. E., Malmberg, L. E., Salmela-Aro, K., Muukkonen, H., Tuominen, H., & Lonka, K. (2019). The role of study engagement in university students' daily experiences: A multilevel test of moderation. *Learning and Individual Differences*, 69(October 2018), 196–205. <https://doi.org/10.1016/j.lindif.2018.11.001>.
- Kuh, G. D., Kinzie, J., & Buckley, J. A. (2006). What matters to student success : A review of the literature spearheading a dialog on student success. In *Commissioned Report for the National Symposium on Postsecondary Student Success Spearheading a Dialog on Student Success* (Vol. 18, Issue July). <http://cpe.ky.gov/NR/rdonlyres/AFA304F0-C125-40C2-96E5-7A8C98915797/0/WhatMatterstoStudentSuccessAReviewoftheLiterature.pdf>.
- Lee, J., Song, H., & Hong, A. (2019). Exploring factors, and indicators for measuring students' sustainable engagement in e-learning. *Sustainability*, 11(4), 985. <https://doi.org/10.3390/su11040985>.
- Lee, K. (2018). Everyone already has their community beyond the screen: reconceptualizing online learning and expanding boundaries. *Educational Technology Research and Development*, 66(5), 1255–1268. <https://doi.org/10.1007/s11423-018-9613-y>.
- Manzo, A. N., & Burke, J. M. (2012). Increasing response rate in web-based/internet surveys. In *Handbook of survey methodology for the social sciences* (pp. 327–343). https://doi.org/10.1007/978-1-4614-3876-2_19.
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis: A methods sourcebook*. Sage Publications, Inc.
- Murphy, M. P. A. (2020). COVID-19 and emergency eLearning: Consequences of the securitization of higher education for post-pandemic pedagogy. *Contemporary Security Policy*, 41(3), 492–505. <https://doi.org/10.1080/13523260.2020.1761749>.
- Ngampornchai, A., & Adams, J. (2016). Students' acceptance and readiness for e-learning in Northeastern Thailand. *International Journal of Educational Technology in Higher*

Education, 13(34), 1–13. <https://doi.org/10.1186/s41239-016-0034-x>.

Nunes, M., & McPherson, M. (2006). Learning support in online constructivist environments in information systems. *Innovation in Teaching and Learning in Information and Computer Sciences*, 5(2), 1–9. <https://doi.org/10.11120/ital.2006.05020006>.

Pacheco, J. A. (2020). The “new normal” in education. In *Prospects*. Springer Netherlands. <https://doi.org/10.1007/s11125-020-09521-x>.

Paolo, A. M., Bonaminio, G. A., Gibson, C., Partridge, T., & Kallail, K. (2000). Response rate comparisons of e-mail- and mail-distributed student evaluations. *Tech Learn Med*, 12(2), 81–84. https://doi.org/10.1207/S15328015TLM1202_4.

Phungsuk, R., Viriyavejakul, C., & Ratanaolarn, T. (2017). Development of a problem-based learning model via a virtual learning environment. *Kasetsart Journal of Social Sciences*, 38(3), 297–306. <https://doi.org/10.1016/j.kjss.2017.01.001>.

Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online university teaching during and after the covid-19 crisis: Refocusing teacher presence and learning activity. *Postdigital Science Education*, 1–23. <https://doi.org/10.1007/s42438-020-00155-y>.

Sarker, M. F. H., Mahmud, R. A., Islam, M. S., & Islam, M. K. (2019). Use of e-learning at higher educational institutions in Bangladesh: Opportunities and challenges. *Journal of Applied Research in Higher Education*, 11(2), 210–223. <https://doi.org/10.1108/JARHE-06-2018-0099>.

Schultz, R. B., & DeMers, M. N. (2020). Transitioning from emergency remote learning to deep online learning experiences in geography education. *Journal of Geography*, 119(5), 142–146. <https://doi.org/10.1080/00221341.2020.1813791>.

Singh, V., & Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018). *American Journal of Distance Education*, 33(4), 289–306. <https://doi.org/https://doi.org/10.1080/08923647.2019.1663082>.

Sue, V. M., & Ritter, L. A. (2007). *Conducting online surveys*. Sage Publications, Inc.

Tugun, V., Bayanova, A. R., Erdyneeva, K. G., Mashkin, N. A., Sakhipova, Z. M., & Zasova, L. V. (2020). The opinions of technology supported education of university students. *International Journal of Emerging Technologies in Learning*, 15(23), 4–14. <https://doi.org/10.3991/ijet.v15i23.18779>.

Whittle, C., Tiwari, S., Yan, S., & Williams, J. (2020). Emergency remote teaching environment: A conceptual framework for responsive online teaching in crises. *Information and Learning Sciences*, 121(5/6), 311–319. <https://doi.org/10.1108/ILS-04-2020-0099>.