

Adaptability, agility, and readiness in transformation digital learning technology post pandemic

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Abstract. This study aims to describe how adaptable, agile, and ready-for-change lecturers are when they use digital information-based learning technology before, during, and after the COVID-19 pandemic in higher education institutions in Indonesia. The pandemic has forced higher education institutions to use digital information-based learning technology to ensure continuity in the learning process. However, it is essential to assess whether this technology is still relevant and whether it will continue to be used after the pandemic ends. The using digital information-based learning technology depends on many factors such as adaptation, learning agility, and readiness for change. This study uses a literature review approach with the keywords utilization of digital information-based learning technology, COVID-19, readiness, adaptability, and learning agility. The results of this study indicate that the adaptability, learning agility, and readiness to change lecturers will determine whether they continue to use learning technology even after the pandemic. Based on these results, lecturers can improve their adaptability and learning agility, to be ready for changes by using renewable and up-to-date learning technology based on digital information technology. This will increase the quality and effectiveness of learning even after the pandemic ends.

Keywords: Adaptability, Learning Agility, Readiness for Change, Digital Learning Technology, Pandemic Covid 19.

1 INTRODUCTION

The COVID-19 pandemic has had a very significant impact on various aspects of life. One of them is in the field of education in general, and higher education in particular, which is experiencing a shift. Before the pandemic, the teaching and learning process in higher education was carried out traditionally by conducting face-to-face meetings. Pandemic Covid 19 forced lecturers and students to carry out distance learning. Based on data from the Ministry of Education and Culture, more than 4,000 higher education institutions in Indonesia have moved to online learning methods. It was also recorded that more than 300,000 lecturers at that time had held online classes (Kemdikbud, 2020). When entering the new normal era, the education process began to undergo adjustments again, where universities that had implemented distance learning began to plan to implement Blended Learning. As explained (Junaidi & Merta, 2020), the New Normal condition will be marked by a shift in the learning paradigm from face-to-face patterns to Blended Learning methods.

Blended learning is a combination of the advantages of face-to-face and virtual learning (Husamah, 2014). Semler (in Junaidi & Merta, 2020) emphasized that: "Blended learning is a learning system that combines the best aspects of online learning, structured face-to-face activities, and real-world practice. Online learning systems, classroom exercises, and on-the-job experience will provide valuable experience for them". Even though blended learning is said to be the best learning system, but it still encounters various obstacles in the field. This is proven by the research results of Huaturuk & Sidabutar (2020) that most lecturers only provide teaching materials via Google Classroom, and if there are many questions they are submitted via the comments column. Apart from that, some lecturers only give assignments at each lecture meeting without explaining the lesson material/topic. Students are required to study teaching materials/modules independently, while many of these teaching materials/modules are also considered difficult to understand. So, the learning process becomes ineffective and inefficient. Research by Saragih, et al (2021) also found that lecturers experienced difficulties in applying the distance learning system in real situations. The biggest challenge for this learning system is related to effective communication with students and the openness of lecturers to learn using various software for video conferencing, storing teaching materials, and online quizzes. This shows that they still do not have skills in instructional design and lack skills in utilizing technology for successful learning outcomes.

The results of this research are in line with data findings at one of the universities in Indonesia, where based on the results of learning evaluations during the pandemic, lecturers were less skilled in utilizing synchronous and asynchronous learning media. As many as 51% of lecturers chose online learning methods using online discussions (chatting) and take-home assignments, and only 16% used virtual face-to-face videos. Therefore, the use of WhatsApp and Google Classroom dominates at 52% compared to the use of E-learning, Zoom Meeting, and Google Meet which is only 29%. The evaluation results also show that students expect an online explanation and understanding of material according to the learning plan. As explained by (Fawwaz, et.al, 2022) that online learning is a new challenge for students so that it can give negative impact on students' mental health. So, this is also a new challenge for lecturers so that lecturers can implement an online learning system to help students learn during the pandemic.

Therefore, combining these two learning systems is not an easy thing, because many aspects need to be considered for successful learning outcomes. These aspects include, among others, related to pedagogical skills, instructional design, skills in using technology, facilities for interacting with students, motivating students, and

organizing the best material that can be delivered via the Internet compared to face-to-face (Junaidi & Merta, 2020). Apart from that, lecturers need to have good adaptability and agility so that lecturers are always ready to face changes that occur in the field, especially related to changes that occur in the use of education systems that utilize information technology and digital systems. Readiness to change is an individual's belief in the benefits of changes to the organization and work processes, as well as the belief that these changes have a high possibility of being implemented (McKay, et al, 2013). Shea, et al (2014) explain that when someone has high readiness to change, they will show higher levels of resilience and cooperative behavior toward planned changes. Readiness to change is also closely related to other attributes such as learning agility and adaptation. Mahendrasti's (2021) research shows that learning agility has a positive relationship with readiness to change. Wahidin (2012) explains that readiness to change is also related to the agility to learn new things. Someone who is agile needs to have the competence to manage change. Managing Change can be defined as the ability to adapt to new or changing situations and not rely excessively on old methods and processes, taking action to support and implement change initiatives, leading change efforts, taking personal responsibility for ensuring change is implemented effectively." (PERMENPANRB Number 38 of 2017).

When the Covid 19 pandemic took place, many adjustments needed to be made by lecturers in facing the new era in the world of education, namely in the learning process which made extensive use of digital information technology. However, after COVID-19, is this learning system still relevant to use? Are lecturers capable of being adaptive and agile in using the blended learning system? And how can organizations encourage lecturers to follow changes?

2 METHOD

The method in this research uses literary review, where the researcher subjectively collects several studies that have topics like the research theme and then interprets them. The components in this research include at least an introduction, methods, discussion, conclusion, and reference list. In a literature review, researchers search one or more databases related to a topic and understand a number of these topics. Based on this understanding, the researcher then summarized the literature found into a discussion topic (Kysh, 2013). In this research, the researcher took the topic of lecturers' readiness to change in terms of adaptation and learning agility in facing digital transformation in the world of education. Keywords used in searching the literature consist of readiness to change, adaptability, learning agility, information technology-based education system, and Covid 19.

3 FINDINGS AND DISCUSSION

The following is a literature search regarding the adaptation, agility, and readiness of lecturers in utilizing information technology-based education systems. Research regarding the implementation of an information technology-based education system due to the impact of COVID-19 is more commonly found in the Asian region. The following is an explanation carried out by researchers based on the title, author, and year of research, aims, methods, findings, and implications of the research.

No	Title	Author, Year, & Country	Research Purpose	Participants, Design & Method	Finding	Implications
1	Agility, Innovations, & Prospects – Virtual Pedagogy During Physical Distancing	Werdiningsih, R & Nursanty, E, (2020), Indonesia	The research aims to explain the problems that arise as result of the online learning process for elementary school-level education.	Qualitative research using a snowball sampling technique. Data collection was carried out by conducting interviews with lecturers, parents, and students in the Semarang City school environment	The readiness of students and lecturers to carry out learning at home varies. Some feel ready, forced to be ready, and some are not ready. Some schools require the use of technological devices in the learning and teaching process. Lecturers/lecturers must ensure that learning activities continue even though learning is carried out remotely, which requires innovation in learning and is implemented by lecturers by maximizing available media using e-learning methods that utilize communication and information technology. The problem related to the use of information technology in learning is the lack of teacher mastery	Positive impact: increased responsibility and desire to learn information technology for lecturers, students, and parents. Negative definition: Low effectiveness of the teaching and learning system. The principal can provide solutions and give notifications to lecturers so that lecturers who are not ready to use online media can be supervised and provide solutions.

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					of this media, especially for senior lecturers. All learning experiences are demanding and require quite high adaptability. Adaptation is a term that refers to the ability to use new information and experiences. Learning is adapting to our new environment. Through adaptation, we can adopt new behaviours that allow us to agree with change. Adaptation is one of the important processes that direct cognitive development.	
2	Examining Faculty's Online Teaching Competence During Crisis: One Semester On	Adi Badi-ozaman, IF., Segar, AR, Iah, D. (2022): Malaysia	The research aims to examine faculty perceptions regarding competency and readiness to conduct online teaching in Sarawak Higher Education Institutions	Quantitative research using the Faculty Readiness to Teach Online measurement instrument (Martin, et al, 2019), which was distributed to four higher education institutions in Sarawak, with a total of 174 respondents	The highest competency rating among the four universities surveyed was regarding learning communication skills and learning design. This is followed by time management competence and technology use competence. However, the Manova results show that there are no differences in terms of demographic variables	Online teaching competency is an important thing that lecturers must have. Understanding this can help universities face the implementation of online learning in emergency conditions with a data-based approach to support and improve coordination, resilience, and adaptability in the higher education environment.
3	The Inevitable Surge of Online Learning Through the Lens of English Education Lecturers During Unprecedented Times	Simanjuntak, DC & Panjaitan, N. (2021): Indonesia	This research aims to explore the perceptions and experiences of English language education lecturers in implementing virtual teaching during the pandemic	Qualitative research explores the perceptions and experiences of informants and helps researchers to understand and explore more deeply the research topic through semi-structured interviews. The sampling technique was purposive sampling with a total of 25 participants.	Lecturers who have agility and adaptability will find it easier to survive fluctuations in uncertain educational situations because they see opportunities to explore several solutions to support the teaching and learning process that can meet student needs. Lecturers who have the ability in technological literacy will be able to create a more natural learning environment to increase the learning efficiency of their students and to develop the quality of teaching. Where all learning outcomes can be achieved through actions taken by the teacher	Online learning in crises makes lecturers try to be more skilled and shape their teaching attitudes in handling difficult situations. In implementing online learning in Language Education, approaches need to be taken to maximize learning interactions between students and lecturers. Lecturers must also ensure that the content and materials are interesting and can encourage students to take part in independent learning during online classes.
4	Are Lectures Agile? Analysis of the Agility of Lecture's Teaching Role as Human Resources in Private Universities	Megawaty., Hamzah, D., Reni, A., & Toaha, M. (2023): Indonesia	The research aims to determine and analyze the level of agility of lecturers as human resources who carry out teaching at private universities in Makassar City	Quantitative research with 99 respondents, who are lecturers at private universities in Makassar. The instrument is a questionnaire consisting of 15 statements from 3 HR agility indicators, namely speed, focus, and flexibility.	Based on the results of this research, three characteristics of lecturers who have agility were found: Speed. Lecturers who can adopt digital techniques in learning will become agile in the learning process, they will take previous experience to improve learning methods in the future and create campus culture as a platform to support a better learning process.	Based on the results of the assessment, it can be concluded that lecturers as human resources at private universities must be able to demonstrate their role in learning by having agility characteristics, which consist of the categories of speed, focus, and flexibility.

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					Focus. Lecturers who have a focus show behaviour to try and encourage their students to continue learning, develop adaptive strategies in the learning process, have a clear vision in shaping student character, and try to build emotional bonds with students to produce good relationships in the learning process. Flexibility. Lecturers who have flexibility in learning will show efforts to give their students the freedom to learn from a variety of literacy sources, trying to produce a comfortable environment in the learning process. Producing a culture with a culture of collaboration, which is positive in the learning process, and produces an interesting learning process that empowers students' abilities.	
5.	The Complexity of Remote Teaching in Emergency Situations: Initial Basic Principles to Avoiding Technological Boundaries	Cahyadi, A., Hendriyani., Widyastuti, S. (2021): Indonesia	This research aims to introduce the principles of ERT (Emerging Remote Teaching) in the Higher Education environment in Indonesia in the new adaptation period.	Research using case study methodology, which focuses on exploring the experiences of faculty, lecturers, and students in Indonesia in facing learning challenges during the COVID-19 pandemic.	In a learning environment that requires change during the COVID-19 period, the speed required to adapt to environmental changes requires high levels of preparedness. The principles needed during the Covid learning period need to apply the ERT principles, including the principle of simplicity, where the online learning system requires simple concepts so that all elements, both lecturers and students, can more easily understand the use of online-based learning systems, the principle of accessibility, where the delivery of learning materials is online learning also requires the application of the principle of flexibility where lecturers must create a flexible learning process anywhere and at any time so that the speed of changing from conventional learning methods is very necessary.	Obstacles encountered by lecturers in implementing online learning during the pandemic include implementing pedagogical practices to continue to achieve learning outcomes in the nationally mandated curriculum. Lecturers as the front guard need the ability to respond quickly in adopting emergency curricula to maintain educational continuity and ensure students can achieve learning goals even in difficult situations.
6.	Post Covid 19 Strategies for Higher Education Institutions in Dealing with Unknown and Uncertainties	Rasli, A., Tee, M., Lai, YL, Tiu, AC, Soon, EH (2022): Malaysia	This research aims to identify strategies for higher education institutions to deal with uncertainty during and after the pandemic.	Research using the Expert Opinion Method involves professors who are senior in university management and are directly involved in formulating strategies and policies during the pandemic.	Based on data analysis, one of the themes that can be explored from the Expert Opinion Method is Resilience and Change Management. Universities are working hard to develop resilient recovery models to increase their ability to adapt to threats posed during the pandemic. In addition, the nature of resilience is related to the ability to adapt which allows individuals to survive, overcome problems, and develop in the future. The resilience model facilitates individual interaction with the environment and environment, which can explain how a person can deal with a person's stress experience in rebuilding the system during the Covid 19 recovery period. E-learning infrastructure and individual cognitive competence in	University management can focus on resilience and change management. Digital transformation, online learning, curriculum change, and sustainability. Flexibility is the key to making this happen. Flexibility in learning can include teaching flexibility, delivery flexibility, learning distribution, learning networks, online learning, and e-learning. Blended learning is an example of the application of flexible learning which has a

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					utilizing technology in the online learning process are important. Both lecturers and students who can practice independently, and effectively, and are committed to using technological applications and devices, believe that universities need to combine the use of technology, optimizing interactions. between people and personalizing teaching to be able to face the future remain relevant and provide the education needed in the next century.	positive impact on self-efficacy creativity, and innovation in the learning process.
7.	Digital Transformation Readiness in Indonesian Institutions of Higher Education with Digital Enabler	Akbar, FR, Sasmoko., Kuncoro, EA, Tjhin, VU (2024): Indonesia	This research aims to produce a model and instrument to measure Industry 4.0 readiness. The research aims to determine the readiness for digital transformation in vocational universities by identifying important factors, namely e-leadership, digital enablers, and implementation of industry 4.0 with the mediating variables of innovation management and organizational agility	Research using systematic literature studies, conceptual models, as well as quantitative and qualitative methods for validation models.	The research results show that only digital enablers have a positive and significant effect on digital transformation readiness in vocational universities. Industry 4.0 has a significant impact on organizational agility. Industry 4.0 has a positive implementation but is not significant towards digital transformation readiness. Meanwhile, organizational agility has a positive and significant impact on digital transformation readiness. Organizational agility is the ability to face changes in Industry 4.0, where management must ensure that vocational faculties have the flexibility and ability to adapt. This involves responsiveness in developing organizational structures, immediate decision-making processes, and the ability to learn to face failure. This is in line with the theory that states that organizational agility is related to flexibility, openness to change, and the ability to adapt in facing a complex environment.	Theoretical implications: digital transformation readiness in vocational universities in the Industry 4.0 era can focus on e-leadership, digital enablers, industry 4.0 implementation, innovation management, organizational agility, and digital transformation readiness. Digital enablers in the context of digital transformation readiness are important in playing a role in empowering vocational faculties to adopt and use digital technology effectively. Based on theory, this is important in identifying and using the right digital enablers to support the initiation of digital transformation. Meanwhile, the implication at the managerial level is the ability to identify and adopt digital enablers that are relevant and based on the needs of vocational faculty. Management needs to ensure the necessary technological resources are possible and accessible to the entire academic community.
8.	Teacher's Technology Integration and Distance Learning Adoption Amidst the Covid 19 Crisis	Rahmadin, IF (2020): Indonesia	The research aims to understand the integration of technology and the ability to adopt distance learning based on	The research was carried out using online survey techniques involving 572 lecturers in Indonesia	The research results show that lecturers tend to use devices and applications that they usually use in everyday life to carry out remote learning. The use of global applications is preferred by most lecturers in managing virtual classes compared to local applications. Lecturers try to increase the level of technology integration but have	Cross-country research is needed to develop further research.

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	sis: A Reflection for Optimistic Future		specified policies.		not been able to integrate technology as a learning transformation. Most lecturers immediately prepared to teach remotely when the home policy was implemented, so they could be classified as early adopters of distance learning. Meanwhile, lecturers' agility in implementing distance learning during the crisis shows a sense of optimism to effectively adapt and adopt distance learning into formal school environments in the future.	

The Covid 19 pandemic can change the world drastically, many things are affected by the pandemic, one of which is the world of education. Lecturers must change face-to-face learning patterns to distance learning by utilizing information technology. Currently, lecturers are required to be able to create learning designs by utilizing information technology (Adi Badiozaman, et al, 2022). Based on the findings of several kinds of literature above, it can be said that to be able to face the digital transformation from conventional learning to learning that utilizes information technology, a ready to face these changes. The COVID-19 pandemic has forced lecturers to adjust and prepare themselves. Based on the findings of Werdiningsih & Nursanty (2020), their level of readiness varies greatly. This readiness is related to the use of technology and facing the challenges that arise to ensure learning continues and can achieve the learning objectives to be achieved. Lectures as the leading component in university must have the ability to respond quickly to changes, they must ensure that learning continues and students can achieve learning goals even in very difficult situations (Cahyadi, et al, 2021; Simanjuntak & Panjaitan, 2021).

Individuals who are more ready to change, have better adaptability. They can use new information and experiences to adapt to change. Apart from adaptability, Agility is also needed so that individuals are ready to face change. Agility in implementing distance learning shows that the individual has a sense of optimism to adapt and adopt distance learning (Rahmadin, 2020). From the findings of Megawaty, et al (2023), it is stated that the agility characteristics that lecturers need to have been related to speed in adopting digital techniques in learning (speed), the ability to adjust behavior, and efforts to encourage students to continue learning and develop adaptive strategies in the process. learning (focus), as well as the ability to produce a positive cultural culture by giving students the freedom to learn from a variety of varied literacy sources). This adaptability and agility will help lecturers manage their time between teaching and creating online learning resources needed in distance learning, as well as trying to prepare and motivate students to be able to face changes in their academic activities (Werdiningsih & Nursanty; 2020, Simanjuntak & Panjaitan, 2021). In more detail, Simanjuntak & Panjaitan (2021) explain that lecturers who have agility and adaptability will find it easier to survive in uncertain educational situations. Lecturers who have good adaptability and agility see change as an opportunity to explore appropriate solutions to support the learning process to student needs. Apart from adaptation and agility, the findings of Rasli, et al (2022) found that lecturers who have resilience will be more able to survive, be able to overcome problems, and develop in the future, even after the Covid 19 recovery period. Ability to face changes in online learning in changing conditions. Emergency can support and improve coordination, resilience, and adaptability in the higher education environment (AdiBadiozaman, et al, 2022).

Based on several excavated literature, readiness to face change is also influenced by the organization's perspective in facing change. The university is expected to be able to encourage individuals to follow the change in managing face-to-face learning to distance (online) learning which utilizes an information system-based learning system. Distance learning requires lecturers to be able to have and master technological literacy in delivering instructions in an environment full of digitalization (Simanjuntak & Panjaitan, 2021). The e-learning infrastructure and cognitive competence in utilizing online learning technology encourage lecturers to be able to apply and use technological devices independently, effectively, and with full commitment (Rasli, 2022). They are trying to integrate technology in transforming distance learning (Rahmadin, 2020). Therefore, lecturers will feel that they will not have technological literacy if the university does not support it. Most lecturers stated that during the transition to online classroom learning during the pandemic, they needed readiness and expertise. This shows that the important thing that is needed when switching from offline to online learning is developing agility and adaptability. Agility is known to be an important factor in surviving and developing, while adaptability is related to a higher level of positive behavioral engagement which leads to more effective results. They can develop agility and adaptability because they receive solid and constant support from colleagues and university administrators to

help them survive the immediate transition (Simanjuntak & Panjaitan, 2021). Therefore, not only individuals, but organizations must also have the agility to follow change. As explained by Akbar, et al (2024), organizational agility will have a positive and significant impact on digital transformation readiness, so management must be able to ensure that the organization has the flexibility and ability to adapt. Agile organizations can be flexible and open to change and can adapt in the face of very complex changes. A flexible organization will influence the individuals within it to behave flexibly too so that from here lecturers are expected to be able to create a flexible learning process, anywhere and at any time so that it can encourage acceleration in changing from conventional learning to distance learning (Cahyadi, et al., 2021). Therefore, university management should focus on digital transformation, digital, online learning, curriculum changes, and continuity of learning which can encourage flexibility in learning that is appropriate and relevant to what is needed now and in the future because of the impact of Covid 19.

4 CONCLUSION

Lecturers with adaptability, agility in learning new things, and a good level of resilience are more likely to be ready to face changes in the distance education system which makes greater use of the latest technology. These three characters will enable them to face and resolve the challenges and difficulties experienced during digital transformation in education. Readiness to change also needs to be encouraged by the organization and management. Management plays a role in preparing relevant change strategies so that the organization is more agile in facing change. So, if we look at it from the perspective of lecturers and universities as having the ability to be able to adapt and be agile in facing changes in the use of educational technology, then we can be sure that lecturers will find it easier to follow the demands of change now and in the future.

References

1. Adi Badiozaman, IF., Segar, AR., Iah, D.: "Examining Faculty's Online Teaching Competence During Crisis: One Semester On". *Journal Of Applied Research in Higher Education* 14(2), 541-555 (2022).
2. Akbar, FR, Sasmoko., Kuncoro, EA., Tjhin, VU.: Digital Transformation Readiness in Indonesian Institutions of Higher Education with Digital Enabler. *Migration Letters* 21(S3), 297-306 (2004)
3. Cahyadi, A., Hendryadi., Widyastuti, S.: The Complexity of Remote Teaching in Emergency Situations: Initial Basic Principles to Avoiding Technological Boundaries. *Doi:10.20944/Preprints202103.0563.V1*(2021).
4. Fawwaz, A.N., Prihadi, K.D., Purwaningtyas, E.K.: Studying online from home and social anxiety among university students: The role of societal and interpersonal mattering. *International Journal of Evaluation and Research in Education (IJERE)* 11(3), 1338-1345 (2022).
5. Husamah.: *Pembelajaran Bauran (Blended Learning) Terampil Memadukan Keunggulan Pembelajaran Face to Face, E-Learning Offline-Online dan Mobile Learning*. Prestasi Pustaka Publisher, Jakarta (2014).
6. Hutauruk, A & Sidabutar, R.: Kendala Pembelajaran Daring Selama Masa Pandemi di Kalangan Mahasiswa Pendidikan Matematika: Kajian Kualitatif Deskriptif. *SEPREN: Journal of Mathematics Education and Applied* 2(1), 45-51 (2020).
7. Junaidi & Merta, M.M.: *Penggunaan Metode Blended Learning di Perguruan Tinggi Menuju New Normal*. IAIN Parepare Nusantara Press, Parepare (2020).
8. Kysh, L.: *Differences Between a Systematic Review and a Literature Review*. Figshare. <https://doi.org/10.6084/M9.Figshare.766364.V1> (2013).
9. Mahendrastiti, ARG.: The Relationship Between Learning Agility and Readiness to Change in Active Students on Student Government Organization (Opmawa) Management at Jakarta State University During the Covid-19 Pandemic. Bachelor Thesis. Jakarta State University, Jakarta (2021).
10. Mckay, K., Kuntz, J. R. C., Naswall, K.: The Effect of Affective Commitment, Communication and Participation on Resistance to Change: The Role of Change Readiness. *New Zealand Journal of Psychology* 42(1), 55-66 (2013).
11. Megawaty., Hamzah, D., Reni, A., Toaha, M. Are Lecturers Agile? Analysis of The Agility Of Lecturers' Teaching Role As Human Resources In Private Universities. *Proceedings Of The 7th International Conference on Accounting, Management and Economics (Icame-7 2022)*, pp. 205–215. Atlantis Press, Indonesia (2023).
12. Permen PAN RB No. 38 Tahun 2017 tentang Standar Kompetensi (maritim.go.id) (2017).
13. Rahmadi, IF.: Lecturers' Technology Integration and Distance Learning Adoption Amidst the Covid-19 Crisis: A Reflection for The Optimistic Future. *Turkish Online Journal of Distance Education-Tojde* 22 (2), 26-41 (2021).
14. Saragih, S., dkk.: Eksplorasi Kesiapan Dosen dan Mahasiswa Menjalani Pembelajaran Jarak Jauh di Masa Pandemi Covid-19. *Jurnal Teknologi Pendidikan* 09 (01), 124-141 (2021).
15. Shea, C., Jacobs, S.R., Esserman, D.A., Bruce, K., & Weiner, B.: Organizational Readiness for Implementing Change: A Psychometric Assessment. *Implementation Science*, 9 (7), 1-15 (2014).
16. Simanjuntak, DC & Panjaitan, NB.: The Inevitable of Online Learning Through the Lens English Education Lectures During the Unprecedented Times. *Journal On English as A Foreign Language* 11 (2), 358-380 (2021).
17. Rasli, A., Tee, M., Lai, YL, Tiu, ZC, & Soon, EH.: Post-Covid-19 Strategies for Higher Education Institutions in Dealing with Unknown and Uncertainties. *Front. Educ.* 7:992063, 1-12 (2022).
18. Wahidin.: Adapt to Change by Being Agile According to Basic Principles. Downloaded From Article Adapt to Change by Being Agile in Accordance with Basic Principles (Kemenkeu.Go.Id) (2021).

19. Werdiningsih, R & Nursanty.: Agility, Innovations & Prospects - Virtual Pedagogy During Physical Distancing, Case: Primary Education in Semarang, Indonesia. Proceedings Of the International Conference on Engineering, Technology and Social Science (Iconetos 2020). Advances In Social Science, Education and Humanities Research, 80-86. Atlantis Press, Indonesia (2020).

