

Design of A Successful Model for The Implementation of Blended Learning in Higher Education in Indonesia

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Abstract

The core objective of this study is to build a systematic evaluation framework to measure the success of blended learning in Indonesian universities. And at the same time, trying to offer a new model to measure the success factors of the implementation of blended learning by considering the perspectives of students and lecturers, which are ultimately expected to meet the needs of all stakeholders. The model developed in this research is the IPO logic model for combining 3 models, namely TRI, ACSR, and DeLone. In this study, researchers used quantitative data methods, with data collection techniques carried out by distributing questionnaires. Testing of 300 respondents, consisting of lecturers and students with Smart PLS 4.0, showed a degree of accuracy of the research measuring instrument used for the contents of the statement regarding the relationship between all factors measured. From the results of the second test, namely the reliability and validity test with Smart PLS 4.0 software on 300 data points, reliable and valid results were obtained. This study concludes that blended learning is an effective learning model in universities in Indonesia, with the success of implementation influenced by technological readiness, institutional support, and lecturer competence in managing online learning.

Keywords: e-learning, blended learning, success, model.

INTRODUCTION

The development of Information and Communication Technology has made many positive

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contributions to modernisation in every human civilisation. Information and communication technology has played a role in changing human activities, especially organisational activities. These changes occur in all fields with such high intensity and complexity that an organisation that produces a product or service is almost entirely associated with information technology.

Traditional learning is a learning model used by lecturers in carrying out their duties, with direct face-to-face meetings between lecturers and students, without requiring special model adjustments based on the nature and characteristics of the subject matter (Fatima et al., 2022; Nirbita, 2017; Suhandi et al., 2008; Zainuddin, 2021). The COVID-19 pandemic period has directly or indirectly provided opportunities for and implemented digital learning, and initiated the transition from traditional face-to-face learning to online methods, thus becoming a new experience for students and educators in Indonesia. With this incident, many higher education institutions have decided to adopt a fully online education system (Nikou & Maslov, 2023; Pokhrel & Chhetri, 2021; Sobaih et al., 2022). Information and communication technology must be utilised to develop modern learning methods. As described above, conventional teaching methods must be combined with information and communication technology as a means of learning, called technology-based learning (e-learning). E-learning (electronic learning) is an effective learning process that combines information and communication technology to deliver digital content (Alyahya et al., 2022; Germain-Rutherford & Kerr, 2008; Nikou & Maslov, 2023).

Regarding technology-based learning, Information Technology covers two aspects, namely information technology and communication technology. Information technology includes everything related to information processing, manipulation, and management tools (Ahmad et al., 2018). Meanwhile, communication technology is related to the activities of processing and transferring information from and between devices. Entering the transition period to the new normal as the COVID-19 pandemic continues to run, various learning models continue to be developed according to school levels by looking at the decline in COVID-19 and in coordination with all parties involved. They must first obtain permission from the Minister of Education and Culture (Kemendikbud).

Technology-supported learning has dramatically changed the way of teaching, from e-learning to newer blended learning (Chiu et al., 2023). According to Germain-Rutherford & Kerr (2008) The definition of blended learning is problematic because it is ambiguous and covers a wide range of teaching practices with little consensus on what they cover. Blended learning is a concept that includes teaching and learning activities that combine traditional face-to-face teaching with face-to-face learning supported by information (Al-Huneidi & Schreurs, 2012; Camilleri &



Camilleri, 2022; Martin et al., 2022; Masadeh, 2021).

The learning process to achieve educational goals has many factors, including the psychological factor of readiness (Zainuddin, 2021). The use of Information Technology in an organisation/institution needs to be seen at the level of success of its implementation as a positive impact on the net benefits received by higher education institutions. Therefore, activity is needed to identify the constructs that influence students, lecturers, and administration in adopting the blended learning method to ensure the success of blended learning (Anthony et al., 2022). Many experts have adopted DeLone's model to empirically measure the performance of information technology in their organisations, to make it easier to make intelligent decisions regarding technology investments that must be made (Sukirman et al., 2022)

LITERATURE ANALYSIS AND METHODOLOGY

Research by Garrison & Kanuka (2004) Shows that blended learning can improve the quality of learning by combining the strengths of face-to-face learning and more flexible online learning elements. This model provides opportunities for students to learn independently but still receive social support from instructors and classmates. Graham, (2005) Proposes various models in blended learning, ranging from rotation models to more flexible lab models, where online and face-to-face elements complement each other and support learning objectives.

In Alabdulkarim's (2021) study, which evaluated Saudi Arabian healthcare students' attitudes and satisfaction towards blended learning, using a blended research method that actively recruited in the academic year 2017–2019 by collecting qualitative data for the study. It was found that students generally preferred team-based learning over face-to-face lectures, which served as a collaborative learning pedagogy. Highly positive attitudes and motivations were found among students regarding blended learning, with student attitudes and satisfaction playing a significant role in teaching and learning outcomes. The results of the study indicated that students were highly interested and had high satisfaction regarding the elements of blended learning. Bernard et al. (2004) in their research results also show that students who are involved in blended learning tend to have higher levels of satisfaction because they feel more independent and have greater control over the time and way they learn. However, this research also emphasises the importance of instructors providing support and feedback to maintain student engagement.

Research conducted by Ma (2021) proves that the effectiveness of learning with a blended approach is as an answer to students' motivational needs, which is a consideration that can



become a new habit in higher education after the Covid-19 pandemic, from student perceptions where blended learning has proven to be more effective in stimulating the interest and attention of each student compared to pure online learning. Petter et al. (2008) identified various blended learning models applied at various levels of education, from primary education to higher education. They emphasised the importance of technology in creating a learning environment that is accessible anywhere and at any time, as well as increasing interaction between students and instructors (Ramdani et al., 2024).

RESEARCH AND RESULTS

This study uses a quantitative method with data collection by distributing questionnaires via Google Form to 50 respondents consisting of lecturers and students and 10 universities randomly in various regions in Indonesia, where the average respondent is a lecturer aged over 30 years with a Masters and Doctoral education level and an average teaching experience of over five years.

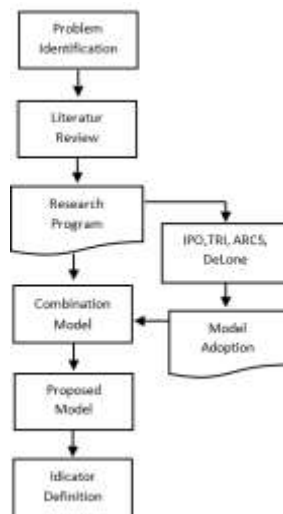


Figure 1. Research Methodology of BLS Development

The results of the questionnaire circulated in the form of a Google Form can be displayed in the form of the following Figure 1 model

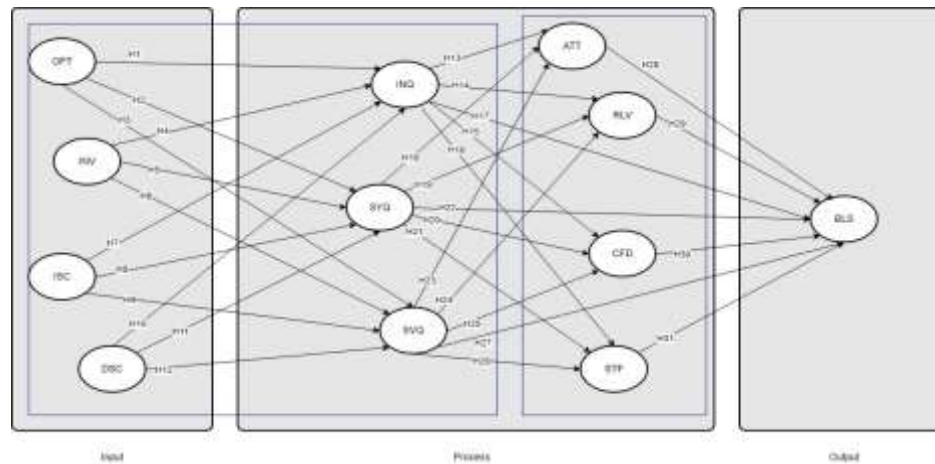


Figure 2: Success Model of Blended Learning System from the merger of 3 models (TRI, ARCS, DeLone)

The model in Figure 1 above results from a combination of 3 models (TRI, DeLone, and ARCS), concerning the principles of Input, Process, and Output (IPO). The input from TRI consists of 4 variables, namely Optimism, Innovativeness, Discomfort, and Insecurity (Zheng et al., 2023), for further processing with two models (DeLone and ARCS). DeLone has 3 variables: System Quality, Information Quality, and Service Quality (Chiu et al., 2023). Meanwhile, ARCS consists of 4 variables: Attention, Relevance, Confidence, and Satisfaction (Hong et al., 2019). The three models with each variable have a positive effect on the success of the Blended Learning System (BLS).

The combination of TRI, ARCS, and DeLone is very useful in the context of blended learning implementation. As explained above, technology readiness (TRI) and user motivation (ARCS), as well as System Quality (DeLone), will determine the success of Blended Learning. This model integration framework shows how the four theories can be used together to create a compelling and adaptive blended learning system (Aldholay et al., 2018; Anglum et al., 2020; DeLone & Mclean, 1992; H. & R., 2003; Subiyakto et al., 2016). Some of the critical points of this integration include the use of TRI to match system design and support with user technology readiness. The application of ARCS principles throughout the system lifecycle ensures user motivation and engagement. Use of the DeLone & McLean model to guide high-quality system development and evaluation of success. Utilisation of the IPO framework to ensure a logical flow from input to output through a structured process (Anglum et al., 2020; Subiyakto et al., 2016).

With this incorporation approach, system developers can create a blended learning

platform that is not only technologically advanced but must also consider human factors, learning motivation, and information system success criteria (Waqar et al., 2023). This can increase adoption, continued use, and overall learning effectiveness.

This study's results indicate that all entities or stakeholders support the development of sustainable blended learning practices, as well as inform the design of effective and additive digital learning experiences. Lecturers and students as direct users will feel the advantages and disadvantages of blended learning methods, where the benefits include flexibility, accessibility, and pedagogical innovation. At the same time, the challenges include student engagement, technical infrastructure, and assessment. Blended learning will continue to evolve in higher education following the development of information technology, so it is essential to consider lecturers' perspectives to guide professional development and digital technology integration, the following list of variables and indicators is shown in Table 1 below:

Tabel 1. Definition Operational Variable

Variables	Definition	Reference
Optimism (OPT)	a positive view of technology with a belief in greater control, flexibility, and efficiency in its use.	(Parasuraman & Colby, 2015)
Innovativeness (INV)	Tends to lead, direct, or influence others in the adoption and use of technology	
Discomfort (DCF)	The perception of a lack of control over technology use can lead to feelings of stress from the use of technology.	
Insecurity (ISC)	Lack of trust in technology and skepticism about one's ability to use it well	
Information Quality (INQ)	confidence that the information produced is consistent and meets user requirements and expectations	(Xu et al., 2013)
System Quality (SYQ)	The level of depiction of good information system quality.	
Service Quality (SVQ)	A good level of assessment of the quality of service to users.	
Attention (ATT)	Attention includes motivational variables related to the learner's curiosity, enthusiasm, interest or boredom.	(J.M., 2012)
Relevance (RLV)	Meets the individual needs/goals of the learner to generate positive attitudes	



Variables	Definition	Reference
Confidence (CFD)	Helps learners believe/feel that they will succeed and take control of their success	
Satisfaction (STF)	Reinforces achievement with rewards (internal and external)	
Blended Learning System (BLS)	As a key factor for the success of implementing blended learning in higher education	(Garrison & Kanuka, 2004)

The explanation of the meaning of the indicators adopted into the model, complete with their definitions, will be explained in the following table

Tabel 2. Definition Operational Indicator

Indicator	Definition
<i>Easiness</i> (OPT1)	The level related to the ability of a system to be free from constraints, difficulties, and problems.
<i>Connectivity</i> (OPT2)	level related to the ability of a system to integrate all existing systems.
<i>Efficiency</i> (OPT3)	The level related to the system's ability to produce maximum output compared to other resources to achieve the same output.
<i>Effectiveness</i> (OPT4)	The level associated with the system's ability to achieve the effectiveness of its intended use
<i>Productivity</i> (OPT5)	The degree to which the system supports the production of maximum output, compared to the resources required to produce that output
<i>Problem Solving</i> (INV1)	The level associated with system support to find solutions to problems that occur
<i>Independence</i> (INV2)	The level associated with the system's ability to support its users without constraints or impact
<i>Challenge</i> (INV3)	The level of system support is related to handling or achieving success in difficult situations or problems
<i>Stimulation</i> (INV4)	The degree to which the system's ability to support progress or development



Indicator	Definition
<i>Competitiveness</i> (INV5)	Levels related to the system's ability to succeed over competitors
<i>Complexity</i> (DCF1)	level related to system features that are easy for users to understand
<i>Difficulty</i> (DCF2)	level related to the condition of a system that is difficult to operate
<i>Dependence</i> (DCF3)	The level associated with the condition of a system that requires another party to help operate it.
<i>Lack Of Support</i> (DCF4)	Levels related to systems that do not have adequate support in their operation
<i>Inappropriateness</i> (DCF5)	Levels associated with inappropriate conditions
<i>Failure</i> (ISC1)	The level associated with the likelihood that a system will be unpleasant or that something dangerous may happen
<i>Threat</i> (ISC2)	Levels associated with situations where the system could cause harm or danger
<i>Reducing Interaction</i> (ISC3)	The level at which the system is implemented will make the possibility of human interaction smaller in terms of size, number, and importance.
<i>Distraction</i> (ISC4)	Levels associated with the use of the system are being noticed more, and preventing people from concentrating on other things.
<i>Incredulity</i> (ISC5)	The level associated with a person's doubts about using the system
<i>Accuracy</i> (INQ1)	The level of accuracy of the information generated
<i>Timeliness</i> (INQ2)	The level of system accuracy in processing information with a specified time duration
<i>Completeness</i> (INQ3)	The degree to which the information generated by the IS is complete or without missing parts
<i>Relevance</i> (INQ4)	Degree of relevance of the information generated by the IS to its subject matter



Indicator	Definition
<i>System Flexibility</i> (SYQ1)	The ability of the information system to make changes to meet user needs.
<i>Functionality</i> (SYQ2)	The level related to SI can be operated by the planned requirements.
<i>Ease Of Use</i> (SYQ3)	The degree of freedom of the system from the occurrence of problems and difficulties, during its use
<i>Response Time</i> (SYQ4)	The rate is related to the amount of response time required for each command from the user.
<i>Reliability</i> (SYQ5)	System reliability is the system's resistance to damage and errors
<i>Responsiveness</i> (SVQ1)	The level of responsiveness of the Information System in serving its users at a time and in situations that suit the needs of its users.
<i>Flexibility</i> (SVQ2)	The level of adaptation of the information system in serving each user according to their respective needs
<i>Security</i> (SVQ3)	The level of security of the integrated system is to serve users safely from unforeseen attacks, hazards, or damage.
<i>Functionality</i> (SVQ4)	The level related to the scope of information system services according to functional requirements
<i>Extension</i> (SVQ5)	Levels related to the scope of additional information system services that go beyond functional requirements
<i>Perceptual Arousal</i> (ATT1)	Ways to get attention by providing novelty and surprises to attract attention.
<i>Inquiry Arousal</i> (ATT2)	Gain attention by stimulating curiosity by asking questions or problems to solve.
<i>Variability</i> (ATT3)	Incorporate a variety of methods and media to meet the different needs of students.
<i>Goal Orientation</i> (RLV1)	Learning objectives are communicated to students to help them achieve the highest chance of success.
<i>Motive Matching</i> (RLV2)	Learning objectives are tailored to students' motives



Indicator	Definition
<i>Familiarity (RLV3)</i>	Information taught relates to learners' personal experiences.
<i>Learning Requirements (CFD1)</i>	Learning objectives and criteria are clearly outlined in advance so that students know what is expected
<i>Success Opportunities (CFD2)</i>	The tasks given to students should be more challenging, so that opportunities for success for students are more open
<i>Learning requirements (CFD1)</i>	Inform students about learning and performance requirements and assessment criteria.
<i>Successful opportunities (CFD2)</i>	Provide challenging and meaningful opportunities for successful learning.
<i>Personal responsibility (CFD3)</i>	About the relationship between learning success and student effort and ability
<i>Intrinsic reinforcement (STF1)</i>	Encourage and support the embodied pleasure of the learning experience
<i>Extrinsic rewards (STF2)</i>	Provide positive reinforcement and motivating responses.
<i>Equity (STF3)</i>	maintaining existing standards consistently and consistently to achieve success.
<i>Content timeliness (BLS1)</i>	The extent to which users think the blended learning is time-sensitive or has immediate feedback.
<i>Content richness (BLS2)</i>	The extent to which users think the blended learning received includes different types of media
<i>Content accuracy (BLS3)</i>	To what extent users think blended learning can be expressed explicitly, or is easy to understand
<i>Content adaptability (BLS4)</i>	To what extent do users think that blended learning can be adapted to other formats

CONCLUSION AND RECOMMENDATIONS

From this study, it is concluded that the three models, namely TRI, ARCS, and Delon, are closely related to the success of implementing blended learning. With 12 variables from each model, there is a positive relationship as a determinant of the success of blended learning implementation in universities in Indonesia.

This BLS model, as a combination of the three models of TRI, Delone, and ARCS, can be



used as a framework for system development and or system evaluation towards the successful implementation of blended systems.

Further research is suggested to add modelling modifications to this research to analyse the BLS's success capability better. Data should be taken from several levels of education so that the effectiveness of all educational institutions can be seen.

REFERENCES

- Al-Huneidi, A. M., & Schreurs, J. (2012). Constructivism Based Blended Learning in Higher Education. *International Journal of Emerging Technologies in Learning*, 7(1), 4–9. <https://doi.org/10.3991/ijet.v7i1.1792>
- Aldholay, A. H., Isaac, O., Abdullah, Z., & Ramayah, T. (2018). The role of transformational leadership as a mediating variable in DeLone and McLean information system success model: The context of online learning usage in Yemen. *Telematics and Informatics*, 35(5), 1421–1437. <https://doi.org/10.1016/j.tele.2018.03.012>
- Alyahya, M. A., Elshaer, I. A., Abunasser, F., Mahmoud Hassan, O. H., & Sobaih, A. E. E. (2022). E-Learning Experience in Higher Education amid COVID-19: Does Gender Really Matter in A Gender-Segregated Culture? *Sustainability (Switzerland)*, 14(6), 1–12. <https://doi.org/10.3390/su14063298>
- Anglum, J. C., Desimone, L. M., & Hill, K. L. (2020). Integrating Computer-Based Curricula in the Classroom: Lessons from a Blended Learning Intervention. *Teachers College Record*, 122(1), 1–50. <https://doi.org/10.1177/016146812012200104>
- Anthony, B., Kamaludin, A., Romli, A., Raffei, A. F. M., Phon, D. N. A. L. E., Abdullah, A., & Ming, G. L. (2022). Blended Learning Adoption and Implementation in Higher Education: A Theoretical and Systematic Review. In *Technology, Knowledge and Learning* (Vol. 27, Issue 2). Springer Netherlands. <https://doi.org/10.1007/s10758-020-09477-z>
- Bernard, R. M., Abrami, P. C., Lou, Y., Borokhovski, E., Wade, A., Wozney, L., Walset, P. A., Fiset, M., & Huang, B. (2004). How does distance education compare with classroom instruction? A meta-analysis of the empirical literature. *Review of Educational Research*, 74(3), 379–439. <https://doi.org/10.3102/00346543074003379>
- Camilleri, M. A., & Camilleri, A. C. (2022). The Acceptance of Learning Management Systems and Video Conferencing Technologies: Lessons Learned from COVID-19. *Technology, Knowledge and Learning*, 27(4), 1311–1333. <https://doi.org/10.1007/s10758-021-09561-y>
- Chiu, C. L., Li, M., & Chiu, J. L. (2023). Effectiveness of food traceability system: Chinese consumer



- food purchase intention during the pandemic. *International Journal of Electronic Finance*, 12(1), 1–17. <https://doi.org/10.1504/IJEF.2023.10048535>
- DeLone, W. H., & Mclean, E. R. (1992). The quest for the dependent variable. *Information Systems Research. Information System Research*, 3(1), 60–95.
- Fatima, S., Idrees, T., Hamid, S., & Umar, M. (2022). A Comparative study of online and traditional (face to face) learning. *Journal of Rawalpindi Medical College*, 26(4), 535–540. <https://doi.org/10.37939/jrmc.v26i4.1710>
- Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *Internet and Higher Education*, 7(2), 95–105. <https://doi.org/10.1016/j.iheduc.2004.02.001>
- Germain-Rutherford, A., & Kerr, B. (2008). An inclusive approach to online learning environments: Models and resources. *Turkish Online Journal of Distance Education*, 9(2), 64–85.
- Graham, C. R. (2005). Blended Learning System.
- H., D. W., & R., M. E. (2003). The DeLone and McLean model of information systems success: a ten-year update. *Journal of Management Information Systems*, 19(4), 9–30.
- Hong, J. Y., Ko, H., & Kim, J. H. (2019). Cultural intelligence and ARCS model for digital era. *ACM International Conference Proceeding Series*, 1–4. <https://doi.org/10.1145/3326467.3326495>
- Martin, F., Wu, T., Wan, L., & Xie, K. (2022). A Meta-Analysis on the Community of Inquiry Presences and Learning Outcomes in Online and Blended Learning Environments. *Online Learning Journal*, 26(1), 325–359. <https://doi.org/10.24059/olj.v26i1.2604>
- Masadeh, D. T. S. Y. (2021). Blended Learning: Issues Related to Successful Implementation. *International Journal of Scientific Research and Management*, 9(10), 1897–1907. <https://doi.org/10.18535/ijstrm/v9i10.el02>
- Nikou, S., & Maslov, I. (2023). Finnish university students' satisfaction with e-learning outcomes during the COVID-19 pandemic. *International Journal of Educational Management*, 37(1), 1–21. <https://doi.org/10.1108/IJEM-04-2022-0166>
- Nila Nirbita, B. (2017). Penerapan Model Pembelajaran Arcs (Attention, Relevance, Confidence and Satisfaction) Untuk Meningkatkan Keaktifan, Motivasi Dan Hasil Belajar Siswa Pada Siswa Akuntansi Di Smk Kristen 1 Surakarta. *Prosiding Seminar Pendidikan Ekonomi Dan Bisnis*, 2, 1–9.
- Parasuraman, A., & Colby, C. L. (2015). An Updated and Streamlined Technology Readiness Index: TRI 2.0. *Journal of Service Research*, 18(1), 59–74.



- <https://doi.org/10.1177/1094670514539730>
- Petter, S., DeLone, W., & McLean, E. (2008). Measuring information systems success: Models, dimensions, measures, and interrelationships. *European Journal of Information Systems*, 17(3), 236–263. <https://doi.org/10.1057/ejis.2008.15>
- Pokhrel, S., & Chhetri, R. (2021). A Literature Review on Impact of COVID-19 Pandemic on Teaching and Learning. *Higher Education for the Future*, 8(1), 133–141. <https://doi.org/10.1177/2347631120983481>
- Ramdani, R. F., Herlambang, A. D., Falhadi, M. M., Fadilah, M. Z., Turnip, C. E. L., & Mulyana, A. (2024). Membangun Kesejahteraan Pikiran untuk Kesehatan Mental Melalui Gaya Hidup Sehat dan Olahraga. *Indo-MathEdu Intellectuals Journal*, 5(3), 2928–2936. <https://doi.org/10.54373/imeij.v5i3.1186>
- Sobaih, A. E. E., Hasanein, A., & Elshaer, I. A. (2022). Higher Education in and after COVID-19: The Impact of Using Social Network Applications for E-Learning on Students' Academic Performance. *Sustainability (Switzerland)*, 14(9). <https://doi.org/10.3390/su14095195>
- Subiyakto, A., Ahlan, A. R., Kartiwi, M., & Putra, S. J. (2016). Measurement of the information system project success of the higher education institutions in Indonesia: A pilot study. *International Journal of Business Information Systems*, 23(2), 229–247. <https://doi.org/10.1504/IJBIS.2016.078908>
- Suhandi, A., Sinaga, P., Kaniawati, I., & Suhendi, E. (2008). Efektivitas Penggunaan Media Simulasi Virtual Pada Pendekatan Pembelajaran Konseptual Interaktif Dalam Meningkatkan Pemahaman Konsep Dan Meminimalkan Miskonsepsi. *Jurnal Pengajaran Matematika Dan Ilmu Pengetahuan Alam*, 12(1), 48. <https://doi.org/10.18269/jpmipa.v12i1.317>
- Sukirman, S., Masduki, Y., Suyono, S., Hidayati, D., Kistoro, H. C. A., & Ru'iya, S. (2022). Effectiveness of blended learning in the new normal era. *International Journal of Evaluation and Research in Education*, 11(2), 628–638. <https://doi.org/10.11591/ijere.v11i2.22017>
- Waqar, A., Skrzypkowski, K., Almujiabah, H., Zagórski, K., Khan, M. B., Zagórska, A., & Benjeddou, O. (2023). Success of Implementing Cloud Computing for Smart Development in Small Construction Projects. *Applied Sciences (Switzerland)*, 13(9). <https://doi.org/10.3390/app13095713>
- Xu, J. D., Benbasat, I., & Cenfetelli, R. T. (2013). I NTEGRATING S ERVICE Q UALITY WITH S YSTEM AND I NFORMATION Q UALITY : A N E MPIRICAL T EST IN THE E-S ERVICE C ONTEXT Measurement Items for the Constructs. 37(3), 1–9.



- Zainuddin, Z. (2021). Tinjauan Model Pembelajaran Blended Learning pada Perguruan Tinggi di Era New Normal Covid-19: Kebijakan dan Implementasi. *Asia-Pacific Journal of Public Policy*, 02, 34–45. <https://doi.org/10.52137/apjpp.v7i2.65>
- Zheng, H., Qian, Y., Wang, Z., & Wu, Y. (2023). Research on the Influence of E-Learning Quality on the Intention to Continue E-Learning: Evidence from SEM and fsQCA. *Sustainability (Switzerland)*, 15(6). <https://doi.org/10.3390/su15065557>

