Al-Ishlah: Jurnal Pendidikan
Vol. 15, 1 (June, 2023), pp. 2308-2316
ISSN: 2087-9490 EISSN: 2597-940X, DOI: 10.35445/alishlah.v15i2.3585

A Comparison of Academic Outcomes and Students' Satisfaction in Offline, Online, and Blended Teaching Models

Maemunah Sa'diyah[1], Ira Patriani[2], Anita Lontaan[3], Afdaleni[4], Made Suandika[5]

[1] Universitas Ibn Khaldun, Bogor, Indonesia, Email: maemunah@uika-bogor.ac.id
[2] Universitas Tanjungpura, Indonesia; irapatriani@gmail.com
[3] Poltekkes Kemenkes Manado, Indonesia; anital@gmail.com
[4] Sekolah Tinggi Bahasa Asing Haji Agus, Indonesia; afdaleni@gmail.com
[5] Harapan Bangsa University, Indonesia; mades@gmail.com

ARTICLE INFO

Keywords:

Blended Learning Model;
Offline Learning Model;
Online Learning Model;
Students' Satisfaction

Article history:

Received 2023-02-16
Revised 2023-03-07
Accepted 2023-05-16

ABSTRACT

Blended learning is an alternative solution that the government had come up with to make up for the flaws of online learning, which was put into place during COVID-19 when the offline way of teaching was completely switched. In practice, though, the online method had some problems, so the government came up with a plan to use the mixed learning method. Then, this study was done to see how offline, online, and blended learning models affected learning results and how happy students were with them. The qualitative method was used to do this study. The information used in this study came from 28 students at X University who filled out surveys and were also interviewed. Overall, the results of this study showed that the face-to-face learning approach was the most effective way to learn. This is because students can understand the lessons better and feel more satisfied with this way of learning. Other learning models, on the other hand, have more distractions, making it harder for students to understand the lesson and making them feel like it's hard to follow the teaching process, making students less happy in the end.

Corresponding Author:
Maemunah Sa'diyah
Universitas Ibn Khaldun, Bogor, Indonesia, Email: maemunah@uika-bogor.ac.id

1. INTRODUCTION

A new habit is happening in society, especially in activities in the world of education, namely changing learning activities that used to be carried out face-to-face in classrooms (offline learning) to become fully online with various media, be it WhatsApp Groups to YouTube. As the fully online learning process progresses, it turns out that it has several weaknesses, one of which is that it only focuses on cognitive aspects without direct interaction between the teacher and students, while the learning process requires feedback from one between the teacher and students (Bali & Holilah, 2021). These weaknesses make the government look for effective solutions and adapt to current conditions. One of the government's efforts is to issue a Joint Decree of the Minister of Education, Culture, Research and Technology, Minister of Religion, Minister of Health, and Minister of Home Affairs of the Republic

of Indonesia; through decree Number 03/KB/2021, Number 384 of 2021, Number HK.01.08/MENKES/4242/2021, and Number 440-717 of 2021 concerning guidelines for organizing learning during the Covid-19 pandemic, namely limited face-to-face learning with continue to implement health protocols. Following up on this, the Chancellor of University X expressed his opinion through a Circular Letter regarding limited face-to-face learning (PTM), that face-to-face learning is only carried out in a blended learning manner with a maximum number of 25 students in one class (Munastiwi & Puryono, 2021). In conclusion, the shift from offline learning to online learning has become a topical issue that is currently discussed among educators.

Off-network learning, commonly interpreted offline, is distance learning that requires teachers and students to study from home without using an internet network. Offline is an activity that is carried out without accessing the internet network. The Internet is a communication network connecting one electronic medium with another. Thus, offline learning can be interpreted as a form of learning that is completely unrelated to the Internet network. The offline learning system means learning by using media outside of the internet, such as television and radio (Veed, McGinley, & Crockett, 2019). This offline learning has the same concept as conventional learning with a process of change within humans, and these changes appear in the form of improving quality, knowledge, and human thinking attitudes. Learning and learning are activities that are planned to achieve certain goals, which are characterized by the involvement of several components that are interrelated to one another. The components in learning and learning in question are called learning tools which consist of learning implementation plans, learning tools that cover methods, media, and learning resources, as well as evaluation tools, both in the form of tests and non-tests (Han, 2022). Then, Rasmitadila et al., (2020) stated that the offline learning system (of the network) means learning by using media, such as books, modules, printed teaching materials, etc. Students engaged in offline activities include those who compose articles or complete projects in Microsoft Word while disconnected from the internet. Students conducting an offline conference by meeting in person without the use of the Internet is an example of an offline activity.

On the other hand, online learning is a method for organizing online learning lessons in order to reach a wide audience. Using the network, education can be provided to an infinite number of pupils. According to Romli, the general definition of online media is any type or format of media that can only be accessed via the internet and includes text, images, video, and audio as a means of online communication, while the specific definition of online media is interpreted as a medium in the context of mass communication (Lassoued, Alhendawi, & Bashitialshaaer, 2020). This is also a learning method that is not conducted face-to-face and instead uses a platform to facilitate the teaching and learning process, which may be conducted remotely. The objective of online learning is to deliver high-quality learning services in a vast and accessible network in order to reach a greater number and variety of study room aficionados (Ferri, Grifoni, & Guzzo, 2020).

There are various methods of carrying out online learning. The types of online learning methods are as follows, E-Learning is a process of electronic-based learning. A computer network is employed as one of the mediums. E-Learning is frequently referred to as distance education using computer technology or the internet. E-Learning is a process of instruction or learning that incorporates the use of electronic equipment in establishing, cultivating, transmitting, assessing, and supporting an interactive, learner-centered teaching and learning process that may occur whenever and wherever the student desires (Amin, Sibuea, & Mustaqim, 2022). Second, Mobile Learning is a form of education that employs mobile phone technology. The existence of mobile learning is meant as a supplement to education and affords students the opportunity to master unmastered content anywhere and at any time. Many kids continue to rely on laptops and textbooks for schoolwork. Using a laptop as a learning tool will make it challenging for pupils to transport the device because it is cumbersome and cumbersome. Seeing this potential, the creation of learning media through the use of mobile phones will provide mobile learning for all Android-based mobile devices (Nelwati & Amelia, 2019). Based on

the several definitions of online learning above, the researcher concludes that online learning uses application media to make it easier for students to carry out the learning process remotely.

Apart from offline and online learning, there is also another trend called blended learning, a learning model whose implementation process combines several methods and strategies, both face-to-face and online, that can optimize the learning experience in achieving learning goals. Blended learning is one of the appropriate solutions for the current conditions, by integrating learning with face-to-face meetings and online in an integrated manner (de Moura, de Souza, & Viana, 2021). It is even considered a needed learning model and is a trend, and is widely used in leading universities worldwide. Blended learning is dynamic and adaptable, allowing students to study anywhere and at any time, access content repeatedly, complete exercises, debate, and contact with teachers outside of online learning hours via the internet, and receive more face-to-face and online learning material (Castro, 2019). Some of the benefits of blended learning, namely: (1) students have the same opportunities as their counterparts in other parts of the world; (2) learning materials and processes are more varied and interesting; (3) providing basic skills for teachers and students regarding computer education to access the internet; (4) helping teachers and students communicate comfortably in a global world; and (5) as a place of best practices for using technology and information. This is in line with preparations for the 5.0 revolution, which aims to introduce and familiarize ways of thinking to adapt in the future by opening global insights. Electronic media such as cell phones and laptops are not just a means of long-distance communication but a tool for learning (Jerry & Yunus, 2021).

The Chancellor's circular letter implies that most lecturers at University X organize lectures in a blended learning manner. Based on the results of preliminary interviews with several lecturers, there are several obstacles in implementing blended learning, including the unstable internet network, the number of students is more than 25 people in one class, so face-to-face meetings must be divided into two classes, and there are no online learning support facilities such as tab pen in lectures. This certainly requires attention, improvement, and innovation in optimizing the application of blended learning to improve the quality of learning, given the importance of blended learning in increasing activeness, achievement, mathematical problem-solving abilities, and providing opportunities for students to learn independently.

Some studies have discussed blended learning models. For instance, Smith & Hill (2019) mentioned that blended learning strives to improve student learning and inspire educators to adapt their teaching practices, changing to a more student-centered model rather than a teacher-centered one. The competency-based learning model combines performance support tools with knowledge resource management and mentoring to improve workplace competence (Effendi & Hendriyani, 2020). Additionally, Dakir & Fauzi (2022) emphasized that blended learning provides an opportunity to combine online innovation and technical advancements with conventional learning that involves interaction and involvement. Blended learning aims to make learning more flexible to design and apply because it consists of a mixture of more than one method from various times and places of learning (Geng, Law, & Niu, 2019). In blended learning, various delivery mediums are selected, set, mixed, and planned to optimize the traditional and online learning experience (Albarrak et al., 2021). It was further stated that in blended learning supervised by a teacher or lecturer, there is a variety of activities such as face-to-face in-class instruction, synchronous or live e-learning, asynchronous or autonomous learning, and organized learning from the experiences of students and educators (Alhusban, 2022). According to Bonk and Graham in Zheng et al. (2021), blended learning combines two types of learning environments: face-to-face (classroom learning) and e-learning (online learning). Blended learning's potential is practically endless and encompasses the natural progression of processes from traditional forms of learning to focused and individualized growth patterns. Blended learning is a logical progression in the design of learning environments.

Based on the explanation, it is important to conduct a study to examine and compare the academic outcomes and levels of student satisfaction across different instructional approaches, namely offline, online, and blended teaching models. Therefore, the researchers are interested in carrying out this

study. In conclusion, conducting a comparative analysis of academic outcomes and students' satisfaction in offline, online, and blended teaching models provides valuable insights into the effectiveness of different instructional approaches. This study aims to shed light on the strengths and limitations of each teaching model, ultimately guiding educational practitioners and policymakers in making informed decisions to optimize student learning experiences in the ever-evolving landscape of education.

2. METHODS

A qualitative approach was adopted to gather data and analyze the research question. The data collection methods employed in this study included questionnaires and interviews with students, focusing on their experiences and perceptions of learning methods through face-to-face, online, and blended learning. Questionnaires were used to collect quantitative data, which included responses to specific questions related to academic outcomes and student satisfaction in different teaching models. These questionnaires were designed based on previous studies and relevant theories to ensure comprehensive coverage of the research topic. Additionally, interviews were conducted to gather qualitative data, allowing for a more in-depth exploration of students' perspectives, experiences, and opinions regarding the different teaching models. The interviews provided an opportunity to delve into specific aspects of offline, online, and blended learning, capturing nuanced insights that cannot be obtained solely through questionnaires. the participants consisted of 28 students from X University. These students were selected based on their willingness to participate and their relevance to the research topic. The sample size of 28 students was deemed sufficient to gather meaningful insights and capture diverse perspectives within the given context. The participants were likely selected based on their relevance to the research topic, such as their enrollment in specific courses or programs related to the study's focus. This approach ensured that the participants had first-hand experience and knowledge of the teaching and learning methods being investigated. The data collected from the surveys and interviews were treated with strict confidentiality and anonymity to protect the participants' privacy. The information provided by the participants served as valuable input for analyzing and drawing conclusions in the study. The inclusion of both surveys and interviews allowed for a comprehensive exploration of the research topic, capturing both quantitative and qualitative perspectives from the participants at X University.

The collected data, including questionnaire responses, interview transcripts, and relevant theories, were analyzed using qualitative data analysis techniques. The research data will then be processed immediately so that conclusions in the research can be found (Rukin, 2019). The data analysis process involved coding, categorizing, and identifying themes and patterns within the data. By examining the data and drawing upon existing research, the study aimed to derive meaningful conclusions and insights related to academic outcomes and student satisfaction in offline, online, and blended teaching models. By employing a qualitative approach and integrating various sources of data, this research aimed to provide a comprehensive understanding of the similarities, differences, and overall effectiveness of different teaching models. The findings from this study have the potential to contribute to the existing body of knowledge on teaching and learning approaches and inform educational practitioners and policymakers in making informed decisions about instructional methods in the post-pandemic education landscape.

3. FINDINGS AND DISCUSSION

The questionnaire was filled in by students from University X, with a total of 28 students. The questionnaire consists of 3 aspects, namely (1) a questionnaire related to student perceptions of online learning; (2) a questionnaire related to students' perceptions of offline learning (face to face); and (3) a questionnaire related to student perceptions of blended learning with a total of 23 statements.

3.1. Results of Online Learning Model According to Students

Below is the result of filling out a questionnaire conducted by students regarding online learning.

Table 1. Results of Filling in the Online Learning Questionnaire

No	Statement	Strongly agree		Agree		Disagree		Strongly Disagree	
		Total	%	Total	%	Total	%	Total	%
1	Learning through the WhatsApp Group is easier to understand than learning through other applications.	0	0	11	39.29	17	60.71	0	0
2	Learning through the WhatsApp Group helps when discussing because responses can be read back anywhere and anytime.	5	17.86	18	64.29	5	17.86	0	0
3	The material delivered by lecturers through the WhatsApp Group is easier to understand.	0	0	13	46.43	15	53.57	0	0
4	Lack of concentration on studying through the WhatsApp Group because notifications sometimes appear from chat or other applications.	6	21.43	16	57.14	6	21.43	0	0
5	Learning via WhatsApp Group is neither effective nor efficient in group discussions.	6	21.43	17	60.71	5	17.86	0	0
6	Learning via Zoom is preferred because you can see the lecturer's explanation firsthand.	8	28.57	19	67.86	1	3.57	0	0
7	Learning via Zoom is often constrained by the internet, so sometimes it misses some material.	10	35.71	16	57.14	2	7.14	0	0
8	Learning via zoom drains the internet quota	10	35.71	12	42.86	6	21.43	0	0
9	Learning through zoom can follow learning anywhere.	6	21.43	22	78.57	0	0	0	0
10	Learning through zoom increases student knowledge regarding online-based learning.	6	21.43	22	78.57	0	0	0	0
11	Interaction in zoom learning provides a sense of comfort/closeness with lecturers and fellow students.	2	17.86	15	53.57	11	39.29	0	0

Students will learn well if they can construct themselves actively between their understanding and what is learned. Therefore, active online learning is the responsibility of teachers and lecturers as learning facilitators who can make it easier for students to construct their understanding of what is being learned. Based on the results of a questionnaire filled out by students, it is known that online learning using the WhatsApp Group application is difficult for students to understand when compared to other learning applications by 60.71%, and material delivered by lecturers is also difficult to understand by 53.57%.

The results of the interviews showed that the causes of students' difficulties in understanding the material were: (1) inadequate network conditions; and (2) the many interruptions of notifications from other applications, as well as the many incoming chats so that material information is missed. This is supported by the results of a questionnaire of 57.14%. This follows the statement of the 20th student: "*Internet network is bad when you are in an area where the internet is inadequate because not all areas have adequate internet*". In addition, the 7th student said that: "*the number of chats included in the learning group resulted in a lot of important information being lost/missed in the chat*". This is very important because it

relates to the concentration of students in participating in learning in a comfortable and conducive manner, and there is no noise or unnecessary interaction so that the material is well received.

Similar to online learning via WhatsApp Group, online learning via Zoom also has the same problems as the WhatsApp Group, namely the unavailability of an adequate internet network 92.86% and the draining of student internet quota with a total percentage of 78.57%. This is supported by the results of interviews with the 10th student, who said that: "*the bad internet connection causes the lecturers to miss some material explanations often and drain internet quota*". However, online learning using Zoom has received a positive response from students regarding material explanations that can be seen and heard directly by students, with a percentage of 96.43%. Learning via Zoom increases the knowledge of all students about online learning and creates good interaction between lecturers and students and fellow students by 60.71%. Overall, the online learning aspect has an average percentage of 77.92%, so it can be concluded that students' perceptions of online learning are positive.

3.2. Results of Offline Learning Model According to Students

Below is the result of completing a questionnaire conducted by students regarding offline learning.

Table 2. Results of Filling in the Offline Learning Questionnaire (Face to Face)

No	Statement	Strongly Agree		Agree		Disagree		Strongly Disagree	
		Total	%	Total	%	Total	%	Total	%
1	Face-to-face learning is preferred learning compared to online learning	11	39.29	14	50	3	10.71	0	0
2	Face-to-Face Learning is hampered because the class atmosphere is busy and noisy, so it interferes with the lecturer's explanation/the lecturer's voice is difficult to hear.	1	3.57	7	25	18	64.29	2	7.14
3	Students are helped when discussing with groups during face-to-face learning because they get many opinions from other groups directly.	10	35.71	17	60.71	1	3.57	0	0
4	In face-to-face learning, students can ask questions directly without typing.	15	53.57	13	46.43	0	0	0	0
5	Students better understand the material during face-to-face learning	14	50	14	50	0	0	0	0

Based on the results of a questionnaire filled out by students, it was found that overall, students gave a good response to face-to-face learning because students were assisted during group discussions by having opinions from other groups directly at 96.43%; and all students (100%) students are free to ask questions directly without having to type and better understand the material. This is supported by the results of interviews with the 18th student, saying that: "*face-to-face is good because you can see and meet directly with lecturers when giving material, especially mathematics courses, and can exchange ideas with fellow students directly*". The 8th student also said, "*I understand learning material better in face-to-face learning than online learning*".

However, 71.43% of students responded to the busy and noisy classroom atmosphere in face-to-face learning which disturbed concentration. This is supported by the results of interviews with the 4th student, who said, "Sometimes the class becomes tense, even though we need calm and concentration to understand in depth the material presented by the lecturer". Overall, aspects of offline (face-to-face) learning get an average percentage of 82.86%, so it can be concluded that student responses to face-to-face learning are positive. Again, it is noteworthy that despite the challenges posed by the classroom atmosphere, the overall response towards face-to-face learning was positive. This suggests that while some students faced difficulties with the busy and noisy environment, the majority still appreciated

and responded favorably to the traditional offline learning format. These findings highlight the importance of creating a conducive and calm learning environment within face-to-face settings to promote better concentration and comprehension among students (Wright, 2017). It also emphasizes the need for educators to be aware of the impact that classroom atmosphere can have on students' learning experiences and take appropriate measures to address any disruptions that may hinder their concentration.

3.3. Results of Blended Learning Model According to Students

Below is the result of filling out a student questionnaire on blended learning.

Table 3. Results of Filling in the Blended Learning Questionnaire

No	Statement	Strongly Agree		Agree		Disagree		Strongly Disagree	
		Total	%	Total	%	Total	%	Total	%
1	Blended learning begins with face-to-face learning and continues with online learning	4	14.29	17	60.71	7	25	0	0
2	Blended learning begins with online assignments and continues with the discussion of assignments in face-to-face learning	5	17.86	16	57.14	6	21.43	1	3.57
3	Blended learning increases student motivation and enthusiasm for learning.	4	14.29	20	71.43	4	14.29	0	0
4	Students find it difficult to follow Blended Learning	2	7.14	8	28.57	18	64.29	0	0
5	Blended learning is effective in helping students obtain learning information	5	17.86	20	71.43	3	10.71	0	0
6	Blended learning supports strengthening students' understanding of the material.	5	17.86	19	67.86	4	14.29	0	0
7	Students look forward to Blended learning in other subjects	4	14.29	16	57.14	8	28.57	0	0

Blended learning is an alternative learning model that can be used to achieve learning goals because it combines various technological media and types of activities in creating optimal learning so that it allows students to develop and practice skills anytime and anywhere with the condition that they are connected to the internet. Based on the results of the questionnaire that students filled in, it was found that overall, students were happy with the blended learning model. This is indicated by the very good percentage of student responses: whether blended learning begins with face-to-face learning or begins with online learning, the percentage is 75%. In fact, 64.29% of students said it was easy to follow blended learning and were still waiting to apply the blended learning model in other subjects at 71.43%.

These results align with in-depth interviews with the 4th student, who said, "*Blended learning is very interesting because there is a combination of teaching and learning methods.*" In addition, the 10th student said, "*Blended learning is practical because it can overcome boredom in one learning model because face-to-face meetings sometimes get boring. But with blended learning, there is a combination of online and offline, and this is interesting, I like it*." Overall, the blended learning aspect has an average percentage of 73.98%, so it can be concluded that student responses to blended learning are positive.

Based on the results of completing the questionnaire students followed by in-depth interviews, it can be concluded that all student responses to learning were positive, both online learning, offline learning, and blended learning. However, the highest average percentage of student responses was in face-to-face learning, namely 82.86%. This indicates that face-to-face learning is good and is most liked by students at University X. However, these results cannot be used as a basis for justifying that the face-

to-face learning model is good and is liked by students because there is no clear and verified process for determining the best learning model between online learning, offline learning (face-to-face), and blended learning. Nevertheless, it is crucial to exercise caution when interpreting these results. While the data indicates a preference for face-to-face learning, it should not be used as a definitive justification for declaring face-to-face learning as the best or most preferred learning model. It is essential to recognize that determining the ideal learning model among online learning, offline learning, and blended learning involves a complex process that goes beyond student preferences alone (Ntim et al., 2021). Factors such as learning outcomes, student engagement, flexibility, and access to resources need to be carefully considered when making informed decisions about the most effective and suitable learning model. Future research and comparative studies should explore these factors in more depth to provide a more comprehensive understanding of the strengths and limitations of each learning mode and their impact on student learning outcomes.

4. CONCLUSION

Face-to-face learning is one of the recommended learning models in lectures because there is direct interaction between lecturers, students, and fellow students. However, if face-to-face learning cannot be carried out due to the Covid-19 pandemic, then blended learning is an alternative learning that can be applied. In general, students feel quite satisfied with the three types of learning models. However, face-to-face and blended learning methods have a higher response than online learning methods. As for learning outcomes, students find it easier to understand lessons through face-to-face learning models than blended learning and online learning. This is because the interactions that are carried out are direct, making it easier for students to ask questions to lecturers and fellow students during lectures. In addition, there are far fewer distractions in the face-to-face learning process than in online learning and blended learning models, increasing the ease of students understanding lecture material. However, it is important to note that face-to-face learning garnered the highest average percentage of positive student responses, indicating a preference for this traditional approach. Nonetheless, it is crucial to consider that determining the best teaching model cannot be solely based on student preferences. Factors such as learning outcomes, engagement, flexibility, and access to resources play significant roles in determining the effectiveness of a teaching model. Further research and comparative studies are necessary to delve deeper into the multifaceted aspects of each teaching model. A comprehensive framework that incorporates various indicators and considerations is needed to make informed decisions about the most suitable and effective teaching approaches in different contexts.

REFERENCES

Albarrak, A. I., Zakaria, N., Almulhem, J., Khan, S. A., & Karim, N. A. (2021). Modified team-based and blended learning perception: a cohort study among medical students at King Saud University. *BMC Medical Education*, *21*, 1–8.

Alhusban, H. (2022). A Novel Synchronous Hybrid Learning Method: Voices from Saudi Arabia. *Electronic Journal of E-Learning*, *20*(4), 400–418.

Amin, M., Sibuea, A. M., & Mustaqim, B. (2022). The Effectiveness of Online Learning Using E-Learning During Pandemic Covid-19. *Journal of Education Technology*, *6*(2).

Bali, M. M. E. I., & Holilah, N. (2021). The Role of Foster Caregivers in the Effectiveness of Online Learning in Pesantren. *Edukasi Islami: Jurnal Pendidikan Islam*, *10*(01), 339–362.

Castro, R. (2019). Blended learning in higher education: Trends and capabilities. *Education and Information Technologies*, *24*(4), 2523–2546.

Dakir, D., & Fauzi, A. (2022). Hybrid learning effectiveness in Learning Management during the Covid-19 pandemic. *Cypriot Journal of Educational Sciences*, *17*(11), 3924–3936.

de Moura, V. F., de Souza, C. A., & Viana, A. B. N. (2021). The use of Massive Open Online Courses (MOOCs) in blended learning courses and the functional value perceived by students. *Computers & Education*, *161*, 104077.

Effendi, H., & Hendriyani, Y. (2020). The conceptual and hypothetical model of interactive blended problem based learning. *JPI (Jurnal Pendidikan Indonesia)*, *8*(2), 285–292.

Ferri, F., Grifoni, P., & Guzzo, T. (2020). Online learning and emergency remote teaching: Opportunities and challenges in emergency situations. *Societies*, *10*(4), 86.

Geng, S., Law, K. M. Y., & Niu, B. (2019). Investigating self-directed learning and technology readiness in blending learning environment. *International Journal of Educational Technology in Higher Education*, *16*(1), 1–22.

Han, Z. (2022). Exploration of Happy Learning for College Students with the Integration of Thinking Visualization and Action Learning in the Internet+ Environment. *Journal of Environmental and Public Health*, *2022*.

Hua, J., & Shaw, R. (2020). Corona virus (Covid-19)"infodemic" and emerging issues through a data lens: The case of china. *International Journal of Environmental Research and Public Health*, *17*(7), 2309.

Indra, R., Komariah, A., Nurdin, D., & Fadhli, R. (2022). A Rasch Analysis: Comparing Students' Learning Activity on Online Learning and Blended Learning. *Cypriot Journal of Educational Sciences*, *17*(6), 2013–2028.

Jerry, M., & Yunus, M. M. (2021). Blended learning in rural primary ESL classroom: Do or don't. *International Journal of Learning, Teaching and Educational Research*, *20*(2), 152–173.

Lassoued, Z., Alhendawi, M., & Bashitialshaaer, R. (2020). An exploratory study of the obstacles for achieving quality in distance learning during the COVID-19 pandemic. *Education Sciences*, *10*(9), 232.

Munastiwi, E., & Puryono, S. (2021). Unprepared management decreases education performance in kindergartens during Covid-19 pandemic. *Heliyon*, *7*(5), e07138.

Ntim, S., Opoku-Manu, M., & Kwarteng, A. A. A. (2021). Post COVID-19 and the potential of blended learning in higher institutions: exploring students and lecturers perspectives on learning outcomes in blended learning. *European Journal of Education and Pedagogy*, *2*(6), 49-59.

Nelwati, S., & Amelia, R. (2019). On Using of a Mobile Learning in Teaching History at UIN Imam Bonjol Padang: A sResearch and Development Model. *Al-Ta Lim Journal*, *26*(2), 191–203.

Pratiwi, H., Hasanah, N. I., Purnama, S., Ulfah, M., & Saripudin, A. (2022). Adaptation to digital parenting in a pandemic: A case study of parents within higher education. *South African Journal of Childhood Education*, *12*(1), 1–12.

Rasmitadila, R., Aliyyah, R. R., Rachmadtullah, R., Samsudin, A., Syaodih, E., Nurtanto, M., & Tambunan, A. R. S. (2020). The perceptions of primary school teachers of online learning during the Covid-19 pandemic period. *Journal of Ethnic and Cultural Studies*, *7*(2), 90–109.

Rukin, S. P. (2019). *Metodologi penelitian kualitatif*. Yayasan Ahmar Cendekia Indonesia.

Smith, K., & Hill, J. (2019). Defining the nature of blended learning through its depiction in current research. *Higher Education Research & Development*, *38*(2), 383–397.

Veed, G. J., McGinley, M., & Crockett, L. J. (2019). Friendship network influence on the development of internalizing symptoms during adolescence. *Journal of Applied Developmental Psychology*, *60*, 157–165.

Wright, B. M. (2017). Blended Learning: Student Perception Of Face-To-Face And Online Efl Lessons. *Indonesian journal of applied linguistics*, *7*(1).

Zheng, W., Ma, Y.-Y., & Lin, H.-L. (2021). Research on blended learning in physical education during the COVID-19 pandemic: A case study of Chinese students. *SAGE Open*, *11*(4), 21582440211058196.