



Blended Learning as an Alternative Learning in Elementary Schools

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Abstract

The problem with learning during the Covid-19 pandemic was that it could not be held face-to-face so blended learning was an alternative learning solution. This problem occurs in various regions. Learning in the conditions of the Covid-19 pandemic is difficult to find a solution because it is caused by various problems from students, teachers, and schools. So that learning outcomes and student motivation do not decrease, Blended Learning is used to overcome them. The writing of this article uses the systematic literature review method in reviewing it. The findings of research results in various journals by writing down keywords totaling 104,000 articles, then identified based on citations and years, so that there are 16,900 articles. Then verification of the articles based on topic suitability was carried out into 10 articles and synthesis analysis was carried out on the existing articles into 5 articles, and the final stage was to describe the findings of the articles to conclude. Various findings in research show that blended learning motivates and improves student learning outcomes. Blended-Learning is seen as providing a variety of variations, completeness, and learning flexibility in the use of place, time, and access to lessons.

Keywords: *Blended Learning*, Alternative Learning, Elementary Schools

Blended Learning Sebagai Alternatif Pembelajaran di Sekolah Dasar

Abstrak

Problematika pembelajaran saat masa pandemic covid-19 yaitu tidak dapat diselenggarakan secara tatap muka sehingga blended learning sebagai solusi alternatif pembelajaran. Permasalahan ini terjadi diberbagai daerah. Pembelajaran dalam kondisi pandemi covid-19 ini sulit dicari solusinya, karena disebabkan berbagai permasalahan dari siswa, guru dan sekolah. Agar hasil belajar dan dorongan siswa tidak menurun, maka dipergunakan Blended Learning untuk mengatasinya. Penulisan artikel ini menggunakan metode systematic literature review dalam mengkajinya. Dari temuan hasil penelitian di berbagai Jurnal dengan menuliskan kata kunci yang berjumlah 104.000 artikel, kemudian diidentifikasi berdasarkan kutipan dan tahun, sehingga menjadi 16.900 artikel. Lalu dilakukan verifikasi artikel berdasarkan kesesuaian topik, menjadi 10 artikel dan dilakukan analisis sintesis pada artikel yang ada menjadi 5 artikel, serta tahap terakhir yaitu mendeskripsikan temuan artikel untuk ditarik kesimpulan. Berbagai temuan dalam penelitian bahwa blended learning memotivasi dan meningkatkan hasil belajar siswa. Blended-Learning dipandang memberikan ragam variasi, kelengkapan dan fleksibilitas belajar dalam penggunaan tempat, waktu, dan mengakses pelajaran.

Kata kunci: *Blended Learning*, Alternatif Pembelajaran, Sekolah Dasar

INTRODUCTION

There are various types of learning in the digital era, one of which is learning using a blended learning approach. Currently, blended learning is being warmly discussed in the world of education. Blended learning is a tool that provides convenience in the learning process because it has a combination of methods, methods, and models in learning activities so that learning is carried out effectively in terms of time and effort (Hadjerrouit, 2008). The use of this blended learning approach combines online or online learning through direct (offline) learning. Therefore, blended learning is a combination of various things, starting from models, learning styles, methods, and how to apply them. The blended learning approach is considered an approach that uses important components in learning, namely the interaction and application of technology.

The outbreak of Covid-19 in various countries, including in Indonesia. Giving influence in various aspects of life including in the aspect of education. This condition is called the COVID-19 pandemic. Situations like the current face-to-face learning are very vulnerable to do. For this reason, a solution is needed so that the implementation of education, especially learning, can continue. For this reason, learning that is used in the conditions of the Covid-19 pandemic uses a blended learning approach in the learning process that is carried out.

Conditions in various regions in Indonesia have forced policymakers to look for alternatives in finding solutions so that learning can continue. The solution to the learning approach used is by utilizing various means and modes of learning that are efficient and effective in their implementation. For this reason, the blended learning approach in learning is an alternative learning solution in the current conditions. Through blended learning, the implementation of learning for students takes place smoothly.

A mixed approach or blended learning means blended, namely a mix, a good combination (Khan, A. I., Qayyum, N., Shaik, M. S., Ali, A. M., & Bebi, 2012). While learning is learning. Meanwhile, Samarescu considers blended learning as part of combined learning between learning that is carried out conventionally and learning that applies the use of technology that is currently developing (Samarescu, 2016). The Blended Learning model in learning activities is supported by textbooks, model book products, lecturer handbooks, student handbooks, application handbooks, and e-learning (Hamzah et al., 2022). The implementation of the blended learning approach in its use uses online learning resources based on applications or software and combines them with conventional learning.

Various articles on blended learning as stated by Lam. Y. W. stated in his findings that the use of blended learning in the application of digital game mechanics increased students' online contributions and writing performance (Lam, Y. W, 2018). Likewise, Jenifer Hall Rivera stated in her published article, said that the use of blended learning has proven successful in achieving student involvement at all academic levels (Rivera, 2017). Blended learning can significantly improve the overall performance of K-12 students, that the factors that moderate the impact of blended learning on student performance in this learning include group activity, educational level, subject, type of knowledge, instructor, sample size, duration of intervention, and region (Shuqin Li, 2022). Findings about the use of blended learning as part of an alternative implementation of learning have a good impact and influence on the learning process (Sitorus, 2018). Blended learning is a significant contribution to the prevention and transmission of disease (Megahed. Naglaa, 2022). Other research findings during the ongoing Covid-19 pandemic also conveyed, that the blended learning model has a positive effect on learning outcomes during its application during the Covid-19 pandemic (Batubara et al., 2022). So that some educational institutions use this approach in the implementation of learning in their educational units.

The blended learning approach in education has been widely used in the process of learning activities. Education at the secondary level, such as high school (SMA) and higher education or college, has been widely used. But at the elementary level. As in elementary school (SD) is still very limited. Learning for schools requires alternative solutions in further developing and applying them. It is hoped that the use of a blended learning approach in learning, especially at the elementary school level. So, it will provide additional diversity in the learning process which is limited in its implementation faced by educators in educational units. So the use of blended learning as alternative learning for elementary school students will increase.

METHODS

This type of research is a systematic literature review. The systematic literature review method was chosen because this study aimed to corroborate the findings of the use of blended learning as a learning alternative for those who study at the elementary school level. The method used has contributed to the

synthesis of existing academic literature reliably and accurately (Van Laar, E., van Deursen, A. J. A. M., van Dijk, J. A. G. M., & de Haan, 2017). The writing of this article was carried out by examining various research findings that are following the results of using blended learning in learning activities. The research criteria included the following reviews: title; author: year of publication; research objectives type of research (quantitative, qualitative, or mixed); topic studied; measurement instrument used; results of research. Systematic literature reviews are used in identifying, and judging the validity of the use of methods, determining decisions about the priority of the literature being studied, and providing criticism of the literature so that it becomes new knowledge of the topic in the form of synthesis (Hart, 1999) (Torraco, 2005) (Levac, D., Heather Colquhoun, 2010). Research data is obtained through several techniques including identification, verification, analysis, synthesis, and description. The process is as follows:

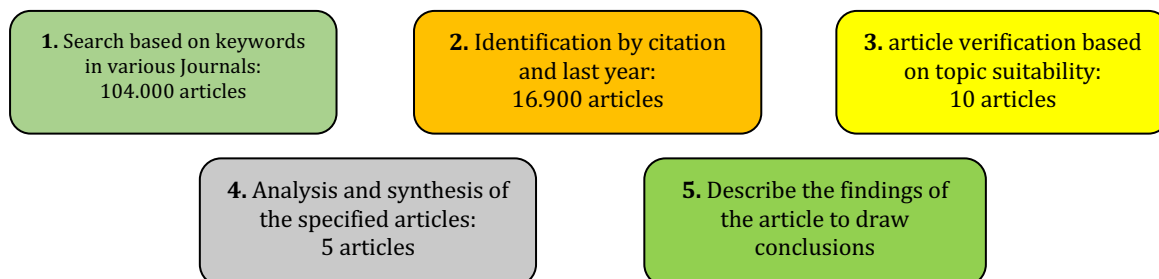


Image 1. Literature review process

From the process carried out, then conclusions are drawn to be written into writing articles.

RESULTS AND DISCUSSION

The findings from existing research regarding the use of blended learning in learning activities have a positive influence on students. This research found studies on blended learning in elementary schools from 2017-2022. Some of the findings regarding blended learning are presented in the following table:

Table 1. Reviewed Articles

Author	Year	Research Method	Main Outcomes	Environment
Jen Ellise Prescott, Kristine Bundschuh, Elisabeth R Kazakoff, Paul Macaruso	2017	Experiment Research	Using blended learning, learning English experienced significant progress in reading performance on reading assessment standards and language learning literacy.	Kindergarten through 5th-grade elementary school students in the United States
Khusna Maziyatul, Sudaryanto, Dian Dede.	2020	Two-cycle action research	Using blended learning has a positive impact on student learning motivation.	Grade 6 elementary school students in Yogyakarta
Maha Dewi Sitorus.	2018	Eksperimen Research	There are different learning outcomes between classes with blended learning and classes without blended learning in Civics lessons.	Teachers and students at the elementary level, in Medan, Indonesia.
Hudian Yusfil Hazmi, Muhammad Tahir, Muhammad Turmuzi	2020	Qualitative Research with a descriptive approach	The use of blended learning for students improves digital literacy skills such as sending files, photos, and videos. Meanwhile, teachers provide an understanding of social networks, and various educational	Students and teachers in grade 5 SDN 5 Cakranegara.

				websites in the learning process.		
Jarot	2021	Class action research		There are no students who have not completed the Science lesson on Alternative Energy Materials and Its Use using blended learning.	Grade 6 elementary school student Jeruk Sokok, Bondowoso, East Java, Indonesia.	

From the results of research by Jen Ellise Prescott, Kristine Bundschuh, Elisabeth R Kazakoff, and Paul Macaruso (2018), the findings are produced in the following table:

Table 2. The mean difference in standardized test scores and total grade by class and EL status.

Class	Students			Student EL			Student non-EL		
	Pretest	Post-test	Different	Pretest	Post-test	Different	Pretest	Post-test	Different
1	90.45	107.10	16.64	79.88	100.18	20.29	93.13	108.85	15.72
2	97.91	108.73	10.82	97.29	101.38	4.10	98.06	110.44	12.39
3	97.28	104.69	7.41	87.17	93.35	6.17	99.98	107.72	7.74
4	99.06	101.87	2.82	84.92	90.69	5.77	102.73	104.78	2.05
5	99.86	100.14	0.27	85.21	83.43	-1.79	102.17	102.76	0.60
6	98.47	101.41	2.94	88.24	94.12	5.88	100.39	102.77	2.38

The table of findings from tests on kindergarten to grade 5 elementary school students, a total of 641 students, illustrates that there was a change from before and after the use of EL and non-EL of the subjects. The difference is that students who carry out e-learning get good results than non-e-learning students. So from that data, it can be concluded that the use of blended learning in learning has a better effect on standard reading tests (Prescott, J. E., Bundschuh, K., Kazakoff, E. R., & Macaruso, 2018).

Based on the results of research conducted by Maziyatul Husna, Widayatno, and Dede Dian, stated:

Table 3. Student motivation from each cycle

Motivational Indicator	1st cycle	2nd cycle	Enhancement
Persevere in following the learning	76,56%	91,78%	15,22%
The problem was solved tenaciously	75,46%	90,38%	14,92%
Willingness and desire to learn	72,84%	91,58%	18,74%
Desire to achieve success	75,80%	90,38%	14,58%
Average	75,16%	91,03%	15,86

Based on the analysis of the findings in the table.3, the results of using a blended learning approach in learning can be described, giving a better influence on the results of motivation indicators. Whereas the indicator of diligently participating in learning in the 1st cycle produced 76.56 percent, there was an increase of 91.78 percent in the 2nd cycle. For indicators of problems overcome tenaciously, reaching 75.46 percent in cycle 1 and an increase to 90.38 percent in cycle 2. For indicators of willingness and desire to learn in cycle 1 reaching 72.84 percent, there is an increase of 91.58 percent in cycle 2. As for the indicator of the desire to succeed, it has increased, in cycle 1 from 75.80 percent to 90.38 percent in cycle 2. Of all these indicators, the aspect of motivational indicators has an average of 75.16 percent and increases the average was 91.03 percent in the 2nd cycle.

Table 4. Comparison of Learning Achievement Tests

Information	Preliminary Aptitude Test	1st cycle	2nd cycle
Average	54,8	75,67	85,6

Highest Score	75	85	100
Lowest Score	30	44	50
The number of students	4	7	13
Completeness Percentage	28,5%	50%	92,8%
Qualification	Not enough	Enough	Good

Based on the analysis of the research results table above, there are different results from the initial abilities in the first cycle and the second cycle. Based on the initial ability test, the average student score was fifty-four point eight and the number of students with completeness of four students who had a complete percentage of 28.8 percent was categorized as lacking. Based on cycle 1, the class average has an increase of 75,67 and the number of students has a completeness of seven students with a complete process of 50% which is categorized as sufficient. Based on cycle 2, the class average has increased to 85,6 of the total students obtaining completeness of thirteen students, obtaining a completeness percentage of 92,8% which is categorized as good (Khusna Maziyatul, Sudaryanto, 2020).

Meanwhile, the research results of Maha Dewi Sitorus, the findings in her research shows: a) there are differences in the learning outcomes of Civics students who are taught through a blended learning approach with conventional learning approaches. Where from the learning outcomes of Civics subjects through a blended learning approach, the results are higher than the learning outcomes of Civics subjects taught through conventional learning approaches. The findings show $P_{count} 8.70 > P_{table} 4.00$; 2) there are differences in the learning outcomes of Civics subjects, students who have a high desire to learn from the learning outcomes of Civics subjects and students who have a low desire to learn. The findings show $P_{count} 5.01 > P_{table} 4.00$; 3) there is an interaction between the use of the learning approach and the desire to learn about the learning outcomes of students' Civics subjects. The findings show $P_{count} 5.20 > P_{table} 4.00$. Based on the results of the data analysis, it can be concluded that using a blended learning approach in learning Civics subjects is more effective for students who have a high desire to learn (Sitorus, 2018).

Based on the findings in the research conducted by Hudian Yusfil Hazmi (2020), the data was obtained through interviews, observation, and documentation in grade 5 SD. Regarding the implementation of blended learning in learning Activities 4.0 to increase students' digital literacy, namely: the learning process with blended learning is carried out by E-learning first or online, namely the teacher sends learning materials and assignments to students in their homes with the assistance of their parents. Then if students do not understand and understand the learning material and assignments delivered via the WhatsApp group, the class can ask them directly. After the assignments given have been completed by students, they collect them by sending them via personal chat to their teacher's WhatsApp number. For the implementation of face-to-face learning, it is carried out on Tuesdays and Thursdays with students coming to school in turns according to a predetermined attendance number. The purpose of face-to-face learning is to strengthen students' understanding of materials and assignments collected via WhatsApp. With the blended learning activities that have been implemented. Students will increase their digital literacy by observing and working on student learning photos and videos collected via WhatsApp from learning material intangibles in the surrounding environment. As for teachers, the use of blended learning will increase knowledge and insight about social networks in providing learning materials and assignments to students. Teachers know more about various educational websites in learning activities.

From the findings in the research conducted by Djarot, it resulted in:

Table. 5 Results of student acquisition scores cycle 1

Student	Score				
	liveliness	performance	Task 3	Task 4	Average
Student 1	67	70	75	75	72
Student 2	67	70	75	75	72
Student 3	67	70	65	65	67
Student 4	67	70	65	75	69
Student 5	67	70	75	75	72
Student 6	67	70	75	65	69
Student 7	67	70	65	70	68
Student 8	67	70	65	75	69
Student 9	67	70	75	75	72

Student 10	67	70	70	75	71
Student 11	67	70	70	65	68
Student 12	67	70	65	75	69
Student 13	67	70	70	75	71
Student 14	67	70	65	65	67
Student 15	67	70	70	70	69
Student 16	67	70	75	70	71
Student 17	67	70	65	75	69
Student 18	67	70	70	70	69
Student 19	67	70	75	70	71
Student 20	67	70	70	70	69
Student 21	67	70	75	75	72
Student 22	67	70	75	75	72
Student 23	67	70	70	75	71

The student activity table.5 shows twenty-three students who are involved in natural sciences on the topic of alternative energy and its utilization, 12 students have not completed it (KKM 70) so classical student completeness is still less than 50%, namely 47.83%.

Furthermore, the implementation of the learning that has been designed follows the blended learning model with the topic of Plants. After the observations were made, the following data were obtained:

Table. 6 Results of the Student's Acquisition Score Cycle 2

Student	Score				
	liveliness	performance	Task 3	Task 4	Average
Student 1	89	80	85	85	85
Student 2	89	80	85	85	85
Student 3	89	80	75	75	80
Student 4	89	80	75	85	82
Student 5	89	80	85	85	85
Student 6	89	80	85	75	82
Student 7	89	80	75	80	81
Student 8	89	80	75	85	82
Student 9	89	80	85	85	85
Student 10	89	80	80	85	84
Student 11	89	80	80	75	81
Student 12	89	80	75	85	82
Student 13	89	80	80	85	84
Student 14	89	80	75	75	80
Student 15	89	80	80	80	82
Student 16	89	80	85	80	84
Student 17	89	80	75	85	82
Student 18	89	80	80	80	82
Student 19	89	80	85	80	84
Student 20	89	80	80	80	82
Student 21	89	80	85	85	85
Student 22	89	80	85	85	85
Student 23	89	80	80	85	84

In table.6 student activity shows that twenty-three students were involved in natural science lessons about alternative energy and its use. The competence of students in understanding learning material is getting better in this 2nd cycle. This can be seen by the number of students who complete or have better grades on the topic of the material.

From the results of the research described above. So that it can be concluded that the actions in cycle 2 can increase student activity with indications from the data that 100 percent of students are active and have the ability to understand learning material as seen from the value of learning outcomes obtained by students who complete the learning topic increased by 57 percent from the previous cycle (Jarot., 2021).

The implementation of blended learning in current learning needs to be developed because through a blended learning approach the learning that is carried out will be more effective and efficient. Various learning resources and learning tools used, make learning activities better. Learning using blended learning in it needs to be supported by textbooks, model book products, lecturer handbooks, student handbooks, application handbooks, and e-learning so that it can be carried out practically and effectively (Hamzah et al., 2022). The use of a blended learning approach as an alternative for future learning is due to the use of various methods in its implementation. The blended learning approach in learning activities utilizes various media, learning resources, and technology. So that the blended learning approach is said to be a learning approach that combines conventional methods, and learning methods that are carried out independently, as well as learning that is carried out online.

Blended learning is a learning approach that combines ways of delivery, ways of teaching, and learning styles as well as open communication between parties participating in learning activities. In the blended learning approach, e-learning is also used. As stated by Clark and Mayer, e-learning is learning delivered using a computer. In e-learning, the material is provided in digital form, so it can be saved in file form. The use of e-learning is supported by information and communication technology via the Internet. This learning becomes open and flexible because it can be done anywhere, anytime, and by anyone in the community (Clark & Mayer, 2008). Using blended learning in learning various methods, techniques, styles, and means are used so that the implementation of teaching is carried out efficiently and effectively. In the use of Blended learning cognitive factor is the most linked pedagogical principle to the four main capabilities of technological learning tools, that is, time, self-related, learning task, and learning community-related. Useful for instructors to plan learning and teaching by choosing the technological learning tools that match with appropriate Education 4.0 pedagogies for optimizing the immersive blended learning practices (Bizami et al., 2023).

The use of blended learning in education will provide convenience in the use of time and place in accessing learning. Students do not need to come to the place where learning is delivered. Blended learning can be done from anywhere whether they have access to the internet. Blended learning makes students independent in learning and controls the success of learning. Learners are free to determine when they will start and finish learning. From the learning module used, go between module one and move on to the other module you want to study first. In learning that is carried out independently, if there is material that is difficult to understand, students can contact their instructor via email, chat, or dialogue available on the learning management system (LMS).

The blended learning approach describes learning situations with a blend of methods that aim to provide more insight and knowledge to students (Welington, 2004). The intended integration is a combination of the use of teaching techniques, such as images, videos, and communication network connections with conventional learning carried out by teachers which is called blended learning (Hartley, 2001).

From a review of the design of learning facilities. The type of blended learning approach is between face-to-face learning and non-face-to-face learning. In blended learning, there are characteristics for teachers who will design a blended learning approach, such as the contents of learning material, ways of communication in learning between students and teachers and between students, and the mental condition of students participating in learning so that blended learning can be carried out properly (Boohan, 2002). From the review of students in Blended learning, students' self-efficacy must be prepared in advance, this is for the success of the implementation of blended learning. Learning using Blended Learning in its management, namely self-efficacy is a prerequisite for managing learning resources (Heo et al., 2022). From the teacher's review, learning using the blended learning approach requires teaching abilities and skills so that the teacher can carry it out so that students can master as much learning material as is provided by the teacher. The blended learning approach can be successful, so in practice, the initial meeting is carried out face to face, then thereafter with weekly online assignments and interspersed with online communication and consultation via email, chat, and discussion forums, and the final part is closed with a final exam in the form of face to face or non-face to face (Kusni, 2010).

Thus, students have many opportunities to explore their abilities and have responsibility for themselves, improve their competence, explore their potential, explore skills in adding information, and gain success (Hadjerrouit, 2008). In using blended learning, teachers can accept that there are different ways of learning students according to the learning speed of students and encourage communication from various directions both students and teachers or students with other students (Ulfa, 2012). By using blended learning, you will get many benefits. In terms of education, in terms of time, place, and use. blended

learning provided more optimal learning during pandemic times, one of which was an increase in math subjects. Difficulties experienced related to the application of blended learning are the limitations of facilities and infrastructure, and the lack of teacher competence in technology. While smartphones and WhatsApp become the most widely selected digital tools and platforms and are used as a support for the implementation of blended learning (Amalia & Julia, 2022). The main advantage of using blended learning is the opportunity to build a sense of togetherness among students (Kusni, 2010). In classes that use blended learning, students meet in face-to-face learning, communicate openly, carry out discussions, critically debate among students, and participate in secure online communication. This provides greater opportunities and a wider learning experience for students.

The blended learning approach provides opportunities for students to build relationships between one student and other students and with the teacher. More resources are available, supported by connections between individuals in the same field. Students who are used to taking conventional learning, with blended learning that provides space for developing autonomy, self-efficacy, and organizational skills. There is also a need for consistency in following the lesson. With this blended learning approach, students get new experiences about the method and how to learn in practice its use. In distance learning where there is no face-to-face component, teachers can program interactive learning between students, between classmates, and with their teachers (Barton, 2004). The existence of new technology in learning, helps various parties to overcome limitations in learning that are difficult to reach. There is an increase in students' learning motivation from the application of blended learning (Abroto et al., 2021). The application of the Google Classroom-assisted blended learning model increases student motivation and learning outcomes in elementary school (Puspitasari et al., 2022). The use of educational technology such as teleconferencing, video streaming, video meetings, and applications that can support learning in hard-to-reach classes (Musker, 2004).

The advantages and benefits of using blended learning include: (a) the educational technology used provides benefits for teachers, students and those concerned in education, (b) the existence of learning technology for teachers will increase the effectiveness and efficiency of learning, (c) the existence of learning technology for students, providing quality learning opportunities, (d) student involvement becomes more active when learning, (e) students can explore lessons by utilizing online technology, (f) increasing the dynamics of the learning process and ease in adding insight and knowledge, (g) inspire students to become someone who is able to compete at the rapid pace of information, (h) meet the different characters of students, (i) the existence of educational technology increases the enthusiasm for learning of students, (j) the existence of learning technology makes it easier to convey subject matter with diversity the media used, (k) the existence of learning technology enriches the diversity in student learning variations, (l) the existence of technology in the world of education, things that are difficult to convey to students become more easily and clearly understood by students in learning (Clyde, W. & Delohery, 2005). Blended Learning produces consistently higher satisfaction than other learning activities because it obtains support for learning opportunities, assessment and feedback, academic support, organization and management, learning resources, community learning, and student voices (Finlay et al., 2022). Blended learning is a solution to the new century's transformation with the flexibility and effectiveness of learning technology (Widjaja & Aslan, 2022). From the advantages possessed by the blended learning approach in learning activities. So the blended learning approach is very suitable as alternative learning for basic education levels, especially for elementary school students.

CONCLUSION

Through a blended learning approach that combines conventional and online learning, it provides benefits for its users, namely learning becomes cheaper, more efficient, and more effective in its implementation. Learning with a blended learning approach has forms in its implementation such as real-time software collaboration, online web-based, and various software and applications that support learning. The application of blended learning in learning can be done synchronously (directly) and asynchronously (indirectly). The purpose of using mixed learning is to obtain better quality and quantity of learning than conventional learning.

The teacher's point of view with the use of blended learning in learning provides effectiveness and ease of implementation of the learning carried out. Meanwhile, from the perspective of students, with the blended learning approach in learning, the various technologies used affect better quality learning, because the blended learning approach can be used by anyone, anytime and anywhere.

Thus, from the findings of research results in various journals by writing down keywords totaling 104.000 articles, then identified based on citations and years, there are 16.900 articles. Then verify the articles based on topic suitability, into 10 articles, and synthesis analysis is carried out on the existing articles into 5 articles, and the final stage is to describe the findings of the articles to conclude. So that from the existing articles it can be concluded that Blended learning is very appropriate to be used as an alternative implementation of learning for the elementary school level because it will provide motivation and better student learning outcomes so that the needs of students for education will be fulfilled and carried out as they should.

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