



The Effect of Applying Blended Learning using WhatsApp Group on Students Critical Thinking Skills in Online Learning in Elementary Schools (Pre-Experimental Study of Social Sciences in The Fourth Grade of SDN Cibabat 5)

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Abstract: This research aims to determine the effect of applying blended learning using WhatsApp Group (WAG) on students' critical thinking skills in online learning in elementary schools. The research was conducted to obtain an overview of critical thinking skills in Social Sciences subjects. The subjects of this study were 40 fourth grade students of SDN Cibabat 5, Cimahi Utara District, Cimahi City. This type of research is pre-experimental research with a One-Shot Case Study design. The data analysis technique used statistical tests with the One-Sample t-test at the 95% confidence level. The results of the research show that the value of $t\text{-count} > t\text{-table}$ is $3.909 > 2.023$, and the value of $\text{sig. (2-tailed)} < 0.05$, that meaning there is an effect of applying blended learning using WhatsApp Group (WAG) on students' critical thinking skills in online learning in elementary schools.

Keywords: Blended Learning, Critical Thinking, WhatsApp.

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INTRODUCTION

The development of information and communication technology currently has a major impact on various sectors. This is also influenced by the Covid-19 pandemic which requires work from home and study at home. In the world of education, the existence of the 2013 Curriculum as the curriculum used for learning in educational units requires a balance between Soft Skills and Hard Skills by honing 3 aspects, namely: attitudes, knowledge, and skills. The use of the 2013 curriculum is by the demands of the 21st century which adapts three educational concepts, namely 21st Century Skills, Scientific Approach, and Authentic Assessment (Murdi, 2013). The 21st Century Skills concept contains learning and innovation skills which include critical thinking and solving problems, communication, and collaboration as well as creativity and innovation (Trilling & Fadel, 1009, p. 49). According to research conducted by Wijaya, et al (2016, pp. 121-123) indicators of critical thinking and solving problems have the greatest value, which is around 96.21%, which is very much needed in 21st-century learning skills.

Social Sciences (IPS) at the basic education level focuses its studies on human relations and the process of helping develop students' emotional abilities to achieve harmony and harmony in people's lives.

Social studies learning in elementary schools do not pay attention to the characteristics of elementary school-age children, which are related to the psychological development of students. According to Jean Piaget (1963), children in the elementary school age group (6-12 years) are in the developing of their intellectual/cognitive abilities at a concrete operational level. The IPS material is full of abstract messages. Concepts such as time, change, continuity (continuity) cardinal directions, environment, ritual, acculturation, power, democracy, value, role, demand, or scarcity are abstract concepts that must be taught in the social studies program to elementary school students.

Learning that is generally carried out is using face-to-face learning, but after the emergence of the Covid-19 outbreak, online learning is one of the right solutions for distance learning, this is supported by social media that is well known to almost all circles, especially WhatsApp so that when there is



Circular No. 4 of 2020 from the Minister of Education and culture which recommends that all activities in educational institutions must keep their distance and all material delivery will be delivered in their respective homes.

WhatsApp is the first choice used by educators to get around PJJ because its application is easy and inexpensive for students and almost covers all the needs needed in online learning, from video conversion, sending messages, and can also attach shared file types, be it documents, photos, nor video. WhatsApp can also be used in the learning model recommended by the government, namely the Blended Learning Model, which is a learning model that uses an online system as well as face-to-face through video conference. So, even though students and teachers do remote learning, they can still interact with each other.

THEORETICAL REVIEW

The difference in the ability to accept student material from one another is determined by the thinking ability of each student (Budiarti, et al. 2017). Thinking is a process that is carried out systematically to find a truth to build trust that is factually and realistically obtained (Fitriyani & Supriatna, 2019). One of the important things in the learning process is critical thinking (Huber & Kuncel, 2015). The ability to think critically can be seen from how to give opinions confidently and how to act by giving reasons (Mabruroh & Suhandi, 2017). Critical thinking becomes a way of thinking that becomes a person's intellectual ability to solve problems in the right way based on the right knowledge (Cahyono, 2017). Thus, it can be concluded that critical thinking is a mindset that is carried out based on the rules obtained from existing facts. The indicators of critical thinking skills refer to Ennis (Fridanianti, Purwati, & Murtianto, 2018), namely:

a. Focus (focus), is the first thing that must be done to find out information. To focus on problems requires knowledge so that the more knowledge you have, the easier it is to identify information.

- b. Reason, which is looking for the truth of the statement to be put forward, because in expressing a statement it must be accompanied by reasons that support the statement.
- c. Conclusion (inference), which is making a statement accompanied by precise reasons.
- d. Situation (situation), namely the truth of the statement that depends on the situation that occurred.
- e. Clarity (clarity), namely ensuring the truth of a statement from the situation that occurs.
- f. An overall examination (overview), which is looking back at a process in ensuring the truth of a statement in an existing situation so that it can determine its relationship to other situations.

Blended learning is an alternative learning strategy that can be used by teachers in the current era of globalization (Aslam, 20015). This is because blended learning can be done by teachers anywhere and anytime (Alonso, et al., 2015). Blended learning is a learning process that is carried out by combining face-to-face learning with e-learning using learning media accompanied by theories that support the learning process (Wardani, Toenlloe, & Wedi, 2018). In his 1998 work Haughey (Hendarita, nd) suggests three models in the development of blended learning, namely (1) the web course model, this model is a learning model using the internet for educational purposes where students and teachers are completely separated by distance and face-to-face processes are not carried out. in the learning process. All learning activities are carried out via the internet. (2) web-centric course model, the learning process is carried out by mixing offline and online learning. the material is delivered partly face-to-face and some through the internet so that the learning process is complementary to one another. And (3) the web-enhanced model is a learning model by using the internet to improve the quality of learning in the classroom so that in this case educators are required to master the internet for learning purposes as a tool for finding information and presenting information that has been obtained through the web.



Several studies have stated that the application of the blended learning model can improve critical thinking skills. Research conducted by (Suana et al., 2019) shows that blended learning using WhatsApp can improve critical thinking and problem-solving skills. Research conducted by (Masitoh, Yuliyanti, Lestari, & Fiftriyah, 2018) WhatsApp is an effective medium used to foster critical thinking attitudes in elementary students. Research conducted by (Ingriyani, Hamdani, & Dahlan, 2019) suggests that there is an increase in interest in learning with an average of 18.78 after applying the blended learning model.

However, research with the web course type of blended learning model with WhatsApp media at the elementary school level, especially in social studies lessons, is still relatively rare. Therefore, the purpose of this study is to determine how influential the application of the WhatsApp Group-based Blended Learning model is on students' critical thinking skills in online learning in elementary schools

METHOD

The research subjects were fourth-grade students of SDN Cibabat 5, North Cimahi District, Cimahi City with as many as 40 students. The research data was obtained from the results of discussions through WhatsApp and critical thinking questions given to students.

The approach used in this research is quantitative research with the type of pre-experimental design One-Shot Case Study to determine students' critical thinking skills in social studies subjects. The One-Shote Case Study design is a design in which there is no control group in the study so that at the time of the study students were only given treatment after that it was observed by giving posttest questions.

The independent variable in the study is the WhatsApp Group-based blended learning model, while the dependent variable is the

students' critical thinking ability. The instrument used in the study was critical thinking test questions. The research design of One-Shot Case Study according to (Gall, Joyce P. Gall, & Borg, 2010) can be described as follows:

Information:

X = treatment given (independent variable)

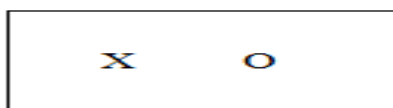
O = observation (dependent variable)

The hypothesis of this research is the critical thinking ability of grade IV students who are learning with the blended learning model based on WhatsApp group > 80. The data analysis technique used is the One sample t-test to determine the effect of the application of the WhatsApp group based blended learning model on students' critical thinking skills.

RESULTS AND DISCUSSION

In this study, there were several negative student behaviors. This is also often felt by the homeroom teacher who was the subject before the research was carried out. Some of these student behaviors are: chatting with friends in class when the learning model developed in this study is a blended learning model with a web course type where learning is only done entirely online using WhatsApp media for elementary social studies subjects. The stages in the implementation of research using the blended learning model, namely:

1. Seeking information, at this stage students independently learn and search for information online from various sources related to predetermined topics. In this study, because the research subjects were elementary school students, the material was provided by the teacher by sending learning videos according to the material to be studied. The media used in the learning process is WhatsApp Group media.
2. Acquisition of information, individually or in groups of students working together to be able to understand then interpret so that they can communicate again based on available sources. In this study, because the research targets were elementary school students, the material was provided by the teacher. The teacher provides video shows for students to





learn on the WhatsApp Group, where then individually students are given space to carry out discussions and provide responses via the WhatsApp Group.

3. Synthesizing of knowledge, namely constructing knowledge through the process of assimilation and accommodation starting from the results of the analysis, discussion, and formulation of conclusions from the information obtained. At this stage, the students send the results of the discussion as well as the conclusions of the information they get here. The students are given questions according to the indicators of critical thinking related to the video that has been given. Then the students wrote down the answers to the

questions that were sent through the WhatsApp Group media.

The results of the discussion show that after the application of the WhatsApp Group-based blended learning model, there is an influence on the ability to think critically according to the indicators put forward by Ennis.

The instrument of critical thinking skills in the form of post-test questions that have been tested shows that the web course type of blended learning model with the media affects students' critical thinking skills. this is indicated by the acquisition of the student's average score greater than before using the blended learning model.

The results of the students' critical thinking ability test are presented in table 1.

Table 1. Critical Thinking Skills

Type of Test	N	Critical Thinking Skills		Average	Standard Deviation
		Minimum Score	Maximum Score		
Post Test	40	75	100	77.500	42.590

A normality test is used to determine whether the data is normally distributed or not. The normality test is used as a condition for conducting the One-Sample t-test. To test data that is normally distributed or not done

Table 2. Normality Test

	Statistic	Df	Sig.	Note
Blended Learning	90	40	0,072	Normal

Shapiro-Wilk

Based on the results of the calculation of the normality test using SPSS version 26 as shown in the table above, it can be concluded that the posttest questions are normally distributed and can be continued to test the One-Sample t-test because the requirements for conducting the one-sample t-test test are that the data must be normally distributed.

Table 3. One Sample t-test

Test Value				
t	Df	Sig (2- tailed)	Mean Difference	95% Confidence Interval of the Difference
				Lower Upper

Normality Test

at the end of the lesson or in the final test, which is when the treatment has been done by giving post-test questions. The results of the normality test are presented in Table 2:

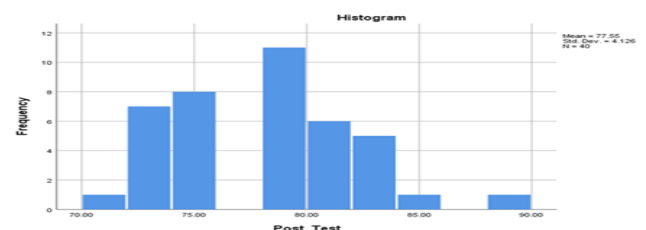


Figure 2. Data Distribution

Hypothesis Testing

The data obtained from the research results were analyzed using data analysis data hypothesis testing One-Sample t-Test. The analysis results are presented in the table below:



Blended Learning	3.909	39	0.000	255.000	12.305	38.695
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Based on the results of calculations using SPSS version 26, the results of the One-Sample t-test analysis showed that Sig = 0,000 means that the value of Sig < 0.05 means that H₁ is accepted.

The results of this study are in line with research (Firdaus, Isnaeni, & Ellianawati, 2018) which states that the blended learning model can increase student motivation and learning achievement in thematic learning, by showing that there is an average increase in learning motivation by 56.50 and learning achievement by 57.00. The same is the case with the research results (Wichadee, 2017) which states that "The findings indicate that blended learning was more effective than traditional learning. That is, students in the experimental group not only outperformed those in the control group in oral proficiency, but they also exhibited higher learning motivation. Meanwhile, Widiara (2018) explained that "adding appropriate learning innovations will generate independence and confidence in students who have tried to find and explore learning resources not only from teachers.

This assumption is what makes blended learning an option when learning is not enough just face to face". The results of research by Masitoh, et al: (2018) reveal that the blended learning model using WhatsApp media is a suitable medium to be applied in elementary schools to instill a spirit of critical thinking in students. The conclusion is to foster critical thinking, WhatsApp media is an effective medium to be applied in elementary schools. In this study, it can be concluded that there is an effect of the application of the WhatsApp group based blended learning model on the critical thinking skills of fourth-grade elementary school students. This is shown by the results of the t-test analysis (One-Sample t-test) at the 95% confidence level, the tcount > ttable is 3.909 > 2.023, thus H₀ is rejected and H₁ is accepted.

CONCLUSION

Based on the results of the study, WhatsApp Group-based blended learning affects the critical thinking skills of elementary students in social studies subjects. This was shown during learning activities; all students were involved in discussions carried out through the WhatsApp Group media. This means that students are enthusiastic about learning using the blended learning model based on the WhatsApp group and this model is considered to affect students' critical thinking skills.

REFERENCES

- Andujar, A. (2020). Analyzing WhatsApp and Instagram as Blended Learning Tools. *Recent Tools for Computer- and Mobile-Assisted Foreign Language Learning*.
- Arsyad, Azhar. (2009). *Media Pembelajaran*. Jakarta: PT. Raja Grafindo Persada.
- Cahyono, B. (2017). Analisis Keterampilan Berfikir Kritis Dalam Memecahkan Masalah Ditinjau Perbedaan Gender. *Aksioma*, 8(1), 50–64.
- Ennis, H. (1985). *The Critical Thinking Skills*, Allyn & Bacon, Boston.
- Ennis, R. H. 1996. *Critical Thinking*. New Jersey. Prentice-Hall Inc.
- Faiz, F. (2012). *Thinking Skill Pengantar Menuju Berpikir Kritis*. Suka Press.
- Firdaus, S., Isnaeni, W., & Ellianawati. (2018). Motivation and Learning Achievement of Primary Students in Theme-Based Learning using Blended Learning Model. *Journal of Primary Education*, 7(3), 324–331.
- Fisher. Alec. 2018. *Berpikir Kritis Sebuah Pengantar*. Jakarta: Penerbit Erlangga.
- Fitriyani, Y., & Supriatna, N. (2019). Efektivitas Penggunaan Model Pembelajaran Kooperatif Tipe Number Head Together (NHT), Teams Games Tournament (TGT) dan Course Review



- Horay (CRH) Terhadap Kemampuan Berpikir Kritis (Studi Eksperimental pada Mata Pelajaran Ilmu Sosial Kelas V Di Gugus 3 Kec. Universitas Pendidikan Indonesia.
- Fridanianti, A., Purwati, H., & Murtianto, Y. H. (2018). Analisis Kemampuan Berpikir Kritis Dalam Menyelesaikan Soal Aljabar Kelas IV SMP N 2 Pangkah Ditinjau Dari Gaya Kognitif Reflektif Dan Kognitif Impulsif. *AKSIOMA: Jurnal Matematika Dan Pendidikan Matematika*, 9(1), 11. <https://doi.org/10.26877/aks.v9i1.222>
- Gall, M. Joyce P. Gall, & Borg, W. R. (2010). *Applying Educational Research* (6th ed.). Boston: Pearson.
- Hendarita, Y. (n.d.). *Model Pembelajaran Blended Learning*. Retrieved from <https://sibatik.kemdikbud.go.id/>
- Inggriyani, F., Hamdani, A. R., & Dahlan, T. (2019). Minat Belajar Mahasiswa dengan Menggunakan Blended Learning melalui Google Classroom pada Pembelajaran Konsep Dasar Bahasa Indonesia SD. *PEMBELAJAR: Jurnal Ilmu Pendidikan, Keguruan, Dan Pembelajaran*, 3(1), 28. <https://doi.org/10.26858/pembelajar.v3i1.8649>
- Margerum-Leys, J., & Marx, R. W. (2004). The nature and sharing of teacher knowledge of technology in a student-teacher/mentor teacher pair. *Journal of Teacher Education*, 55(5), 421–437. doi:10.1177/0022487104269858
- Masitoh, S. N., Yuliyanti, I. D., Lestari, U. D. A., & Fiftriyah, C. Z. (2018). Model Pembelajaran Berbasis Blended Learning Melalui Media WhatsApp Dalam Menumbuhkan *Critical Thinking* Pada Siswa SD. *Prosiding FKIP Universitas Jember*, 115–1120.
- Maya, Y. (2020). Penggunaan Blended Learning Pada Pembelajaran Era Industri 4.0. *Jurnal Pendidikan Bahasa Dan Sastra Indonesia*, 4(2), 31–38.
- Mukhtar, *Metode Praktis Penelitian Deskriptif Kualitatif*. Press Group, Jakarta, 2013.
- Mayer, Richarud. Teguh Wahyu Utomo (Eds). (2009). *Multimedia Learning Prinsip Prinsip dan Aplikasi*. Yogyakarta: Pustaka Pelajar.
- Permendikbud. (2016). 8. <https://doi.org/10.5151/cidi2017-060>
- Suana, W., Raviany, M., & Sesunan, F. (2019). Blended Learning Berbantuan WhatsApp: Pengaruhnya Terhadap Kemampuan Berpikir Kritis Dan Kemampuan Pemecahan Masalah. *Gravity: Jurnal Ilmiah Penelitian dan Pembelajaran Fisika*, 5(2), 37–45. <https://doi.org/10.30870/graIVty.v5i2.4990>
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