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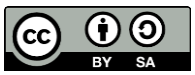

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Students' Critical Thinking Skills in Analyzing Literary Works in the Form of Digital Short Stories

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Abstract

One of the skills that 21st-century human resources must have been the capacity for critical thinking. The capacity for critical thinking is the capacity for thoughtful decision-making and problem-solving. This study aims to illustrate how students in the English Language Education Study Program use critical thinking to analyze literary works in the form of digital short tales. The quantitative descriptive approach was employed in this study. 33 students in semester IV were the focus of this study. 6 descriptive questions that were created based on critical thinking skill indicators from Facione (2015) and verified by professionals were used as part of the data collecting approach. The results of the research demonstrated that when examining literary works in the format of digital short tales, self-regulation is a sign of mastery in critical thinking abilities, whereas inference is a sign of difficulty. According to the proportion of students who met the very critical thinking criterion, 21% of students think critically, 27% think less critically, and 43% think very less critically. Of the students, 9% met the very critical thinking criteria. The average score that was earned altogether was 51.1. Consequently, it is evident that the fourth semester English language education study program students' critical thinking abilities fall into the less critical category at Khairun University.

Keywords: *Critical Thinking Skills, Literary Analysis, Self-Regulation, English Language Education*

Introduction

In the era of increasingly rapid technological development, education is crucial to the production of highly qualified human resource. According to Wijaya et al. (2016), it is difficult for someone to develop education in the 21st century that can result in thinking resources that can support the development of a knowledge-conscious social and economic order similar to that of 21st century global citizens. One of the required abilities that must be possessed is the ability to think critically. Syafitri (2021) stated that to face world challenges, it is also necessary to improve the human development sector which can be done through developing students' critical thinking skills as the nation's next generation.

Restuningsih, *et al* (2017) also believes that one thing that is needed for successful life in the 21st century is the ability to think critically because it is to support arguments in solving problems or also in making decisions. Galbreath (1999) also stated that in the era of technological development, intellectual skill capital, especially high-level thinking skills, is a demand for human resources in the 21st century.

In every organization and educational system around the world, critical thinking has gained significant importance, particularly in the latter half of the 20th century. (Elfatih, 2017). According to Wicaksono (2020), critical thinking is the process of determining the truth or value of something which is characterized by reasoning and choosing skills, observing situations carefully, and changing based opinion proof. Walker & Finney (2006) states that critical thinking skills are an intellectual process for constructing concepts, describing, implementing, and assessing all information obtained from the observation process where the results are used as a basis for measurement.

Additionally, Facione (2015) identifies six components of critical thinking abilities: self-regulation, inference, interpretation, analysis, evaluation, and evaluation. According to Vincent Ruggiero (in Faturohman, 2012), critical thinking encompasses any mental process that may be used to develop and solve issues, come to conclusions, and satisfy the need for understanding.

Students' lack of critical thinking abilities continues to be an issue in the field of education, particularly in Indonesia. It was revealed in research conducted by Anisa, et al., (2021), namely that students' low ability to think critically is a serious problem that must be immediately resolved because it will be very detrimental to many parties if it continues. It is feared that students will not be able to analyze and solve real problems that they experience in everyday life and that they will experience difficulty in making decisions quickly and accurately. As an effort made to improve students' thinking abilities, various models, methods and learning media have been implemented.

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Literary analysis is one technique that may be used to help students think more critically since it trains them to make conclusions, explain cause and effect relationships, compare facts, express opinions, and apply concepts they learn from real-world experiences. According to a study by Ramadhana et al. (2022), students employ critical thinking abilities indirectly when they analyze literary works. Specifically, they do this by analyzing the works based on how to draw conclusions or find solutions to problems that align with the literary analysis approach. Prayuana and Andriani (2023) in their research also stated that short films are one of the considered literary works in audiovisual form able to help improve students' critical thinking skills. Ayuningtiyas (2024) shows that drama is an appropriate learning medium to foster students' critical thinking skills.

In the society 5.0 era, which is a continuation of the current industry 4.0 era, society is required to be able to integrate the digital technology into daily life as a whole. The presence of digital media makes it easy for every user to share information from all corners of the world (Wiguna, 2024). Digital short stories are the evolution of literary works produced in digital form as one of the impacts of technological developments in the field of literature which aims to make it easier for people to consume reading, especially literary works.

Fitriani and Aziz (2019) stated that as time and technology advanced, so did the ways in which literary literacy was applied. This was particularly true during the 4th industrial revolution, or the era of the digital industrial world, which has come to be seen as a model and point of reference for modern society. Research on the development of digital short stories as a learning medium has also been carried out by several researchers such as Sephiana, et al (2023) and Pratomo, et al (2024).

Based on the background provided above, the researchers believe it's crucial to understand students' critical thinking skills while evaluating literary works in the form of digital short tales. The purpose of this study is to characterize the critical thinking abilities of students when examining literary works in the format of digital short tales. It is intended that educators will be able to utilize the research's findings as a guide or point of reference when modifying learning models, techniques, or media, particularly in courses like *Drama and Prose* and *Introduction to Literature.*

Method

This research used quantitative descriptive methods. The aim of this research is to find out in depth about students' critical thinking abilities in analyzing literary works in the form of digital short stories. The population of this study consisted of fourth-semester students who had successfully completed the Introduction to Literature course and were enrolled in prose and poetry courses. At the same time, the sample size for this research study was limited to 33 students from class A, who served as research subjects. Purposive sampling, a technique for selecting research

subjects based on specific criteria with the goal of obtaining more representative data later on, was used to choose the subjects.

Six descriptive questions that were created based on critical thinking skill indicators from Facione (2015) and verified by professionals were used as part of the data collecting approach. It can be seen from Table 1 below:

Table 1. Critical Thinking Indicators from Facione (2015)

No	Indicator	Description	Sub indicator
1	Interpret	This skill is used to uncover and understand the broad meaning or significance of various situations, events, or data.	a. Categorize b. Explain meaning c. Classify meaning.
2	Analyze	This skill aims to identify and connect questions, concepts, or descriptions to describe beliefs, opinions, reasons, opinions, or judgments	a. Detect ideas b. Detecting arguments c. Analyze arguments.
3	Inferencing	Proficiency in identifying the components required to formulate plausible inferences, theorize and hypothesize, and take into account relevant data	a. Interesting conclusion b. Consider c. Proposing alternatives.
4	Evaluate	This skill aims to assess the truth of statements based on beliefs, responses, situations, or opinions	a. Assess claims b. Assess arguments.
5	Explaining	Aims to provide explanations regarding information, data or ideas based on concepts, evidence, criteria and methods.	a. State the results b. Allow the procedure c. Presenting arguments
6	Regulate yourself	This skill aims to observe cognitive activities through analysis and self-evaluation activities.	a. Self-assessment b. Self-correction

Data analysis was done in multiple steps. The first step involved analyzing the number of points obtained from the critical thinking ability test using the critical thinking assessment rubric as a guide. The assessment score ranged from 0 to 4, with 4 being the highest score (very good), 3 being the score that is good, 2 being the score that is fair, 1 being the score that is poor, and 0 being the score that is not at all. Each indicator is analyzed based on the assessment rubric.

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The second stage, adds up the scores and then calculates the percentage of the critical thinking ability test. The following formula is used to calculate the percentage value of students' critical thinking skills. (Razak, 2017).

$$Percentage = \frac{Total\ Score}{Maximum\ total\ score} X\ 100\%$$

The third stage, after getting the percentage of students' critical thinking abilities, then determining the criteria for the results of students' critical thinking abilities to be used is according to A. Setyowati in the Indonesian Journal of Physics Education 7 (2011).

Table 2. Critical Thinking Ability Criteria

Value Range	Criteria
81,25 - 100	Very Critical
62,50 - 81,25	Critical
43,75 - 62,50	Less Critical
25,00 - 43,75	Very Less Critical

Finding And Discussion

Finding

This research was conducted in the English Language Education Study Program. There were 33 of fourth semester students participated in this study. The purpose of this study is to characterize the critical thinking abilities of students when examining literary works in the format of digital short tales. Six essay questions that have been developed based on Facione (2015)'s verified markers of critical thinking skills make up the study instrument. The following are the results of the research:

Table 3. Test Results of Students' Critical Thinking Abilities

No	Respondent	Total Score	Presentage	Criteria
1	Subject 1	6	25,0	Very Less Critical
2	Subject 2	17	70,8	Critical
3	Subject 3	21	87,5	Very Critical
4	Subject 4	6	25,0	Very Less Critical
5	Subject 5	15	62,5	Less Critical
6	Subject 6	14	58,3	Less Critical
7	Subject 7	21	87,5	Very Critical
8	Subject 8	15	62,5	Less Critical

9	Subject 9	20	83,3	Very Critical
10	Subject 10	9	37,5	Very Less Critical
11	Subject 11	5	20,8	Very Less Critical
12	Subject 12	9	37,5	Very Less Critical
13	Subject 13	10	41,7	Very Less Critical
14	Subject 14	19	79,2	Critical
15	Subject 15	11	45,8	Less Critical
16	Subject 16	16	66,7	Critical
17	Subject 17	15	62,5	Less Critical
18	Subject 18	7	29,2	Very Less Critical
19	Subject 19	3	12,5	Very Less Critical
20	Subject 20	2	8,3	Very Less Critical
21	Subject 21	11	45,8	Less Critical
22	Subject 22	10	41,7	Very Less Critical
23	Subject 23	14	58,3	Less Critical
24	Subject 24	6	25,0	Very Less Critical
25	Subject 25	18	75,0	Critical
26	Subject 26	18	75,0	Critical
27	Subject 27	18	75,0	Critical
28	Subject 28	15	62,5	Less Critical
29	Subject 29	17	70,8	Critical
30	Subject 30	14	58,3	Less Critical
31	Subject 31	8	33,3	Very Less Critical
32	Subject 32	5	20,8	Very Less Critical
33	Subject 33	10	41,7	Very Less Critical

The data in table 3 above is the result of a test of students' critical thinking skills in analyzing literary works in the form of digital short stories. The scores obtained are based on the critical thinking assessment rubric, with a perfect or maximum score was 24. Based on the table above, it was found that there were 14 students who got a total score in the interval 2-10. Nine students got a total score in the 11-15 interval, and seven students got a total score in the 16-19 interval.

However, there were three students who got a high total score in the 20-21 interval. It shows that the 33 students who analyzed literary works had very varied critical thinking skills. There were only three students who were close to perfect scores, while there were two students who had the lowest scores, namely 2 and 3, which indicated that these students were unable to answer questions from all the indicators proposed. The presentation of each criterion for student critical thinking abilities can be seen in the diagram below:

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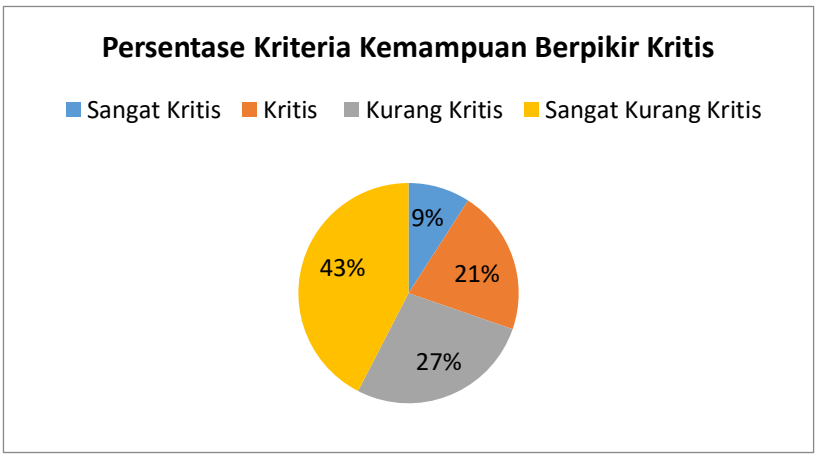

Figure 1. Percentage of Critical Thinking Ability Criteria

According to the image above, three students met the extremely important requirements, which are on value intervals 81, 25–100, with a percentage of 9%. Thinking criteria of *critically* that is on value intervals 62,5 -81,25, there were seven students with a percentage of 21%. A number of nine students were in the thinking criteria *less critical* or on value intervals 43,75-62,50, with a percentage of 27%. Lastly, on thinking criteria *very less critical* that is on value intervals 25,00-43,75, as many as 14 students with a percentage of 43%. The calculation results based on data on students' critical thinking abilities can be seen in the table below:

Table 4. Data Results on Students' Critical Thinking Ability

Min	Max	Average	Standard Deviation	Modus	Median
8,3	87,5	51,1	22,8	62,5	58,3

Table 4 above shows that, among the 33 students who took part in the analysis of literary works presented as digital short tales, the lowest score was 8.3, while the best score was 87.5. The mode of the students' critical thinking ability data wass 62.5 and the median was 58.3. The overall average score obtained was 51.1, so it can be seen that students' critical thinking abilities are included in the criteria less critical.

It is the evident from the data analysis of critical thinking abilities in the study of literary works in the form of digital short tales that the self-regulation indicator predominates or is better than other indicators. The large number of students who receive a score of 4 indicates that pupils are capable of providing accurate and comprehensive answers to questions that are backed by arguments. Meanwhile, on the other hand, the explaining indicator got the lowest percentage of students with a score of 4. In other words, students were not able to assess the truth of statements based on beliefs, responses, situations or opinions.

On the inferencing indicator, the highest percentage of students received a score of 0, which indicates that students have not been able to identify the elements needed to draw reasonable conclusions, make conjectures and hypotheses, and consider the information in question. Apart from that, the explaining indicator also has the highest percentage of students getting a score of 0, which of course shows that many students are not able to provide explanations regarding information, data or ideas based on concepts, evidence, criteria and methods. For more details, it can be depicted in the graph below:

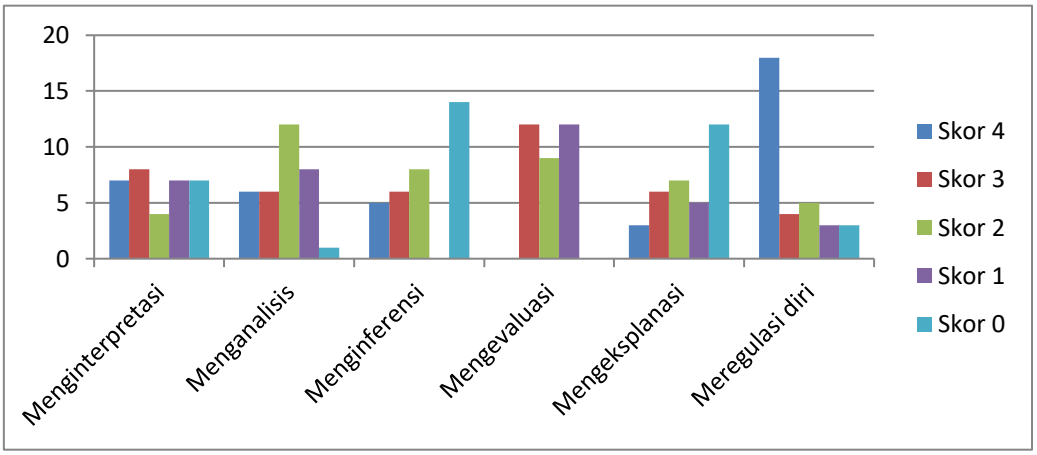

Figure 2. Presentation of Student Scores for Each Critical Thinking Indicator

Discussion

Students in the English Education Study Programs are classified as having weaker critical thinking abilities when it comes to evaluating literary works that take the shape of digital short tales. The average score of 51.1 that was attained demonstrates this. According to the proportion of students that meet the critical thinking ability criterion, 21% of students think critically, 27% think less critically, and 43% think very less critically. Of the students, 9% meet the extremely critical thinking requirement.

Based on Faccione (2015), there are six components of critical thinking skills that are used to gauge one's capacity for critical thought: interpretation, analysis, evaluation, inference, explanation, and self-regulation. Based on the data analysis findings, it was discovered that students' critical thinking skills were more prominent or better while evaluating literary works in the form of digital short tales, namely the indication of self-regulation. It indicates that students can articulate the conclusions of their thought processes, reason from facts, ideas, and a methodical approach while maintaining a fair balance, and interpret. Due to the inference indicator, critical thinking abilities are still considered to be inadequate. It demonstrates how many students still lack the skills to pay attention to pertinent

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information, minimize the effects of judgments, beliefs, opinions, concepts, descriptions, and other forms of representation, and identify and choose the elements required to reach a reasonable conclusion or formulate a hypothesis.

Students' critical thinking skills while evaluating literary works indicate that their critical reading is low quality. In the research, Restuningsih, et al., (2017) revealed that Reading activities are complex processes rather than simple mechanical ones, and reading is a thinking and reasoning activity that involves activities like recognizing, interpreting, assessing, reasoning, and even solving different problems so that the reasoning power becomes very dominant. Reading skills are an important part of developing thinking skills. Therefore, to achieve critical reading skills, critical thinking skills are needed in students because in understanding reading, critical thinking skills will also determine the extent of a person's understanding in understanding a concept, story, or scientific dialectic from reading material.

The same thing was also conveyed by Doang, et al. (2022) that reading culture can have an impact on critical thinking skills because thinking skills come from reading material, the more reading material, the more knowledge students have so that students' thinking abilities will develop more. Sariyem (2016) from the results of his research stated that the higher a student's critical thinking ability, the higher their critical reading ability. Therefore, Muhammad, et al (2019) stated that the influence of reading culture on critical thinking skills shows a moderate relationship and has a positive pattern, meaning that the higher the reading culture, the greater the critical thinking ability.

In actuality, reading interest among Indonesians is still relatively low. According to UNESCO's research, just 0.001% of Indonesians are interested in reading, which is quite concerning. This indicates that just one Indonesian out of every 1,000 is a voracious reader. kids' critical reading skills and reading interest are significantly correlated; the more interested kids are in reading, the more proficient they are in critical reading. According to Anisa et al.'s research from 2021, students' and society's disinterest in reading will eventually have an impact on their critical thinking abilities.

According to the justification provided, pupils need to be able to read and analyze literary works in order to develop their critical thinking abilities. Literary works are an intriguing medium to read, according to Chamamah in Diana (2016), since when someone reads a literary work for enjoyment, they will react to it or evaluate it critically. According to Ramadhana et al. (2022), students also employ critical thinking abilities inadvertently when they analyze literary works. Specifically, they do this by approaching the analysis of the work from a perspective that informs their solution of the problem or helps them reach a conclusion.

To attract students' interest in reading, it is necessary to use digital literature, one of which is digital short stories which can be accessed and enjoyed anywhere. Pratomo, et al (2024) stated that presenting interesting reading material will increase students' interest in reading. One way that can be done to attract students' interest in reading is by presenting appropriate media or reading materials. One research related to the use of a digital platform (Wattpad) conducted by Pratiwi and Dewi (2023) shows that the use of *Wattpad* as a digital literacy medium it has a positive impact in increasing the interest in reading and writing among students. By helping develop writing skills, as well as playing an important role in an educational context, *Wattpad*, as a digital literacy medium, really helps increase students' interest in reading and their creativity.

With the existence of various digital literary platforms, such as Kompas short stories on the site https://cerpenkompas.wordpress.com/, *wattpadd, joylada, fizzo, webtoon,* etc., it is hoped that it can be used by teachers, especially in literature learning, to attract students' interest in reading literary works which have an impact on critical thinking skills. Wiguna (2024) states that literary interest refers to interest in literary works. In this case it can be called literary appreciation. Literary appreciation is an activity of studying literary works seriously in such a way that it can develop understanding, appreciation, critical sensitivity and good feelings towards a literary work. As an educator, teachers should provide understanding and training in literary appreciation to students, so that they not only understand conceptually but cannot implement and apply it.

Conclusion

The critical thinking skills of sixth semester students of the English Education Study Program in analyzing literary works in the form of digital short stories are categorized *less critical*. It is shown from the research results that 9% of students were categorized as thinking *very critically*, 21% of students were categorized *critical thinking*, 27% of students were categorized as thinking *less critically*, and 43% of students were categorized as thinking *very less critically*. With an average value of 51.1 or in the category *less critical*.

Of the six indicators of critical thinking skills tested, self-regulation is the indicator that is most mastered by students, while the indicator that is most difficult to master is the inferencing indicator. It shows that in order to improve students' critical thinking skills in analyzing literary works, students must improve their critical reading skills, by getting used to reading and analyzing literary works. Also, to increase students' interest in reading, reading material that is interesting and can be accessed easily, such as digital short stories, is needed.

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References

Anisa, A. R., Ipungkarti, A. A., & Saffanah, K. N. (2021). Pengaruh kurangnya literasi serta kemampuan dalam berpikir kritis yang masih rendah dalam pendidikan di Indonesia. In Current Research in Education: Conference Series Journal (Vol. 1, No. 1, pp. 1-12).

Ayuningtiyas, R. (2024). Mengembangkan Kemampuan Berpikir Kritis Siswa dalam Menganalisis Drama Melalui Pendekatan Kontekstual Kelas Xi-1 Sman 6 Surabaya. Cendikia: Jurnal Pendidikan dan Pengajaran, 2(6), 228-233.

Bani, M., & Masruddin, M. (2021). Development of Android-based harmonic oscillation pocket book for senior high school students. JOTSE: Journal of Technology and Science Education, 11(1), 93-103.

Diana, Ani. 2016. Analisis Konflik Batin Tokoh Utama Dalam Novel Wanita Dilautan Sunyi Karya Nurul Asmayani. Dalam Jurnal Pesona. Vol. 2. No.1(Halaman 43-52). Pringsewu Lampung. STKIP Muhammadiyah

Doang, W., Gunayasa, I. B. K., & Setiawan, H. (2022). Hubungan Budaya Membaca dengan Keterampilan Berpikir Kritis Siswa Kelas V di SDN 3 Lenek Daya Tahun 2020/2021. Jurnal Ilmiah Profesi Pendidikan, 7(2b), 579–584. https://doi.org/10.29303/jipp.v7i2b.538

Facione, P. A. (2015). Critical Thinking: What It Is and Why It Counts. Insight Assessment.

Faturohman, D. R. (2012). Pengembangan Model Bahan Ajar Strategi Pembelajaran Konflik Kognitif untuk Meningkatkan Kemampuan Berpikir Kritis Matematik Siswa SMP (Doctoral dissertation, Universitas Pendidikan Indonesia).

Fitriani, Y., & Aziz, I. A. (2019, March). Literasi Era Revolusi Industri 4.0. In Prosiding Seminar Nasional Bahasa dan Sastra Indonesia (SENASBASA) (Vol. 3, No. 1).

Galbreath, J. (1999). Preparing The 21st Century Worker: The Link Between Computer-Based Technology and Future Skill Sets. Educational Technology, 39(6), 14–22. Http://Www.Jstor.Org/Stable/44428565

Muhammad, E. B., Sholichah, A. S., & Aziz, J. A. (2019). Pengaruh budaya membaca terhadap kemampuan berpikir kritis siswa di SMP Islam Al Syukro Universal Ciputat tahun 2019. Andragogi: Jurnal Pendidikan Islam Dan Manajemen Pendidikan Islam, 1(2), 332-343.

Poetri, M. S., Tryana, T., Prayuana, R., Andriani, D. I., & Rifai, I. (2023). Objectification in Moxie Film by Amy Poehler. Jurnal Sinestesia, 13(2), 882-902.

Pratiwi, S., & Dewi, T. U. (2023). Pemanfaatan Wattpad Sebagai Media Literasi Digital. Khazanah Pendidikan, 17(2), 229-236.

Pratomo, N. W., Hikmat, A., & Safi'i, I. (2024). Pemanfaatan Media Digital Joylada dalam Pembelajaran Sastra Populer. Jurnal Onoma: Pendidikan, Bahasa, dan Sastra, 10(1), 765-772.

Ramadhana, R. N., Elyani, E. P., & Muâ, F. (2022). Kemampuan Berpikir Kritis Siswa

Melalui Analisis Sastra. Stilistika: Jurnal Pendidikan Bahasa dan Sastra, 15(2), 279-292.

Razak, F. 2017. Hubungan kemampuan awal terhadap kemampuan berpikir kritis matematika pada siswa kelas VII SMP Pesantren Immim Putri Minasatene. Moshrafa. 6(1): 117-128. https://doi.org/10.31980/mosharafa.v6i1.299

Restuningsih, M. A., Nyoman, D., & Sudiana, N. (2017). Kemampuan membaca kritis ditinjau dari kemampuan berpikir kritis dan minat membaca pada siswa kelas v sd kristen harapan denpasar. PENDASI: Jurnal Pendidikan Dasar Indonesia, 1(1), 45-54.

Sariyem. 2016. "Kemampuan Berpikir Kritis dan Minat Baca dengan Kemampuan Membaca Kritis Siswa Kelas Tinggi SD negeri di Kabupaten Bogor". Jurnal Pendidikan Dasar. Volume 7, Edisi 2,

Sephiana, R. S., Muqodas, I., & Justicia, R. (2023, February). Analisis Buku Cerita Digital Sebagai Media Penanaman Nilai Moral Spiritual Anak Usia Dini. In Prosiding Seminar Nasional PGPAUD UPI Kampus Purwakarta (Vol. 2, No. 1, pp. 192-196).

Setyowati, A., & Subali, B. (2011). Implementasi pendekatan konflik kognitif dalam pembelajaran fisika untuk menumbuhkan kemampuan berpikir kritis siswa SMP kelas VIII. Jurnal Pendidikan Fisika Indonesia, 7(2).

Syafitri, E., Armanto, D., & Rahmadani, E. (2021). Aksiologi kemampuan berpikir kritis (kajian tentang manfaat dari kemampuan berpikir kritis). Journal of Science and Social Research, 4(3), 320-325.

Sugiyono. (2013). Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, dan R & D). Bandung: Alfabeta.

Walker, P., & Finney, N. (2006). Skill Development and Critical Thinking in Higher Education. Teaching In Higher Education, 4(4), 531–547. Https://Doi.Org/10.1080/1356251990040409

Wicaksono, A. G. (2022). Potensi Pemberdayaan Keterampilan Berpikir Kritis Mahasiswa Calon Guru Sekolah Dasar Melalui Model Discovery Learning. Jurnal Basicedu, 6(1), 1398-1407.

Wiguna, I. W. D. P. (2024). Sastra Digital Sebagai Inovasi Pembelajaran Sastra di Era Society 5.0. In Prosiding Sandibasa Seminar Nasional Pendidikan Bahasa dan Sastra Indonesia (Vol. 2, No. 1, pp. 198-208).

Wijaya, E. Y., Sudjimat, D. A., & Nyoto, A. (2016). Transformasi pendidikan abad 21 sebagai tuntutan pengembangan sumber daya manusia di era global. In Prosiding Seminar Nasional Pendidikan Matematika (Vol. 1, No. 26, pp. 263-278).