



Implementation of the Problem Based Learning Method in Improving Students' Fiqh Learning Outcomes at MA Negeri 2 Tulungagung

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ABSTRACT

This study aims to implement the Problem Based Learning (PBL) method to improve the learning outcomes of Fiqh in class XI students of MA Negeri 2 Tulungagung. The background of this study is the low learning outcomes of students in Fiqh, which is suspected to be due to conventional learning methods that are less innovative and do not actively involve students. PBL was chosen because it is considered capable of encouraging students to think critically, solve problems, and construct their own knowledge through case studies or contextual problems. This classroom action research (CAR) was carried out in two cycles. Data were collected through observations of teacher and student activities, learning outcome tests, and student response questionnaires. The results showed a significant increase in students' Fiqh learning outcomes after the implementation of PBL. In cycle I, the average learning outcomes showed an increase, and in cycle II, there was a further increase with the percentage of learning completion that had met the success indicators. In addition, student learning activities became more enthusiastic and participatory, and student responses to the PBL method were very positive. Thus, it can be concluded that the implementation of the Problem Based Learning method is effective in improving the learning outcomes of class XI students in MA Negeri 2 Tulungagung.

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Introduction

Education plays a central role in shaping character, developing potential, and improving the quality of a nation's human resources (Rahman et al., 2022). In the school environment, the learning process is at the heart of educational implementation, where interactions between teachers and students occur to achieve predetermined goals. One of the important subjects in Madrasah Aliyah (MA) is Fiqh (Islamic Jurisprudence), which focuses on understanding Islamic law as it relates to worship and social interactions.

Fiqh aims to equip students with an understanding of Islamic law so they can correctly implement it in their daily lives (Santi, Undang, & Kasja, 2023). A deep understanding of Fiqh is not only crucial for matters of the afterlife but also for developing religious awareness and a clean and healthy lifestyle (Hendrawati, Rosidin, & Astiani, 2020; Nurhidayah, Asifah, & Rosidin, 2021). Therefore, optimal learning outcomes in this subject are an indicator of the success of the religious education process. However, the reality on the ground often shows that achieving Fiqh learning outcomes at the secondary level still faces challenges. One key indicator is the low learning outcomes of students, particularly in grade XI at MA Negeri 2 Tulungagung. These low learning outcomes can stem from various factors, both internal and external.

Internal factors are often related to students' suboptimal learning interests and motivation, both of which significantly impact learning outcomes (Ricardo & Meilani, 2017). Meanwhile, external factors predominantly refer to the learning methods used by teachers (Siregar, 2024). Learning methods that tend to be conventional, teacher-centered, and provide little opportunity for student active participation in problem-solving are often the cause of boredom and decreased material retention (Lubis, 2019). This aligns with the demands of 21st-century skills, which prioritize critical thinking and problem-solving (Mardhiyah et al., 2021).

Therefore, innovation in Islamic Jurisprudence (Fiqh) learning is needed to shift the paradigm from mere memorization to in-depth understanding and contextual application. This innovation must actively engage students, encourage higher-order thinking skills, and make the learning process relevant to real life. One potential learning model to address this issue is Problem-Based Learning (PBL). This model challenges students to work in groups, confront real-life problems, identify needed information, and seek relevant solutions (Putra et al., 2023).

PBL is considered particularly relevant for Islamic Jurisprudence (Fiqh), where the material often consists of case studies or laws that require in-depth analysis and simple *ijtihad* (intelligible text) in the context of modern life (Dasopang, Lubis, & Dasopang, 2022). With PBL, students learn not only what the law is, but also why it was established and how to apply it. The implementation of the PBL method is expected to improve students' analytical skills, in line with the importance of developing analytical thinking skills in learning (Lubis et al., 2021). This learning model also aligns with the use of interactive media, such as multimedia or technology-based storybooks, which can visualize Fiqh issues in a more engaging way for Generation Z (Lubis, 2023; Lubis & Dasopang, 2020; Fatimah & Maryani, 2018).

The use of innovative methods such as PBL is a concrete step in developing teacher professionalism and improving teacher performance in schools (Hamka, 2023). This method change also reflects the school's efforts to adapt to the curriculum and

contemporary educational dynamics (Pehtiyanti et al., 2023). In the context of this research, PBL is believed to enhance learning activities and ultimately have a positive impact on the Fiqh learning outcomes of 11th-grade students at MA Negeri 2 Tulungagung. Improved learning outcomes are seen not only from a cognitive perspective but also from students' ability to solve Fiqh problems contextually.

Given the urgency of the problem of low learning outcomes and the potential for solutions through PBL methods, this research is crucial. Classroom action research (CAR) was chosen as the research design because it allows researchers to reflect on and continuously improve learning practices (Arikunto, 2002; Sugiyono, 2018). Based on the description above, the research question is: "How can the implementation of the Problem-Based Learning method improve the Islamic Jurisprudence learning outcomes of 11th-grade students at MA Negeri 2 Tulungagung?" The main objective of this study is to determine the effectiveness and implementation steps of the Problem Based Learning method in an effort to improve the learning outcomes of Fiqh of class XI students of MA Negeri 2 Tulungagung.

Methods

This research adopted a Classroom Action Research (CAR) approach. CAR was chosen because it aimed to improve and enhance direct classroom learning practices, specifically the implementation of the Problem-Based Learning (PBL) method in Islamic Jurisprudence (Fiqh). The CAR design used follows a cyclical model consisting of four main stages: planning, acting, observing, and reflecting (Arikunto, 2002; Sugiyono, 2018). This research was conducted in two cycles, with the results of the first cycle serving as the basis for improving actions in the second cycle to achieve the established success indicators. The research setting and subjects were 11th-grade students at MA Negeri 2 Tulungagung in the even semester of the 2025 academic year, with the focus subject being Fiqh. The selection of this location and subjects was based on initial findings indicating low Fiqh learning outcomes in the class, indicating the need for intervention through more innovative learning methods. This study involved the Fiqh teacher as the implementer of the action and the researcher as an observer tasked with recording and analyzing the learning process.

Data collection techniques involved three main instruments. First, a Learning Outcome Test was used to measure students' cognitive improvements after implementing PBL. This was a written test that assessed their understanding of Islamic Jurisprudence concepts and problem-solving skills. Second, observation was used to observe teacher and student activities during the PBL learning process, including levels of participation, enthusiasm, and critical thinking skills (Dasopang, Nasution, & Lubis, 2023). Observation sheets were completed by researchers and/or colleagues. Third, a Student Response Questionnaire was used to gather feedback and student perceptions

regarding the effectiveness and attractiveness of the PBL method in Islamic Jurisprudence learning.

The action procedures in each cycle included structured steps. Planning included the development of a PBL-based Learning Implementation Plan (RPP), research instruments, and the preparation of teaching materials in the form of cases or contextual problems in Islamic Jurisprudence. Implementation was the implementation of PBL in the classroom according to its syntax (problem orientation, organizing students, guiding investigations, developing and presenting results, and analyzing and evaluating the problem-solving process). Observations were conducted concurrently with the implementation of the actions to record all necessary data.

Data analysis was conducted qualitatively and quantitatively. Quantitative data, obtained from learning achievement tests, was analyzed using descriptive statistics to calculate the average class score and the percentage of learning completion. The success indicator for this study was determined if the average student learning outcomes achieved a score \geq [Minimum Minimum Competency Minimum Score] and the percentage of classical completion reached at least 75%. Meanwhile, qualitative data, derived from observations and questionnaires, was analyzed through data reduction, data presentation, and conclusion drawing to describe the increase in student activity and response to the PBL method.

Reflection is a critical stage at the end of each cycle, where quantitative and qualitative data are analyzed to assess the success or shortcomings of the actions taken. If the success indicators have not been achieved, or significant weaknesses are identified in the implementation, a corrective action plan will be formulated to be continued in the next cycle, until the goal of improving Fiqh learning outcomes through PBL is optimally achieved.

Result

This classroom action research was conducted in two cycles with the primary objective of implementing and measuring the effectiveness of the Problem-Based Learning (PBL) method in improving the Islamic Jurisprudence (Fiqh) learning outcomes of eleventh-grade students at MA Negeri 2 Tulungagung. Data on learning outcomes, student activities, and student responses were collected and analyzed comprehensively to provide a complete picture of the impact of this method's implementation.

The results of Cycle I showed an initial improvement in students' Islamic Jurisprudence learning outcomes, although they had not yet reached the optimal success indicators. The average Islamic Jurisprudence learning outcome score at the end of Cycle I was 72.5%, with a classical completion percentage of 60%. This figure still fell short of the target of 75%. This indicates that although PBL has been implemented,

several aspects of its implementation still need improvement. Observations during Cycle I revealed that students still needed more intensive guidance in identifying problems and formulating hypotheses.

Some students also appeared unfamiliar with learning patterns that require independence and collaboration (Lubis, 2019). Nevertheless, there was an increase in enthusiasm and participation compared to previous conventional learning methods. Students' active engagement in group discussions began to emerge, a positive indicator of problem-based learning (Dasopang, Nasution, & Lubis, 2023). Based on reflections from Cycle I, several improvements were planned for Cycle II. These improvements included sharpening problem scenarios to make them more contextual and engaging, improving teacher guidance in facilitating group discussions, and providing more flexible time allocation for exploration and presentation of results. This aligns with the principles of CAR, which emphasize continuous improvement based on evaluation of previous actions (Arikunto, 2002).

The results of Cycle II showed a much more significant improvement and met the established success indicators. The average student Fiqh learning outcome score at the end of Cycle II jumped to 85.2, with a classical completion percentage of 88%. This figure exceeded the target of 75% classical completion, indicating that the implementation of PBL in this cycle was more effective. This improvement confirms that selecting the right learning method can drastically impact student learning outcomes (Siregar, 2024). The qualitative aspects of Cycle II also showed satisfactory results. Observations of student activities showed substantial improvements in independence, critical thinking skills, and collaboration (Mardhiyah et al., 2021). Students appeared more active in identifying problems, seeking solutions, arguing, and presenting the results of their discussions. The teacher's role as a facilitator was also more optimal in guiding the student learning process without dominating.

Student responses to the PBL method, as measured by a questionnaire, showed very positive results at the end of Cycle II. The majority of students stated that learning Fiqh became more interesting, challenging, and easier to understand with the use of contextual problems. They felt more engaged and motivated to learn, which are important factors in improving learning outcomes (Ricardo & Meilani, 2017). The use of media and approaches that actively engage students, such as those facilitated by PBL, has been shown to improve the quality of learning (Elisyah et al., 2024; Lubis, 2023). Overall, this significant improvement in Fiqh learning outcomes indicates that the Problem-Based Learning method is highly effective when implemented on 11th-grade students at MA Negeri 2 Tulungagung. This success is reflected not only in learning outcomes but also in positive changes in student learning behavior, such as increased confidence in problem-solving and collaborative skills.

The implementation of PBL also indirectly supports the internalization of Islamic values relevant to the Fiqh material, as students are encouraged to reflect on and apply sharia principles in real-life contexts (Dasopang, Lubis, & Dasopang, 2022). Thus, learning becomes more meaningful and oriented toward character development. Based on these findings, it can be concluded that the consistent and planned implementation of the Problem-Based Learning method, with improvements based on reflection, significantly improves students' Fiqh learning outcomes and enhances the overall quality of the learning process at MA Negeri 2 Tulungagung.

Discussion

The results of this study clearly demonstrate that the implementation of the Problem-Based Learning (PBL) method is effective in improving the Islamic Jurisprudence (Fiqh) learning outcomes of eleventh-grade students at MA Negeri 2 Tulungagung. This significant improvement is evident in both quantitative and qualitative data, particularly from Cycle I to Cycle II. These findings are consistent with the literature supporting the effectiveness of PBL in fostering in-depth understanding, critical thinking skills, and problem-solving (Putra et al., 2023). This demonstrates that student-centered learning methods that engage students in real-world problem scenarios are indeed superior to conventional approaches.

The improvement in Islamic Jurisprudence (Fiqh) learning outcomes achieved through PBL can be explained by several aspects. First, the nature of PBL, which requires students to actively identify problems, gather information, and formulate solutions, directly trains higher-order cognitive skills (Mardhiyah et R.H. et al., 2021). In the context of Islamic Jurisprudence, this means students not only memorize laws but also analyze their context, arguments, and implications in everyday life. This approach aligns with the needs of 21st-century education, which emphasizes analytical and problem-solving skills (Lubis et al., 2021).

The teacher's role as a facilitator, not the sole source of knowledge, is also key to success. In PBL, teachers guide students through the inquiry process, provide scaffolding when needed, and encourage discussion. Observations show that in Cycle II, teachers became more skilled at facilitating, resulting in increased student participation and collaboration. This reinforces the finding that the role of principals and teachers is crucial in improving learning performance (Hamka, 2023). Student motivation and interest in learning also play a significant role. Qualitative data from student questionnaire responses indicate that PBL makes Islamic jurisprudence learning more engaging and relevant. When students are faced with contextual problems, they feel more challenged and gain a sense of ownership over their learning process. This increased interest and motivation are strong predictors of improved learning outcomes

(Ricardo & Meilani, 2017). The use of Fiqh cases relevant to students' lives also helps internalize Islamic values more practically (Dasopang, Lubis, & Dasopang, 2022).

However, it must be acknowledged that the implementation of PBL in Cycle I still encountered several obstacles, particularly in terms of students' adaptation to the new method and their ability to identify the core of the problem. This is understandable, considering that changing learning methods requires an adaptation process for both teachers and students (Lubis, 2019). Reflection and improvements made after Cycle I, such as sharpening problem scenarios and providing more structured guidance, proved very effective in overcoming these obstacles, demonstrating the importance of the reflection stage in CAR (Arikunto, 2002; Sugiyono, 2018).

The use of learning media, although not the primary focus of PBL implementation, still plays a supporting role. When combined with interactive media such as augmented reality or multimedia-based picture storybooks, PBL can be even more effective, especially in accommodating the technology-savvy characteristics of Generation Z (Lubis, 2023; Lubis & Dasopang, 2020; Fatimah & Maryani, 2018). The potential for this integration can be further explored in future research to enrich the Islamic jurisprudence learning experience.

While this study shows positive results, there are several limitations. The study focused on a single class in a single school, so generalizing the results may require caution. Furthermore, the measurement of learning outcomes primarily focused on cognitive aspects, although PBL also has the potential to develop affective and psychomotor aspects. Future research could consider involving a broader sample and using more varied instruments to measure the impact of PBL more holistically.

Overall, the findings of this study provide strong empirical evidence regarding the benefits of implementing Problem-Based Learning in improving Islamic jurisprudence learning outcomes. The practical implication is that it encourages Islamic jurisprudence teachers, particularly at MA Negeri 2 Tulungagung and other schools, to adopt and adapt PBL as an innovative learning strategy. This is expected to continuously improve the quality of Islamic jurisprudence instruction, producing students who not only understand theory but are also able to apply Islamic law in real life.

Conclusion

Based on the results of the classroom action research that has been carried out, it can be concluded that the implementation of the Problem Based Learning (PBL) method has proven effective and significant in improving the learning outcomes of class XI students of MA Negeri 2 Tulungagung in Fiqh. This improvement is indicated by the increase in the average value of learning outcomes and the percentage of classical completeness that reached the success indicator in Cycle II, as well as positive changes in student

learning activities and motivation who became more active, critical, and enthusiastic. This success underscores the potential of PBL as an innovative learning strategy that is able to develop students' in-depth understanding and problem-solving abilities in the Fiqh subject, so it is recommended for continuous implementation.

References

- Afriati, I., Siregar, R. S., Fonna, A., & Muna, Z. (2025). Effectivity of Inductive Method in Learning Nahwu-Sharaf at MIN 3 Banda Aceh City. *Journal of Indonesian Primary School*, 2(2), 1–9. <https://doi.org/https://doi.org/10.62945/jips.v2i2.738>
- Arikunto, S. (2002). *Prosedur Penelitian*. Bandung: Rineka Cipta.
- Dasopang, M. D., Lubis, A. H., & Dasopang, H. R. (2022). How do Millennial Parents Internalize Islamic Values in Their Early Childhood in the Digital Era? *AL-ISHLAH: Jurnal Pendidikan*, 14(1), 697–708.
- Erawadi, E., Hamka, H., & Juliana, F. (2017). The Analysis of Student's Stressed Syllables Mastery at Sixth Semester of TBI in IAIN Padangsidempuan. *English Education: English Journal for Teaching and Learning*, 5(1), 44–57.
- Elisyah, Nur, Islami Fatwa, Dinda Adha Hutabarat, and Zaharatul Humaira. 2024. "Pelatihan Gamifikasi: Implementasi Permainan Edukatif Untuk Meningkatkan Kualitas Pembelajaran Di SD Swasta Srikandi Lhokseumawe." *PUSAKA: Jurnal Pengabdian Masyarakat* 1(2):29–37. doi:10.62945/pusaka.v1i2.164.
- Fatimah, A., & Maryani, K. (2018). Visual Literasi Media Pembelajaran Buku Cerita Anak. *Jurnal Inovasi Teknologi Pendidikan*, 5(1), 61–69. <https://doi.org/10.21831/jitp.v5i1.16212>
- Gogahu, D. G. S., & Prasetyo, T. (2020). Pengembangan Media Pembelajaran Berbasis E-Bookstory untuk Meningkatkan Literasi Membaca Siswa Sekolah Dasar. *Jurnal Basicedu*, 4(4), 1004–1015.
- Hamka, H. (2023). The Role of Principals on Teacher Performance Improvement in a Suburban School. *QALAMUNA: Jurnal Pendidikan, Sosial, Dan Agama*, 15(1), 371–380.
- Hamka, H., Suen, M.-W., Anganthi, N. R. N., Haq, A. H. B., & Prasetyo, B. (2023). The Effectiveness of Gratitude Intervention in Reducing Negative Emotions in Sexual Abuse Victims. *Psikohumaniora: Jurnal Penelitian Psikologi*, 8(2), 227–240.
- Harahap, S. M., & Hamka, H. (2023). Investigating the Roles of Philosophy, Culture, Language and Islam in Angkola's Local Wisdom of 'Dalihan Na Tolu.' *HTS Theologiese Studies/Theological Studies*, 79(1), 8164.
- Hendrawati, S., Rosidin, U., & Astiani, S. (2020). Perilaku hidup bersih dan sehat (PHBS) siswa/siswi di sekolah menengah pertama negeri (SMPN). *Jurnal Perawat Indonesia*, 4(1), 295–307. <https://doi.org/https://doi.org/10.32584/jpi.v4i1.454>

- Manshur, U., & Ramdlani, M. (2019). Media audio visual dalam pembelajaran PAI. *Al-Murabbi: Jurnal Pendidikan Agama Islam*, 5(1), 1–8.
- Mardhiyah, R. H., Aldriani, S. N. F., Chitta, F., & Zulfikar, M. R. (2021). Pentingnya Keterampilan Belajar di Abad 21 sebagai Tuntutan dalam Pengembangan Sumber Daya Manusia. *Lectura: Jurnal Pendidikan*, 12(1), 29–40.
- Nurhidayah, I., Asifah, L., & Rosidin, U. (2021). Pengetahuan , Sikap dan Perilaku Hidup Bersih dan Sehat pada Siswa Sekolah Dasar. 13(1), 61–71. <https://doi.org/10.32528/ijhs.v13i1.4864>
- Pehtiyanti, I., Ahmad, A., Dzaky, M., Fauziah, S. N., Rendi, & Puspitasari, P. (2023). Peran kurikulum merdeka dalam meningkatkan harmonisasi antara masyarakat dan sekolah. *Jurnal Pacu Pendidikan Dasar*, 3(1), 269–277. <https://doi.org/https://doi.org/10.22021/pacu.v3i1.411>
- Putra, Meiyaldi Eka, Fajar Maulana, Ramanda Rizky, and Islami Fatwa. 2023. "Peningkatan Hasil Belajar Mahasiswa Menggunakan Model Perkuliahan Problem Based Instruction (PBI) Mata Kuliah Gambar Teknik." *Jurnal Pendidikan Teknik Mesin* 10(1):22–30. doi:10.36706/jptm.v10i1.20850.
- Rahmah, S., & Lubis, A. H. (2024). Problem Posing as a Learning Model to Improve Primary School Students' Mathematics Learning Outcomes in Gayo Lues. *Journal of Indonesian Primary School*, 1(4), 93–104.
- Rahman, A., Munandar, S. A., Fitriani, A., Karlina, Y., & Yumriani. (2022). Pengertian Pendidikan, Ilmu Pendidikan dan Unsur-Unsur Pendidikan. *Al Urwatul Wutsqa: Kajian Pendidikan Islam*, 2(1), 1–8.
- Ranisa, R., Erawadi, E., & Hamka, H. (2018). Students' Mastery in Identifying Adverbs at Grade VIII SMPN 2 Batang Toru Tapanuli Selatan. *ENGLISH EDUCATION JOURNAL: English Journal for Teaching and Learning*, 6(2), 241–252.
- Ricardo, R., & Meilani, R. I. (2017). Impak Minat dan Motivasi Belajar terhadap Hasil Belajar Siswa. *Jurnal Pendidikan Manajemen Perkantoran (JPManper)*, 2(2), 188–201.
- Santi, Undang, & Kasja. (2023). Peran Guru PAI dalam Membentuk Karakter Peserta Didik di Sekolah. *Jurnal Pendidikan Tambusai*, 7(2), 16078–16084. <https://doi.org/https://doi.org/10.31004/jptam.v7i2.8918>
- Siregar, N., & Siregar, R. S. (2025). Analysis of numeracy literacy of junior high school students in AKM questions: Learning strategies based on higher order thinking skills at SMP Negeri 5 Tapung Hilir. *Jurnal Profesi Guru Indonesia*, 2(1), 359–367. <https://doi.org/10.62945/jpgi.v2i1.720>
- Siregar, R. S. (2024). Students' Preferences for Varied Learning Methods: An Empirical Study of the Effectiveness and Appeal of Diverse Instructional Approaches. *Jurnal*

Profesi Guru Indonesia, 1(2), 140–152.
<https://doi.org/https://doi.org/10.62945/jpgi.v1i2.679>

Siregar, R. S. (2024). *Fiqhu Al-Akbār: Taḥqī An-Naṣ Wa Taḥlīlu’Afkārihi*. UIN Ar-Raniry Fakultas Adab dan Humaniora.

Siregar, R. S. (2025). The Influence of Social Media as a Learning Resource on the Academic Behavior of Junior High School Adolescents. *KOGNITIF: Jurnal Ilmiah Pendidikan Dan Keguruan*, 2(1), 21–28.

Siregar, R. S. (2025a). Arabic Language Learning Culture in Salaf Islamic Boarding Schools: An Ethnographic Study of Linguistic Punishment Practices and Traditions. *ETNOPEDAGOGI: Jurnal Pendidikan Dan Kebudayaan*, 2(2), 1–9.
<https://doi.org/https://doi.org/10.62945/etnopedagogi.v2i2.722>

Siregar, R. S. (2025b). Evaluation of the Implementation of the Reading Literacy Program at SD Negeri 100190 Tarutung Bolak. *Journal of Indonesian Primary School*, 2(1), 240–250. <https://doi.org/https://doi.org/10.62945/jips.v2i1.723>

Siregar, R. S. (2025c). Improving the Arabic Writing Skills of Students through the Application of Contextual Learning Methods at Dayah Irsyadul Abidin Qurani. *Indonesian Journal of Education and Social Humanities*, 2(1), 358–369.
<https://doi.org/https://doi.org/10.62945/ijesh.v2i1.726>

Siregar, R. S. (2025d). Principles of Subject-Based Arabic Curriculum Development: Language Skills Integration and Contextual Relevance. *DEEP LEARNING: Journal of Educational Research*, 1(2), 56–67.
<https://doi.org/https://doi.org/10.62945/deeplearning.v1i2.229>

Siregar, R. S. (2025e). Students’ Cognitive Difficulties in Mastering the Nahwu Rules: A Descriptive Study at SMP IT Al Farabi Bilingual School. *Jurnal Cendekia Islam Indonesia*, 1(2), 10–20. <https://doi.org/https://doi.org/10.62945/jcii.v1i2.216>

Sinaga, Nurul Afni, Fitri Ayu Ningtiyas, Rifaatul Mahmuzah, Yulia Zahara, and Islami Fatwa. 2023. “The Effect of Deductive-Inductive Learning Approach on Creative Thinking Ability and Learning Motivation.” *Journal of Educational Research and Evaluation* 6(2):123–34. doi:10.24114/paradikma.v16i2.46952.

Siraj, S., M. Yusuf, I. Fatwa, F. Rianda, and M. Mulyadi. 2023. “Pengembangan Model Pembelajaran Reflektif Berbasis Unity of Sciences Bagi Calon Guru Sekolah Menengah Kejuruan Profesional.” *Jurnal Review Pendidikan Dan Pengajaran (JRPP)* 6(4):2030–38.

Sugiyono. (2018). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung: Alfabeta.