

# Strengthening Teacher Competence through Differentiated Instruction Training as an Implementation of the Merdeka Curriculum

Erma Aris Suryani<sup>1</sup>, Deny Hadi Siswanto<sup>2</sup>, Siti Atwano Pisriwati<sup>3</sup>

<sup>1,2,3</sup> Muhammadiyah Mlati Senior High School, Indonesia

## Article Info

### Artikel History

Received : 29 November 2024  
Reviewed : 11 December 2024  
Accepted : 24 December 2024

### Keywords:

Teacher Competency  
Differentiated Learning  
Merdeka Curriculum

## ABSTRACT

Differentiated learning is an approach tailored to the diverse abilities, needs, and learning characteristics of students. This adjustment can be applied to teaching materials, methods, classroom management, and assessment of learning outcomes. In this activity, training was provided to teachers to enhance their capacity to implement differentiated learning in accordance with the Merdeka Curriculum. The activity took place at Muhammadiyah Mlati Senior High School in October 2024, with 18 teachers participating. The goal of this activity was to strengthen teachers' competencies in differentiated learning. The training received a positive response from the principal and all participating teachers, who felt they gained a deeper understanding of the characteristics, benefits, and stages of differentiated learning, as evidenced by the increase in their pretest scores (58,88) and posttest scores (85). This training activity should be conducted regularly and sustainably to ensure that teachers' skills continue to develop, allowing their abilities to be honed further and resulting in a positive impact on improving the quality of the learning process, ultimately supporting the optimal implementation of the Merdeka Curriculum across all levels of education.

### Please cite this article APA style as:

Suryani, E. A., Siswanto, D. H., & Pisriwati, S. A. (2025). Strengthening Teacher Competence through Differentiated Instruction Training as an Implementation of the Merdeka Curriculum. *JOELI: Journal of Educational and Learning Innovation*, 1(2), pp. 137-146.

Corresponding Author:

**Deny Hadi Siswanto**

Muhammadiyah Mlati Senior High School, Indonesia

\*Email Correspondence: [denyiswanto11@guru.sma.belajar.id](mailto:denyiswanto11@guru.sma.belajar.id)

This is an open access article under the CC BY-SA license



## 1. Introduction

The Ministry of Education and Culture of Indonesia launched the Merdeka Curriculum in 2021 as part of efforts to improve the quality of education in Indonesia (Putri et al., 2024). This curriculum was designed with the primary goal of providing greater freedom for students to fully develop their potential. According to Azah et al. (2024), under the Merdeka Curriculum framework, students are given the opportunity to learn in a more flexible manner that aligns with their individual needs and abilities. This creates a more inclusive learning environment where every student can progress according to their own path.

One of the approaches emphasized in the Merdeka Curriculum is differentiated learning. This approach refers to efforts to tailor the learning process in the classroom to meet the individual learning needs of each student. As explained by Haq & Wakidi (2024), this approach pays particular attention to the differences among students in the classroom, whether in terms of ability, interests, talents, or learning needs. Therefore, teachers are expected to design learning experiences that are appropriate for each student.

Differentiated learning is not an easy concept to implement without proper preparation. In practice, teachers need to have a deep understanding of the fundamental concepts of differentiated learning and how to implement it effectively in the classroom. Wolff et al. (2021) and Yogyanto et al. (2024) emphasize that this approach not only benefits students but also requires adjustments in classroom management that must be carried out by the teacher. Teachers need to be trained to fully understand how to implement learning that focuses on individual differences.

Training on the implementation of differentiated learning in accordance with the Merdeka Curriculum is essential (Putri et al., 2024; Syah et al., 2024). This training aims to provide teachers with a deeper understanding of how to design and implement learning that can meet the diverse needs of students on an individual basis. With this training, teachers are expected to enhance their skills in creating a learning environment that is responsive to the differences among students in the classroom.

Through this training, teachers will learn various effective classroom management techniques. One of these is how to motivate students to actively engage in learning that aligns with their interests and talents (Stevenson et al., 2020). Teachers are also provided with knowledge on how to develop varied teaching materials that can be accessible to all students, regardless of their ability levels. Support for students who require additional help becomes an important part of this training, ensuring that every student can progress in a way that meets their individual needs.

Additionally, the training covers topics related to evaluation in differentiated learning. The evaluation conducted in this context must be tailored to meet the needs of each student (Tetzlaff et al., 2021). Teachers will learn how to create appropriate assessment tools that measure student progress individually. The feedback provided to students must also be relevant to their learning needs, allowing each student to receive information that is valuable for their academic development (Karrenbauer et al., 2023).

Effective implementation of differentiated learning requires careful classroom management. Teachers need to understand various strategies for addressing

challenges that may arise when dealing with students who have very different needs. For example, some students may absorb material more quickly while others require more time. With differentiated learning, teachers are expected to give special attention to each student, ensuring that no one feels left behind or neglected (Tajik et al., 2023).

The training on differentiated learning is crucial in preparing teachers to effectively implement the Merdeka Curriculum. Teachers not only gain theoretical knowledge but also learn firsthand how to implement differentiated learning in the classroom. This program also provides an opportunity for teachers to share experiences and learn from best practices implemented in other schools.

The training, held in October 2024, was attended by 18 participants, who were teachers from Muhammadiyah Mlati Senior High School. The activity received very positive feedback from participants and the team involved. They felt that the training provided a deeper understanding of how to address differences within the classroom and how to offer relevant learning experiences for each student.

With this training, it is expected that teachers will feel more confident in applying differentiated learning in accordance with the Merdeka Curriculum. This more individualized approach to learning is expected to create a more inclusive learning atmosphere and provide each student with the opportunity to grow according to their unique characteristics. Furthermore, ongoing training will be immensely helpful in ensuring that every teacher possesses a strong understanding and adequate skills in implementing differentiated learning. As a result, the quality of education in Indonesia can continue to improve and adapt to the evolving needs of the times.

## **2. Method**

The training activity was conducted in October 2024 at Muhammadiyah Mlati Senior High School. This training involved 18 teachers with the goal of enhancing their competence in implementing differentiated learning according to the Merdeka Curriculum. The activity was divided into three main phases: preparation, implementation, and evaluation.

During the preparation phase, coordination was carried out with various related parties, including the Education and Culture Office of Sleman Regency, the Muhammadiyah Mlati Branch Leadership, and the prospective training participants. Additionally, training materials were prepared, and a Training of Trainers (ToT) session was held to prepare the facilitators for the training. Once the preparation phase was completed, the training continued with the implementation phase, where teachers were provided with material on capacity building for implementing differentiated learning in line with the Merdeka Curriculum. This training was organized in the form of discussions.

The evaluation phase aimed to assess the success of the training activities. Evaluation was conducted at each stage to assess the effectiveness of the activities and provide feedback for improving future training sessions. To measure the participants' understanding, pretest and posttest were administered to assess the extent of improvement in the teachers' understanding of the material presented during the training. This evaluation served as a basis for refining future training and ensuring that the training objectives were achieved optimally. Data collection techniques included surveys to measure teachers' competence in implementing

differentiated learning. The data were analyzed descriptively using percentages to determine the improvement achieved.

**Table 1.** Teacher Activity Questionnaire

No	Question
1	What is meant by differentiated learning?
2	What is the main goal of differentiated learning?
3	Differentiated learning can be done by adapting?
4	In differentiated learning, the teacher plays a role as?
5	What are the main benefits of differentiated learning?
6	What is meant by “adjustment of teaching materials” in differentiated learning?
7	One way to provide support to students who need it in differentiated learning is by?
8	In differentiated learning, evaluation is carried out for?
9	One example of a technique used in differentiated learning is?
10	How do teachers demonstrate the application of differentiated learning in training?

### 3. Results and Discussion

The Merdeka Curriculum is part of Indonesia's efforts to restore and enhance the quality of education (Siswanto et al., 2024). This curriculum is designed with a more flexible approach, focusing on essential content to develop students' character and competencies. One of the key features of the Merdeka Curriculum is providing flexibility to teachers in delivering lessons, including in the implementation of differentiated learning. Differentiated learning refers to an approach that accommodates the diverse characteristics of students, including their abilities, needs, and learning styles, ensuring that each student can learn according to their own pace and method.

In the training conducted, the teachers were provided with a comprehensive understanding of the structure and philosophy of the Merdeka Curriculum. The participants now realize that the Merdeka Curriculum requires them to recognize and respond to student diversity in ways that do not seek to standardize the learning experience. This approach emphasizes differentiated learning, where each teacher is expected to design and implement lessons that are more personalized, tailored to the conditions and needs of the students. Differentiated learning aligns closely with the fundamental principles of the Merdeka Curriculum, which stresses student-centered learning, where students are the primary subjects in the educational process.

The goal of the training was for teachers to understand and implement the characteristics and benefits of differentiated learning (Putri & Siswanto, 2024). They were expected to identify ways to align the teaching materials, methods, and assessments to meet the individual characteristics of each student. Teachers were also expected to design lessons that consider differences in students' abilities and learning needs, while creating an inclusive learning environment that supports diversity. Differentiated learning provides each student with the opportunity to learn in the way that best suits them, helping them achieve their fullest potential.

At its core, the key to differentiated learning is building meaningful relationships between teachers and students and fostering a classroom culture that values diversity (Kalinowski et al., 2024; Astiwi et al., 2024). In an open and inclusive classroom environment, students feel valued and supported to grow according to their unique strengths. This strengthens social bonds in the classroom and gives students the space to explore their potential more effectively. Differentiated learning is not only about changing the teaching materials but also about how we approach and understand each student in a more personal context, so they can learn to the best of their abilities and feel valued throughout the learning process (Conner et al., 2024).

Differentiated learning places students as the main subjects in the learning process. In this context, students are expected to take an active role in their learning, with enthusiasm and a desire to achieve the set goals. The aim is for learning not to become a burden, but rather a joyful and enjoyable experience. According to Pisriwati et al. (2024), as the subject of learning, students are given the freedom to learn in ways that suit their individual learning styles and are provided access to various relevant learning resources. The teacher's role is to act as a facilitator, bridging this process to ensure that students can reach the learning objectives optimally (Siswanto & Firmansyah, 2024).

In differentiated learning, the learning process is expected to become an intellectual adventure that not only broadens knowledge but also provides an enjoyable experience for students (Syah et al., 2024). Meaningful learning is designed to actively engage students, encouraging them to explore, create, and discover learning methods that align with their unique needs and potential. Through this approach, students are not only guided toward achieving academic goals but are also introduced to the significance of learning in real-life contexts. This process helps them develop valuable life skills, including personal skills such as self-management, social skills like teamwork, and vocational skills relevant to future needs.

Teachers play a crucial role in ensuring the success of differentiated learning. They not only act as facilitators but also as mentors who understand the unique needs of each student (Kuswantara et al., 2024; Widyastuti et al., 2024). With a personalized and empathetic approach, teachers can help students recognize their best potential and provide appropriate guidance to overcome various challenges, whether academic or related to daily life. The support and guidance from teachers enable students to grow into confident, adaptable individuals who are prepared to face diverse situations. Thus, learning becomes more than just a process of transferring knowledge; it serves as a foundation for living a better, more meaningful life.

Teachers in differentiated learning should focus on developing the potential that already exists in students, while also helping them address any weaknesses they may have (Frerejean et al., 2021; Milinga et al., 2023). To do this, teachers need to employ various methods and strategies that cater to the needs and characteristics of their students. With this approach, it is hoped that students will not only gain knowledge but also acquire skills that can be applied in their daily lives. This flexible and directed learning provides space for each student to learn in a way that suits their pace and learning style.

During the training, participants were provided with an in-depth

understanding of differentiated instruction as an approach aimed at meeting the learning needs of students with diverse abilities, interests, and learning styles. The training not only covered theoretical concepts but also introduced teachers to the core principles of differentiated teaching, including how this approach can foster an inclusive learning environment. Creating an inclusive learning environment is a key goal because it allows all students to grow according to their potential without being constrained by uniform standards (Seneru et al., 2024). Through this approach, teachers were taught to recognize students' specific needs, both academically and socially, and to create a supportive classroom atmosphere that embraces diversity.

In addition to conceptual understanding, participants were given various concrete examples of how to implement differentiated teaching strategies in classroom situations. These examples included utilizing diverse learning resources such as books, digital media, and other teaching aids to address students' needs. Teachers were also trained to adapt teaching materials to align with the abilities and interests of their students and to design assignments tailored to the individual characteristics of each student. With this approach, participants were expected to develop teaching methods that are not only effective but also relevant to real-world classroom conditions. The training materials were structured and delivered systematically, enabling participants to understand each step and immediately connect it to their school practices (Pozas et al., 2023).

To deepen participants' understanding, the training included simulation activities designed to engage them actively. In these simulations, some participants were tasked with practicing differentiated teaching by acting as teachers, while others played the roles of students with diverse characteristics. These simulations provided hands-on experience in addressing real challenges in managing classrooms with students of varying needs. The interactions during the simulations created a dynamic and engaging training atmosphere while allowing participants to see the tangible benefits of this approach (Setiawan et al., 2024; Suryani et al., 2024). Through direct experience, participants gained insight into how differentiated instruction can be better applied in the classroom and discovered new ways to enhance the effectiveness of teaching and learning processes in their respective schools. Below is an image of the training.



**Figure 1.** Implementation of Training

To see the increase in participants' understanding regarding differentiated learning, a pretest and posttest were carried out. Based on the results of the pre-test and post-test analysis, there was a significant increase in the training participants' understanding of the material presented.

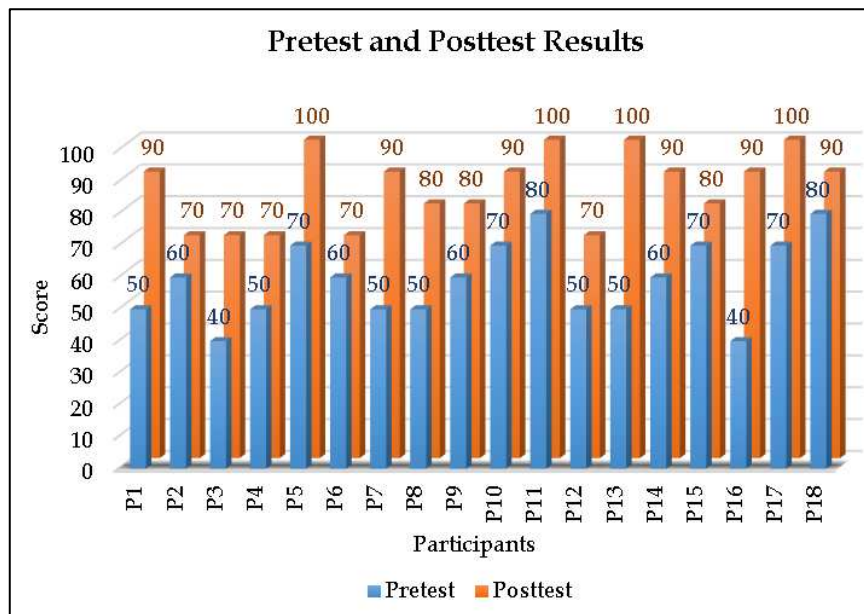


Figure 2. Pretest and Posttest Result

Based on the picture above, the average score on the posttest is higher than the pretest, namely 58.88 on the pretest and 85 on the posttest, this shows that the participants succeeded in understanding the training material well. This is in line with the findings Siswanto et al. (2024), Pozas et al. (2023) and Subban et al. (2024), that the training method used was effective in increasing teachers' understanding and skills in implementing differentiated learning. This success also shows that differentiated learning can be implemented well in the classroom, providing a positive impact on the quality of learning that is more personal and relevant for students.

#### 4. Conclusions

Based on the results of the training activities that have been carried out, it can be concluded that the main objectives of this training activity have been achieved very well and in line with expectations. The teachers who participated in the training not only succeeded in understanding the characteristics of differentiated learning in depth, but also clearly understood the benefits of this approach and the steps that must be taken in its implementation. Apart from that, they have also been able to demonstrate the application of differentiated learning directly in front of the class with confidence, which shows that they have mastered the concepts and techniques taught. These training activities must continue to be carried out periodically and continuously to ensure that teachers' skills continue to develop over time. With continuous training, it is hoped that the teachers' abilities will be further honed, which in turn will have a positive impact in improving the quality of the learning process, so that it can better support the optimal implementation of the Independent Curriculum at all levels of education.

## 5. Acknowledgment

The author would like to thank the head of the Sleman Regency Service who has provided knowledge related to this training and the leadership of the Muhammadiyah Mlati foundation for financial support for this activity, and to fellow teachers at Muhammadiyah Mlati High School who have participated in this activity.

## 6. References

- Astiwi, W., Siswanto, D. H., & Suryatama, H. (2024). Description regarding the influence of teacher qualifications and competence on early childhood learning achievement. *Asian Journal of Applied Education (AJAE)*, 3(3), 347–358.
- Azah, N., Sholeh, M. I., Wahrudin, B., & Muzakki, H. (2024). Management Challenges in Implementing the Merdeka Curriculum. *Al-Hayat: Journal of Islamic Education (AJIE)*, 8(3), 1052–1071. <https://doi.org/https://doi.org/10.35723/ajie.v8i3.711>
- Conner, J., Mitra, D. L., Holquist, S. E., Rosado, E., Wilson, C., & Wright, N. L. (2024). The pedagogical foundations of student voice practices: The role of relationships, differentiation, and choice in supporting student voice practices in high school classrooms. *Teaching and Teacher Education*, 142(February), 104540. <https://doi.org/10.1016/j.tate.2024.104540>
- Frerejean, J., van Geel, M., Keuning, T., Dolmans, D., van Merriënboer, J. J. G., & Visscher, A. J. (2021). Ten steps to 4C/ID: training differentiation skills in a professional development program for teachers. *Instructional Science*, 49(3), 395–418. <https://doi.org/10.1007/s11251-021-09540-x>
- Haq, H., & Wakidi. (2024). Evaluation of the Implementation of the Merdeka Belajar Curriculum in Secondary Schools in the Digital Era. *International Journal of Post Axial: Futuristic Teaching and Learning*, 2(4), 215–228. <https://journal.amorfati.id/index.php/postaxial>
- Kalinowski, E., Westphal, A., Jurczok, A., & Vock, M. (2024). The essential role of teacher self-efficacy and enthusiasm for differentiated instruction. *Teaching and Teacher Education*, 148(May), 104663. <https://doi.org/10.1016/j.tate.2024.104663>
- Karrenbauer, C., Brauner, T., König, C. M., & Breitner, M. H. (2023). Design, development, and evaluation of an individual digital study assistant for higher education students. *Educational Technology Research and Development*, 71(5), 2047–2071. <https://doi.org/https://doi.org/10.1007/s11423-023-10255-8>
- Milinga, J. R., Amani, J., & Lyakurwa, S. E. (2023). Teachers' Perceptions of Differentiated Instruction for Academically High-Achieving Secondary School Students in Tanzania. *Journal of Advanced Academics*, 34(1), 68–102. <https://doi.org/https://doi.org/10.1177/1932202X221129970>
- Pisriwati, S. A., Hardi, Y., & Siswanto, D. H. (2024). Enhancing organizational development through principal leadership to improve teacher and staff work discipline. *Journal of Organizational and Human Resource Development Strategies*, 1(1), 52–62. <https://doi.org/https://doi.org/10.56741/ohds.v1i01.670>
- Enhancing

- Pozas, M., Letzel-Alt, V., & Schwab, S. (2023). The effects of differentiated instruction on teachers' stress and job satisfaction. *Teaching and Teacher Education*, 122, 103962. <https://doi.org/10.1016/j.tate.2022.103962>
- Putri, H. A., Hardi, Y., Alghiffari, E. K., & Siswanto, D. H. (2024). Penerapan teknik mindfulness dalam proses pembelajaran di sekolah menengah atas. *Jurnal Praktik Baik Pembelajaran Sekolah Dan Pesantren*, 3(03), 152-162. <https://doi.org/https://doi.org/10.56741/pbpsp.v3i03.733>
- Putri, H. A., & Siswanto, D. H. (2024). Teaching at The Right Level (TaRL) as an Implementation of New Education Concepts in the Insights of Ki Hajar Dewantara. *Indonesian Journal of Educational Science and Technology (Nurture)*, 3(2), 89-100. <https://doi.org/https://doi.org/10.55927/nurture.v3i2.9297>
- Putri, H. A., Siswanto, D. H., & Susanto, D. (2024). Developing teachers' skills in designing project-based learning in the merdeka curriculum through assembler edu training. *Civitas: Jurnal Pengabdian Masyarakat*, 1(1), 12-20.
- Seneru, W., Dharma, Y., & Wati, R. (2024). The Effect of Emotional Intelligence on Student Interpersonal Communication. *Journal of Adult Education*, 2(1), 22-33. <https://ejournal.stiab-jinarakkhita.ac.id/index.php/jocrss>
- Setiawan, A., Jannah, N., Kristiawan, Y., Siswanto, D. H., & Dahlan, U. A. (2024). Pelatihan Pemanfaatan Platform Geschool dalam Mendukung Transformasi Digital Pendidikan di Sekolah Menengah Atas. *Jurnal Pengabdian Fakultas Ekonomi Dan Bisnis Pancasakti*, 1(1), 27-36.
- Siswanto, D. H., & Firmansyah, A. B. P. D. A. (2024). Korelasi budaya sekolah dan kepemimpinan pengetua sekolah dengan prestasi guru di sekolah menengah atas muhammadiyah mlati. *Jurnal Kepimpinan Pendidikan*, 11(3), 49-58.
- Siswanto, D. H., Kuswantara, H., & Wahyuni, N. (2024). Implementation of problem based learning approach culturally responsive teaching to enhance engagement and learning outcomes in algebraic function limit material. *EDUCATUM JSMT*, 12(1), 80-88.
- Siswanto, D. H., Listyanti, F. S., Firmansyah, A. B. P. D. A., Pisriwati, S. A., & Setiawan, A. (2024). Enhancing Teachers' Competence in Designing Computer- Based Test Questions through In House Training. *JOELI: Journal of Educational and Learning Innovation*, 1(1), 75-84. <https://doi.org/https://doi.org/10.72204/g66ex111>
- Siswanto, D. H., Samsinar, Alam, S. R., & Andriyani. (2024). Peran Kompetensi Guru dalam Menerapkan Kurikulum Merdeka. *Jurnal Pendidikan DIDAXEI*, 5(1), 763-773. <https://ejournal.iaknambon.ac.id/index.php/DX/article/view/1042>
- Stevenson, N. A., VanLone, J., & Barber, B. R. (2020). A Commentary on the Misalignment of Teacher Education and the Need for Classroom Behavior Management Skills. *Education and Treatment of Children*, 43(4), 393-404. <https://doi.org/https://doi.org/10.1007/s43494-020-00031-1>
- Subban, P., Suprayogi, M. N., Preston, M., Liyani, A. N., & Ratri, A. P. P. (2024). "Differentiation is Sometimes a Hit and Miss". Educator Perceptions of Differentiated Instruction in the Higher Education Sector. *Asia-Pacific Education Researcher*, 0123456789. <https://doi.org/10.1007/s40299-024-00904-8>
- Suryani, E. A., Pisriwati, S. A., Siswanto, D. H., & Bagus, A. (2024). Pelatihan Assembler Edu: Meningkatkan Keterampilan Guru pada Pembelajaran

- Berbasis Proyek. *Jurnal Pengabdian Fakultas Ekonomi Dan Bisnis Pancasila*, 1(1), 7–16.
- Syah, A. B. P. D. A. F., Rachmawati, L., & Siswanto, D. H. (2024). Validity and practicality of the game-based learning media for mathematical logic using the quiz whizzer application. *JOELI: Journal of Educational and Learning Innovation*, 1(2), 107–118. <https://doi.org/http://doi.org/10.72204/xpxg2d74>
- Syah, A. B. P. D. A. F., Suwarta, & Siswanto, D. H. (2024). Enhancing teacher self-management and skills in designing teaching materials through a merdeka curriculum workshop at muhammadiyah 1 sleman vocational high school. *Jurnal Pengabdian Masyarakat Bestari (JPMB)*, 3(9), 585–598.
- Tajik, O., Noor, S., & Golzar, J. (2023). Investigating differentiated instruction and the contributing factors to cater EFL students' needs at the collegial level. *Journal of Modern Research in English Language Studies*, 4(1), 69–87. <https://doi.org/10.1186/s40862-024-00299-5>
- Tetzlaff, L., Schmiedek, F., & Brod, G. (2021). Developing Personalized Education: A Dynamic Framework. *Educational Psychology Review*, 33(3), 863–882. <https://doi.org/https://doi.org/10.1007/s10648-020-09570-w>
- Widyastuti, R., Siswanto, D. H., Pisriwati, S. A., & Alam, S. R. (2024). Optimizing Organizational Structure in the Muhammadiyah Student Association at Senior High Schools. *Journal of Social and Community Development (JSCD)*, 1(02), 54–64. <https://doi.org/https://doi.org/10.56741/jscd.v1i02.672> 54
- Wolff, C. E., Jarodzka, H., & Boshuizen, H. P. A. (2021). Classroom Management Scripts: a Theoretical Model Contrasting Expert and Novice Teachers' Knowledge and Awareness of Classroom Events. *Educational Psychology Review*, 33(1), 131–148. <https://doi.org/10.1007/s10648-020-09542-0>
- Yogyanto, N., Pisriwati, S. A., & Siswanto, D. H. (2024). Education on the contextual utilization of information technology based on the iot in the daily lives of senior high school students. *Civitas : Jurnal Pengabdian Masyarakat*, 1(1), 21–27.