Implementation of Differentiated Learning Model in Improving Students Collaboration Skills

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Abstract

This study aims to apply the Differentiation learning model to improve students collaboration skills at SMP Swasta RK Deli Murni Delitua. This Classroom Action Research (CAR) involved 38 Phase D Class VII-1 students in the 2024/2025 Academic Year. The research procedure includes the planning, implementation, observation, and reflection stages, with data collection techniques through tests, observation, and documentation. The results showed a significant increase in the application of differentiation, marked by an increase in the average value from 58,92 in cycle I to 84,82 in cycle II (an increase of 25,9%). The aspect of determining learning objectives increased from 50% to 87.5%, while the implementation of initial diagnostics increased from 62.5% to 81.25%. Students collaboration skills also increased, both in general (from 38,41 to 68,54 or up 30,13%) and in specific aspects such as face-to-face interaction (35.52% to 63.81%) and individual responsibility (32.89% to 60.52%). In addition, visual, auditory, and kinesthetic-based learning products reached the very good category (100%). Recommendations include increasing teacher creativity, reviewing the curriculum, and improving learning strategies.

Keywords: Learning Model; Differentiation; Collaboration Skills; Students

Introduction

Education has a very important role in shaping individual character and competence. In the midst of the global demands of the 21st century, the education system is not only required to transfer knowledge, but also to develop 21st century skills, one of which is collaboration skills. Each individual has a different background, potential, and learning style. Therefore, the educational approach must be inclusive and responsive to the diversity of student characteristics (Sari & Mawardi, 2023). In this context, it is important for teachers to adjust learning strategies to students needs in order to create an effective and meaningful learning process.

Collaboration skills are one of the important competencies of the 21st century that emphasizes the ability to work together with others in groups, to achieve common goals effectively. According to (Ministry of Education, Culture, Research and Technology, 2022), Pancasila students who have collaboration skills are characterized by the ability to work together in a pleasant atmosphere, have a

positive attitude towards others, and are able to formulate and evaluate group goals together. Students are also able to listen, understand, convey ideas effectively, and provide constructive feedback. In general, collaboration skills include several important aspects, such as positive interdependence, face-to-face interaction, accountability, responsibility, group work skills (Pratiwi et al., 2020). In the context of learning, collaboration also means a learning process that emphasizes cooperation between students to solve problems, make decisions, and create learning products together. Through collaboration, students learn to develop empathy, respect each other, and strengthen interpersonal skills (Zainuddin, 2017).

Collaboration skills are one of the main competencies that must be developed in learning because they are directly related to students ability to work together, appreciate differences, and be responsible (Rizky et al., 2024). However, in practice, the implementation of collaborative learning is often limited to formal group work without any positive interdependence or individual accountability. Based on the results of initial observations conducted in class VII-1 of SMP Swasta RK Deli Murni Delitua, various collaboration problems were found, such as lack of student participation, passive communication, and low sense of responsibility and contribution in groups. Students tend to work individually in groups without building healthy and effective interactions.

The problem of low collaboration skills is certainly an obstacle to achieving optimal learning goals, especially in Catholic Religious Education learning, which basically also instills social values and togetherness. When collaboration is not effective, students not only have difficulty understanding the material in depth, but also lose the opportunity to develop social skills that are very important for community life. This condition shows an urgent need to implement a learning approach that is able to respond to differences and accommodate the individual needs of students (Pratiwi et al., 2020).

One approach that is considered capable of overcoming this problem is the differentiation learning model. This model focuses on adjusting content, processes, products, and learning environments based on students needs, interests, and learning profiles (Wahyuningsari et al., 2022). In differentiation, teachers are required to design learning that provides space for active participation of all students, builds balanced teamwork, and strengthens a sense of shared responsibility. Previous studies have shown that differentiation can not only increase student motivation and understanding, but also significantly contribute to improving collaboration skills (Sari & Mawardi, 2023).

The differentiation learning model is an approach designed to adjust the teaching and learning process based on the learning needs of each student. This approach was first developed by Carol Ann Tomlinson (1999), who emphasized that "one size doesn't fit all" there is no one learning approach that is suitable for all students. Differentiation is done by adjusting the content, process, and learning products based on three main aspects, namely: learning readiness, interests, and student learning profiles (Karmelita et al., 2023). In practice, differentiated learning gives students the freedom to access learning materials in a way that suits their characteristics. For example, students with a visual learning style can be given materials in the form of images or videos, while auditory students benefit more from verbal explanations or discussions, and kinesthetic students understand the material better through direct practice (Budi et al., 2021). With this strategy, each student feels cared for, motivated, and actively involved in the learning process. The steps of the differentiation learning model include: determining learning objectives, conducting initial diagnostics, analyzing student diversity, designing differentiation learning strategies, implementing differentiation learning, conducting formative and summative assessments, and feedback and reflection. This approach is very flexible and responsive to classroom dynamics, and is able to build a fair and inclusive learning environment. Differentiated learning greatly supports the development of collaboration skills, because it provides space for students to work together based on their respective strengths (Nurhidayati, 2022).

The differentiation learning model is very relevant to be applied in the context of the Independent Curriculum which emphasizes flexibility and project-based learning. This curriculum encourages the

development of the Pancasila Student Profile, including collaboration skills as part of students social-emotional competencies (Pratiwi et al., 2020). By using differentiation, teachers can form study groups based on students abilities and learning styles, and provide appropriate challenges and support for each individual. Thus, the collaboration that occurs is not just a formality, but a meaningful and complementary interaction between group members. The urgency of this research lies in the need for concrete and evidence-based strategies in developing students collaboration skills. In addition to being part of effective learning, collaboration is also an important provision for students to face the world of work and social life in the future (Sufajar & Qosyim, 2022). This study aims to describe and analyze the use of differentiation learning models in Catholic Religious Education subjects as an effort to improve the collaboration skills of Phase D students of class VII-1 at RK Deli Murni Delitua Private Middle School, and to determine the extent to which students collaboration skills develop after the learning model is applied in the learning process.

By identifying the factors causing low collaboration skills and implementing adaptive learning models, it is expected that students can be more active, responsible, and able to work together effectively. The results of this study are expected to provide practical contributions for teachers, schools, and other researchers in designing collaborative and inclusive learning, as well as being a reference for the development of teaching strategies that are oriented to the needs of the 21st century.

Research Methods

This research is a Classroom Action Research (CAR) conducted at SMP Swasta RK Deli Murni Delitua Phase D Class VII-1 in the Even Semester of the 2024/2025 Academic Year. The subjects of the study consisted of 38 students, consisting of 22 female students and 16 male students, who were selected by census from all students of class VII Phase D. The purpose of this study was to improve students collaboration skills through the application of the Differentiation learning model.

This study uses an action approach based on the model proposed by Carol Ann Tomlinson, which consists of four main stages, namely planning, implementation, observation, and reflection, as explained by Hopkins (1993). Data collection is carried out through various techniques, such as tests, observations, documentation, and other methods (Aulia et al., 2024).

The steps in qualitative descriptive analysis are carried out by comparing data from various sources, grouping data, presenting data in the form of tables or diagrams, then concluding the results gradually. The success of an action is seen from two criteria, namely the success of the process and the success of the product, which play an important role in assessing the effectiveness of learning in action research.

Results and Discussion

The results of Classroom Action Research in Cycle I showed that the implementation of the differentiation learning model had been running quite optimally at various stages. The aspect of "Determining Learning Objectives" showed balanced results, namely 50% of respondents considered the implementation good and 50% considered it very good. The aspect of "Conducting Initial Diagnostics" obtained very good results of 62.50%, and good of 37.50%. Likewise, in the aspect of "Analyzing Student Diversity", 56.25% were included in the very good category and 43.75% were in the good category. Furthermore, the aspect of "Designing Differentiated Learning Strategies" showed 62.50% were in the very good category and 37.50% were in the good category. Likewise, in the aspect of "Implementing Differentiated Learning", the percentage of good and very good were the same, namely 50% each. In the aspect of "Conducting Formative and Summative Assessments", the results achieved were 62.50% in the

very good category and 37.50% in the good category. Finally, the "Feedback and Reflection" aspect obtained the highest results, namely 68.75% in the very good category and 31.25% in the good category.
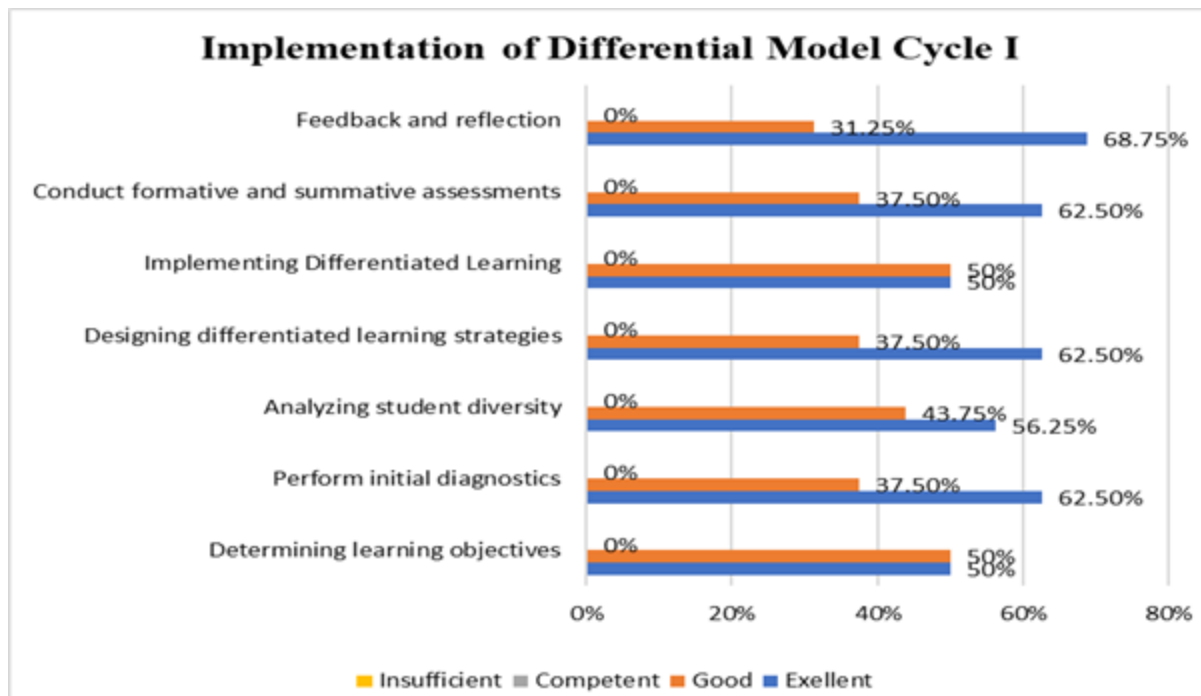

Figure 1. Implementation of Differentiated Model Cycle I

Based on the graph below, students collaboration skills show quite good achievements in various indicators. In the Positive Interdependence aspect, the majority of students are in the Proficient (45.39%) and Proficient (44.61%) categories, while only 10% are classified as Adequate, and none are in the Beginning to Develop category. In the Face-to-Face Interaction aspect, the majority of students are in the Proficient category (48.02%), followed by the Proficient category (35.52%). Only 16% of students are in the Adequate category, and none are still in the Beginning to Develop stage. Meanwhile, in the Accountability aspect, students show quite good performance, with 53.28% of students in the Proficient category and 38.15% in the Proficient category. There are 9% of students in the Adequate category, and no students are found in the Beginning to Develop category. The Responsibility aspect also shows similar results, with the dominance of the Proficient (56.57%) and Proficient (32.89%) categories. As many as 11% of students are still classified as Adequate, and there are no students in the Beginning to Develop category. Finally, in the aspect of Group Working Skills, students showed the highest performance, with 58.55% classified as Proficient and 40% in the Advanced category. Only 1% of students are in the Adequate category, and none are classified as Beginning to Develop.
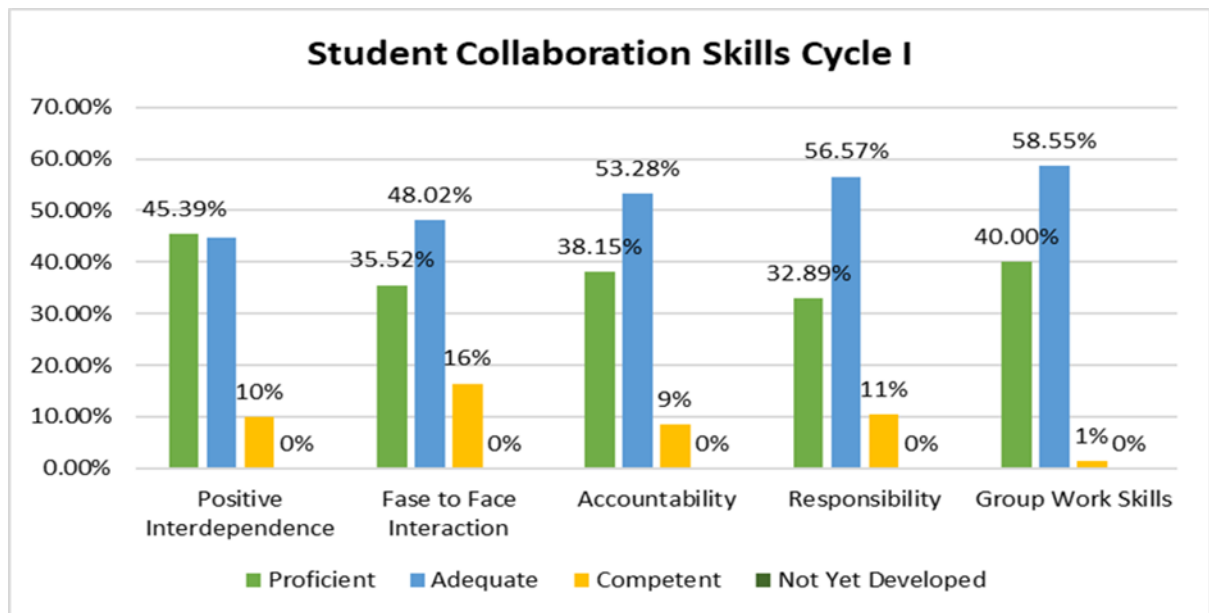
Figure 2. Student Collaboration Skills Cycle I

Based on the image below, it can be seen that the results of the Visual Student Differentiation Product Test for Phase D Class VII-1 at RK Deli Murni Delitua Private Middle School are: 1) Very Good in Cycle I 36% 2) Good in Cycle I 54% 3) Sufficient 9% 4) Less in Cycle I 0% and Very Less in Cycle I 0% with an average of 76.72.
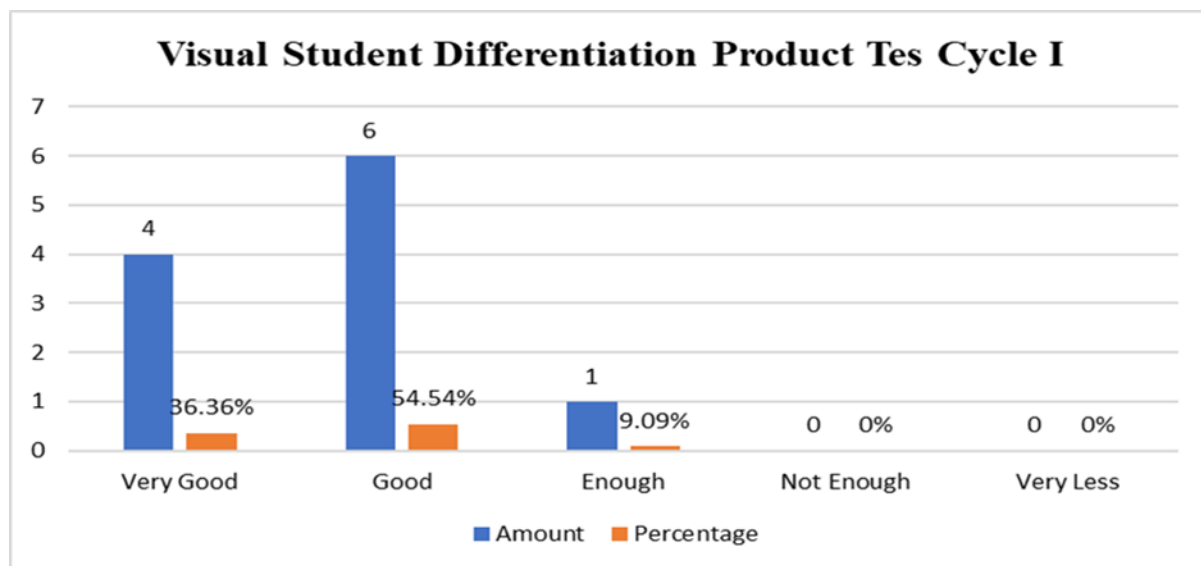

Figure 3. Visual Student Differentiation Product Test Cycle I

Based on the image below, it can be seen that the results of the product test of the Differentiation of Auditory Students Phase D Class VII-1 at RK Deli Murni Delitua Private Middle School are 1) Very Good in cycle I 40% 2) Good in cycle I 60% 3) Sufficient 0% 4) Less in cycle I 0% and Very Less in cycle I 0% with an average of 77.2.
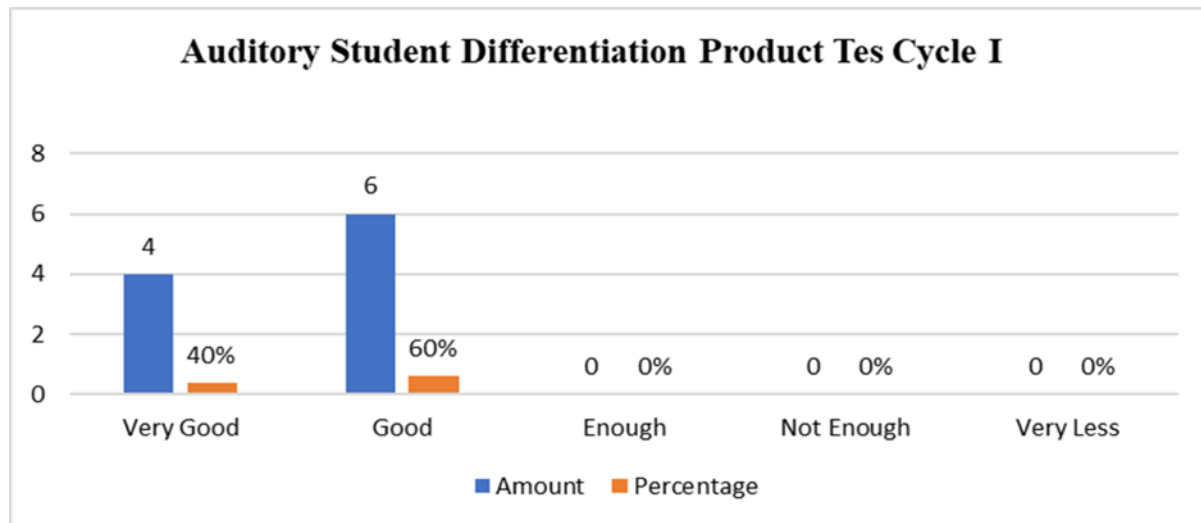
Figure 4. Auditory Student Differentiation Product Test Cycle I

Based on the image below, it can be seen that the results of the product test of the Differentiation of Kinesthetic Students Phase D Class VII-1 at RK Deli Murni Delitua Private Middle School are 1) Very Good in cycle I 35% 2) Good in cycle I 47% 3) Sufficient 17% 4) Less in cycle I 0% and Very Less in cycle I 0% with an average of 75.
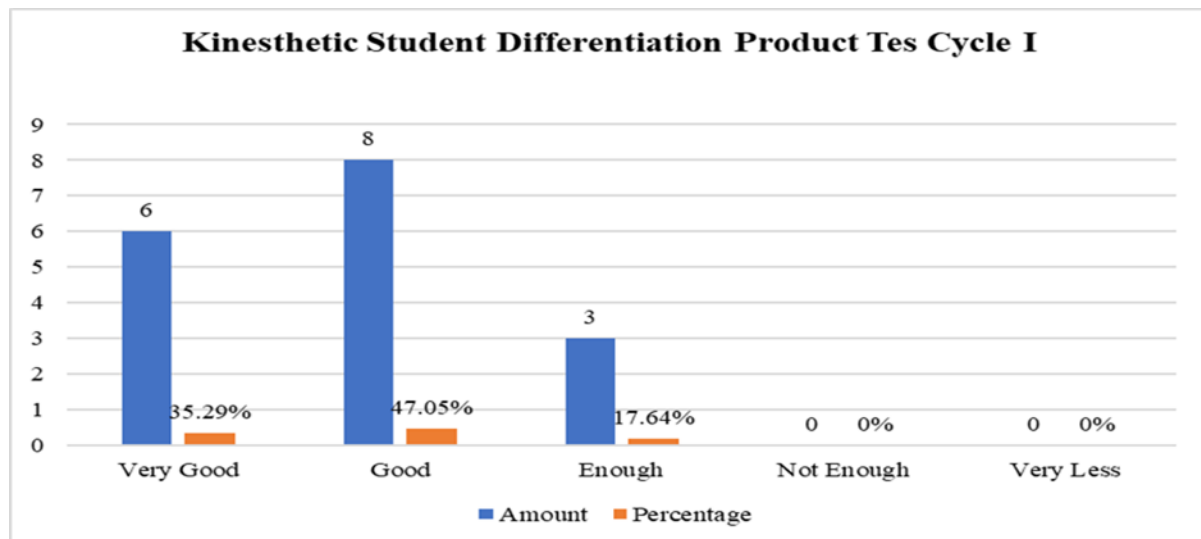

Figure 5 Kinesthetic Student Differentiation Product Test Cycle I

Furthermore, the results of Classroom Action Research in cycle II are explained as follows: based on the graph below, the results of the action research in cycle II show that the implementation of the differentiation learning model has increased significantly. In the aspect of designing differentiation learning strategies, teacher achievement is very high, with 93.75% in the Very Good category. The aspects of analyzing student diversity, providing feedback and reflection, and determining learning objectives, all reached the Very Good level with a percentage of 87.5%. This shows that teachers are able to understand and accommodate differences in student learning needs effectively. In the aspect of implementing formative and summative assessments and conducting initial diagnostics, each reached a Very Good level of 81.25%, while the rest showed performance in the Good category. For the aspect of implementing differentiation learning, 75% were in the Very Good category and 25% in the Good

category, indicating that most teachers have been able to apply differentiation strategies inlearning process effectively.
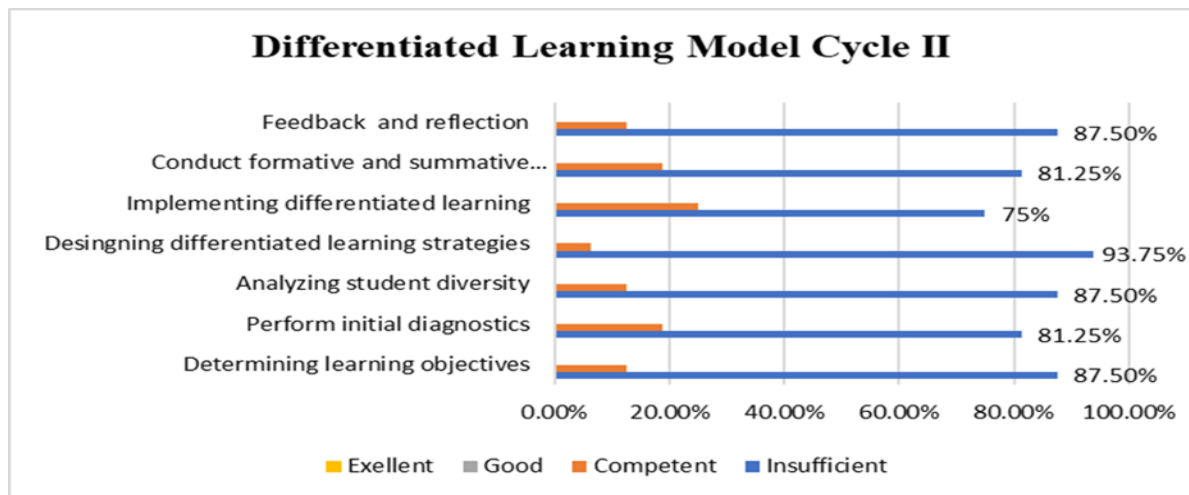

Figure 6. Differentiated Learning Model Cycle II

Based on the graph below, it can be observed that students collaboration skills in Cycle I show that most students have achieved a high level of proficiency. In the Positive Interdependence aspect, 73.02% of students are in the Proficient category, and the remaining 26.97% are in the Proficient category. There are no students who are classified as Adequate or Beginning to Develop. In the Face-to-Face Interaction aspect, 63.81% of students are in the Proficient category, and 36.18% are classified as Proficient, while no students are found in the Adequate or Beginning to Develop categories. Then, in the Accountability aspect, 74.34% of students are in the Proficient category, and 26.97% are in the Proficient category. This shows that the majority of students have a sense of individual responsibility for group assignments. The Responsibility aspect also shows good results, where 60.52% of students are included in the Proficient category, and 39.47% are Proficient. There are no students who are still in the developing or less stage. Finally, in the aspect of Group Working Skills, as many as 71.05% of students are in the Proficient category, while 28.94% are in the Proficient category. All students have demonstrated positive cooperation skills.
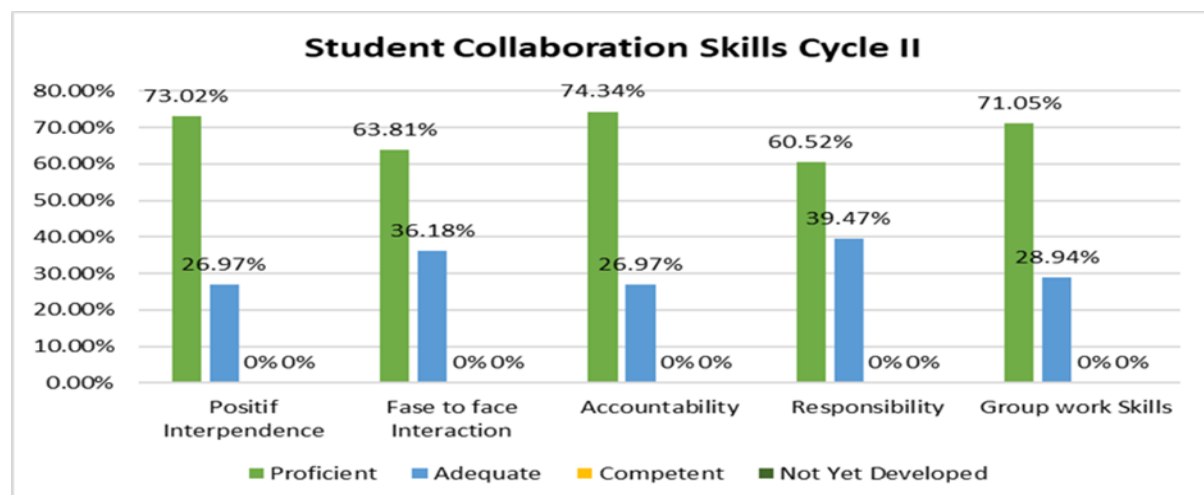

Figure 7. Student Collaboration Skills in Cycle II

Based on the image below, it can be seen that the results of the Visual Student Differentiation Product Test for Phase D Class VII-1 at RK Deli Murni Delitua Private Middle School are 1) Very Good in cycle II 100% 2) Good in cycle II 0% 3) Sufficient 0% 4) Less in cycle II 0% and Very Less in cycle II 0% with an average of 90.
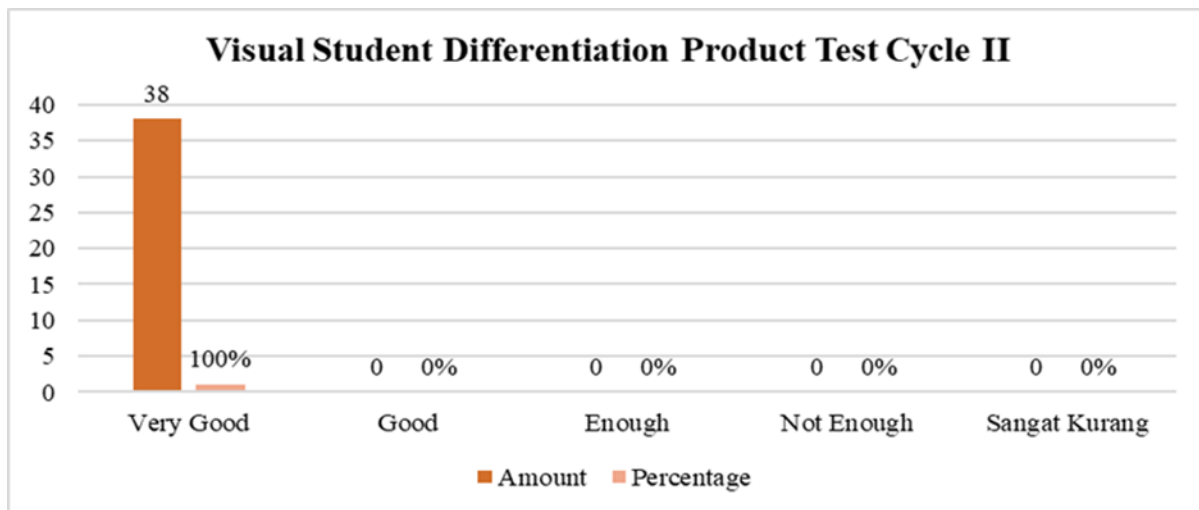

Figure 8. Visual Student Differentiation Product Test Cycle II

Based on the image below, it can be seen that the results of the product test of Differentiation of Auditory Students Phase D Class VII-1 at RK Deli Murni Delitua Private Middle School are 1) Very Good in cycle II 100% 2) Good in cycle II 0% 3) Sufficient 0% 4) Less in cycle II 0% and Very Less in cycle II 0% with an average of 90.

Figure 9. Auditory Student Differentiation Product Test Cycle II

Based on the image below, it can be seen that the results of the product test of the Differentiation of Kinesthetic Students Phase D Class VII-1 at RK Deli Murni Delitua Private Middle School are 1) Very Good in cycle II 100% 2) Good in cycle II 0% 3) Sufficient 0% 4) Less in cycle II 0% and Very Less in cycle II 0% with an average of 89.
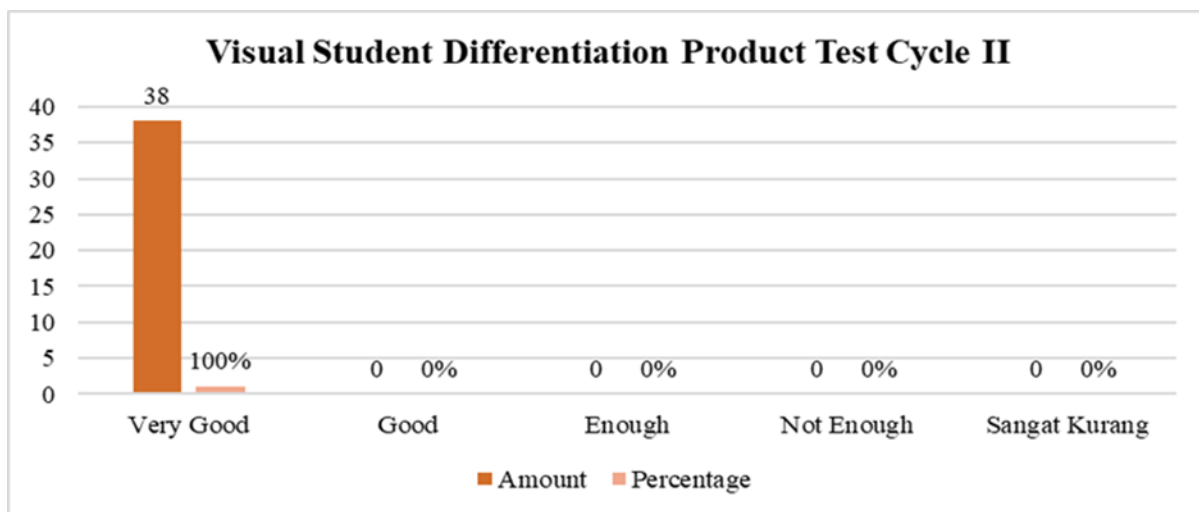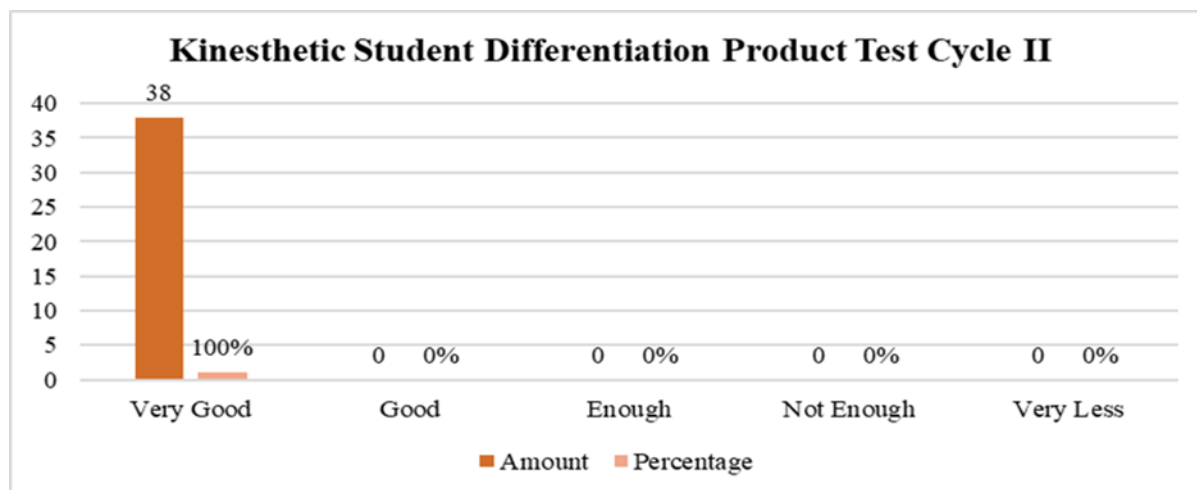
Figure 10. Kinesthetic Student Differentiation Product Test Cycle II

This study is in line with the expected objectives, namely to improve Student Collaboration Skills in Class VII-1 Phase D of RK Deli Murni Delitua Private Middle School. Based on the table below, it can be seen that there is an increase in the success of implementing the Differentiation learning model in Phase D of class VII-1 of RK Deli Murni Delitua Private Middle School, namely 1) Determining learning objectives in cycle I 50% increased to 87.5% with an increase of 75%. 2) Conducting initial diagnostics in cycle I 62.5% increased to 81.25% with an increase of 30%. 3) Analyzing student diversity in cycle I 56.25% increased to 87.5% with an increase of 55.5%. 4) Designing differentiation learning strategies in cycle I 62.5% increased to 93.75% with an increase of 50%. 5) Implementing differentiation learning in cycle I 50% and increased to 75% with an increase of 50%. 6) Conducting formative and summative assessments in cycle I 62.5% and increasing to 81.25% with an increase of 30%. 7) Feedback and reflection in cycle I 68.75% and increasing to 87.5% with an increase of 27.2%.

Table 1.Improving Differentiated Learning Models

ASPECT	SCORE OBTAINED AVERAGE		IMPROVEMENT (From Cycle I-Cycle II)
	CYCLE I	CYCLE II	
Determining Learning Objectives	50%	87.5%	75%
Performing Initial Diagnostics	62.5%	81.25%	30%
Analyzing Student Diversity	56.25%	87.5%	55.5%
Designing Differentiated Learning Strategies	62.5%	93.75%	50%
Implementing Differentiated Learning	50%	75%	50%
Conducting formative and summative assessments	62.5%	81.25%	30%
Feedback and Reflection	68.75%	87.5%	27.2%

Based on the table below, it can be seen that there is an increase in the success of implementing the Differentiation learning model in Phase D of class VII-1 of SMP Swasta RK Deli Murni Delitua, namely 1) Determining learning objectives in cycle I 50% increased to 87.5% with an increase of 75%. 2) Conducting initial diagnostics in cycle I 62.5% increased to 81.25% with an increase of 30%. 3) Analyzing student diversity in cycle I 56.25% increased to 87.5% with an increase of 55.5%. 4) Designing differentiation learning strategies in cycle I 62.5% increased to 93.75% with an increase of 50%. 5) Implementing differentiation learning in cycle I 50% and increased to 75% with an increase of

50%. 6) Conducting formative and summative assessments in cycle I 62.5% and increased to 81.25% with an increase of 30%. 7) Feedback and reflection in cycle I was 68.75% and increased to 87.5% with an increase of 27.2%.

Table 2.Improving Students Collaboration Skills

ASPECT	SCORE OBTAINED AVERAGE		IMPROVEMENT (From Cycle I-Cycle II)
	CYCLE I	CYCLE II	
Positive Interdependence	45.39%	73.02%	60.87%
Face to Face Interaction	35.52%	63.81%	79.64%
Accountability	38.15%	74.34%	94.86%
Responsibility	32.89%	60.52%	84.00%
Group Working Skills	40.13%	71.05%	77.04%

Based on the table below, it can be seen that there is an increase in students Collaboration Skills in Phase D of class VII-1 of SMP Swasta RK Deli Murni Delitua, namely 1) Positive interdependence in cycle I 45.39% increased to 73.02% with an increase of 60.87%. 2) Face-to-face interaction in cycle I 35.52% increased to 63.81% with an increase of 79.64%. 3) Accountability in cycle I 38.15% increased to 74.34% with an increase of 94.86%. 4) Responsibility 32.89% increased to 60.52% with an increase of 84.00%. 5) Group work skills 40.13% and increased to 71.05% with an increase of 77.04%.

Table 3. Improvement of Visual Students Differentiation Product Test Results

ASPECT	SCORE OBTAINED AVERAGE		IMPROVEMENT (From Cycle I-Cycle II)
	CYCLE I	CYCLE II	
Very good	36.36%	100%	100%
Good	54.54%	0%	-100%
Enough	9.09%	0%	-100%
Not enough	0%	0%	0%
Very less	0%	0%	0%

Based on the table below, it can be seen that there is an increase in the results of the auditory student differentiation product test of Phase D Class VII-1 at RK Deli Murni Delitua Private Middle School, namely 1) Very Good in cycle I 40% increased to 100% with an increase of 100% 2) Good in cycle I 60% increased to 0% with an increase of -100% 3) Sufficient in cycle I 0% increased to 0% with an increase of 0% 4) Less in cycle I 0% increased to 0% with an increase of 0% and Very Less in cycle I 0% increased to 0% with an increase of 0%.

Table 4. Improvement of Visual Students Differentiation Product Test Results

ASPECT	SCORE OBTAINED AVERAGE		IMPROVEMENT (From Cycle I-Cycle II)
	CYCLE I	CYCLE II	
Very good	40%	100%	100%
Good	60%	0%	-100%
Enough	0%	0%	0%
Not enough	0%	0%	0%
Very less	0%	0%	0%

Based on the table below, it can be seen that there is an increase in the results of the auditory student differentiation product test of Phase D Class VII-1 at SMP Swasta RK Deli Murni Delitua, namely 1) Very Good in cycle I 35.29% increased to 100% with an increase of 100% 2) Good in cycle I 47.05% increased to 0% with an increase of -100% 3) Sufficient in cycle I 17.64% increased to 0% with an increase of -100% 4) Less in cycle I 0% increased to 0% with an increase of 0% and Very Less in cycle I 0% increased to 0% with an increase of 0%.

Table 5. Improvement of Visual Student Differentiation Product Test Results

ASPECT	SCORE OBTAINED AVERAGE		IMPROVEMENT (From Cycle I-Cycle II)
	CYCLE I	CYCLE II	
Very good	35.29%	100%	100%
Good	47.05%	0%	-100%
Enough	17.64%	0%	-100%
Not enough	0%	0%	0%
Very less	0%	0%	0%

The application of the differentiation learning model to students of class VII-1 Phase D of SMP Swasta RK Deli Murni Delitua showed good results. The teacher designed concrete learning objectives that were in accordance with the curriculum. The objectives were conveyed verbally and visually, so that students were more focused and motivated to follow the learning (Ungusari, 2020). In the initial diagnostic stage, teachers use instruments to identify students' initial abilities. Clear directions help students understand the task, and assessment results are used as a basis for designing learning according to their needs (Dwi Suprapti & Ahmad Rosyid Ridho, 2024). In analyzing student diversity, teachers group students based on learning readiness, map interests through simple surveys, and record visual, auditory, and kinesthetic learning profiles. Teachers also routinely discuss with students to understand their difficulties and needs (Ashari et al., 2023). Learning strategies are designed based on the data. Materials are arranged according to the level of readiness, activities are varied according to interests, and the final product is adjusted to the students abilities. Learning methods and media are also selected based on the students learning styles (Wardhani, 2023). During the implementation, teachers deliver materials using different methods, provide optional assignments according to ability and interest, and provide additional support for students who need help. Teachers also monitor student progress as a basis for making learning decisions. Assessments are carried out in various ways, ranging from oral, quizzes, project assignments, to direct observation. Assignments are given according to ability level and assessment results are discussed with students to identify their strengths and weaknesses. In the final stage, teachers provide specific and constructive feedback. Students are also invited to reflect on the learning process and discuss to improve future learning. Teachers record student feedback as a basis for improving subsequent learning (Susilo et al., 2022).

The improvement of collaboration skills of Phase D students of Class VII-1 of RK Deli Murni Delitua Private Middle School was seen significantly after the implementation of the differentiation learning model. In the aspect of positive interdependence, students understand the goals of the group, accept their respective roles, help friends who are having difficulties, and show strong togetherness. They actively share tasks, support each other, and show awareness of individual contributions to mutual success (Rahmawati & Santosa, 2017). In the aspect of face-to-face interaction, students are increasingly active in discussions, giving opinions, asking questions, and listening to friends well. They show focus, respect the opinions of others, and respond constructively in group discussions. This reflects the development of communication skills and students self-confidence (Nilam & Yenti, 2023). The accountability aspect also increased, where students showed active participation, completed tasks according to their roles, provided structured group work reports, and completed tasks on time. They were more disciplined and able to manage time well in completing group responsibilities (Anjani, 2023). In terms of responsibility, students

carry out their roles well, provide relevant ideas, help resolve conflicts, and provide accurate information in discussions. This shows their maturity and ability to contribute to group goals constructively (Putri et al., 2019). Finally, in the aspect of working in groups, students actively discuss, complete individual tasks, show concern for friends, and are fully involved from the beginning to the end of group activities. This cooperative attitude strengthens social relationships and the effectiveness of teamwork (Sufajar & Qosyim, 2022). Overall, the implementation of the differentiation learning model is able to encourage students to develop comprehensive collaboration skills through active, responsible, and mutually supportive cooperation in group learning.

Conclusion

Based on the research findings during the implementation of classroom action research carried out in class VII-1 of SMP Swasta RK Deli Murni Delitua, the following conclusions can be drawn: The application of the differentiation learning model in Phase D, Class VII-1 of SMP Swasta RK Deli Murni Delitua succeeded in significantly improving students' collaboration skills. The level of achievement in determining learning objectives increased from 50% to 87.5% in the next cycle, with an increase of 75%. The ability to conduct initial diagnostics increased from 62.5% to 81.25%, indicating an increase of 30%. Analysis of student diversity increased from 56.25% to 87.5%, with an increase of 55.5%. The design of differentiation learning strategies increased from 62.5% to 93.75%, indicating an increase of 50%. The implementation of differentiation learning increased from 50% to 75%, with an increase of 50%. The implementation of formative and summative assessments increased from 62.5% to 81.25%, with an increase of 30%. Finally, feedback and reflection activities increased from 68.75% to 87.5%, with an increase of 27.2%.

The improvement of students' collaboration skills in Phase D, Class VII-1 of SMP Swasta RK Deli Murni Delitua can be seen from several important aspects. The percentage of students who showed positive interdependence increased from 45.39% to 73.02% in the next cycle, with an increase of 60.87%. In the aspect of face-to-face interaction, there was an increase from 35.52% to 63.81%, indicating an increase of 79.64%. Students accountability skills experienced a jump from 38.15% to 74.34%, with an increase of 94.86%. Meanwhile, the aspect of student responsibility increased from 32.89% to 60.52%, reflecting an increase of 84.00%. Finally, students skills in working in groups.

There was a significant increase in the results of the differentiation products of Phase D students of class VII-1 of SMP Swasta RK Deli Murni Delitua for the three learning profiles (visual, auditory, and kinesthetic). For visual students, the Very Good category increased from 36.26% to 100%, while the other categories remained at 0%. For auditory students, the Very Good category increased from 40% to 100%, while the Good category decreased from 60% to 0%, and the other categories remained at 0%. Meanwhile, for kinesthetic students, the Very Good category increased from 35.29% to 100%, the Good category decreased from 47.05% to 0%, and Sufficient from 17.64% also to 0%. Overall, these results indicate that all students from the three learning styles managed to achieve the Very Good category in the differentiation product after the learning cycle, while the other categories no longer appeared. This reflects the effectiveness of the implementation of the differentiation learning model in improving the quality of student learning outcomes according to their respective learning styles.

Recommendation

This study shows that the application of the differentiation learning model can help improve students collaboration skills. With this model, students are expected to be more active, able to share tasks, and help each other in study groups. Teachers are advised to continue to develop interesting learning methods that are in accordance with students learning styles so that the learning atmosphere becomes more enjoyable and effective. Schools need to provide adequate facilities, sufficient learning time, and

training for teachers so that they can apply this model well. STP St. Bonaventura KAM is expected to provide training on differentiation learning methods and support prospective teacher students in implementing teaching practices in schools. For further research, it is recommended that the arrangement of learning time be considered so that each stage of learning can run optimally. In addition, research can be conducted at other class levels or subjects to determine the extent to which the differentiation model can be applied more widely.

Reference

Anjani, ET (2023). The Influence of Study Time Management in Improving Discipline and Achievement in High School/Vocational High School Students. Karimah Tauhid, 2(5), 1447–1453.

Ashari, I., Rusli, K., Walinga, ANT, & Cakrawijaya, MH (2023). Survey of Students' Interest in Learning Physical Education Class VIII at UPT Smpn Satap Lebo No. 24 Selayar Islands. Journal of Education, Social and Humanities E-Issn, 1, 28–36.

Aulia, T., Titin, T., & Wahyuni, ES (2024). Improving Student Learning Outcomes Using the Cooperative Model of Teams Assisted Individualization Type in Class VII MTs AL-Muhajirin Rasau Jaya. PTK: Classroom Action Journal, 4(2), 229–241. https://doi.org/10.53624/ptk.v4i2.318.

Budi, SS, Suhaili, N., & Irdamurni, I. (2021). The concept of learning styles and their implementation in the learning process. The Concept of Learning Styles and Their Implementation in the Learning Process, 4(2), 232–236.

Dwi Suprapti, & Ahmad Rosyid Ridho. (2024). Diagnostic Assessment as Learning Assessment in Independent Curriculum at MIN 2 Boyolali. Katalis Pendidikan: Journal of Educational Sciences and Mathematics, 1(2), 253–263. https://doi.org/10.62383/katalis.v1i2.447.

Karmelita, FD, Mangallo, Y., & Rusali, E. (2023). Application of Differentiated Learning in Curved Side Space Building Learning for Grade IX of Junior High School. Cakrawala Ilmu: Journal of Educational Sciences, 02(03), 48–57.

Ministry of Education, Culture, Research and Technology. (2022). Dimensions, Elements, and Sub-Elements of the Pancasila Student Profile in the Independent Curriculum. Ministry of Education, Culture, Research and Technology, 1–37.

Nilam, HS, & Yenti, E. (2023). Analysis of Students' Communication Skills on Chemical Bonding Material. Journal of Natural Science Learning, 02(02), 17–22. https://jom.uin-suska.ac.id/index.php/JNSL.

Nurhidayati, U. (2022). Forging the competence and role of driving teachers in meeting students' learning needs through differentiated learning. Jurnal Ilmiah Pro Guru, 8(1), 279–291. https://journal2.um.ac.id/index.php/jipg/article/view/31241.

Pratiwi, HR, Juhanda, A., & Setiono, S. (2020). Analysis Of Student Collaboration Skills Through Peer Assessment Of The Respiratory System Concept. Journal Of Biology Education, 3(2), 110. https://doi.org/10.21043/jobe.v3i2.7898.

Putri, AE, Wahyuni, A., & Kuning, DS (2019). Forming the Character of Responsibility of High School Students in English Speaking Ability Through Cooperative Learning Methods. Semnasfip, 140–147. https://jurnal.umj.ac.id/index.php/SEMNASFIP/article/view/5120.

Rizky, NS, Patmisari, & Hastuti, S. (2024). Improving Students' Collaboration Skills Using Gallery Walk Corresponding Author. Ptk, 4(2), 2747–1969. https://doi.org/10.53624/ptk.v4i2.389.

Sari, APK, & Mawardi. (2023). Implementation of differentiated learning models in improving elementary school students' collaboration skills. Scientific Journal of Elementary Education, 08(September), 1–24.

Sufajar, D., & Qosyim, A. (2022). Analysis of Junior High School Students' Collaboration Skills in Science Learning During the Covid-19 Pandemic. Pensa: E-Journal of Science Education, 10(2), 253–259. https://ejournal.unesa.ac.id/index.php/pensa/article/view/45054%0Ahttps://ejournal.unesa.ac.id/index.php/pensa/article/download/45054/40720.

Susilo, MJ, Hajar Dewantoro, M., Yuningsih, Y., Burhanuddin, MA, & Wahab, A. (2022). Learning Journal as Student Reflection and Teacher Evaluation During the Learning Process. Briliant: Research and Conceptual Journal, 7(1), 116. https://doi.org/10.28926/briliant.v7i1.914.

Ungusari, E. (2020). STRUCTURED LEARNING WITH ASSIGNMENT GIVING IN IMPROVING SOCIAL STUDIES LEARNING ACHIEVEMENT OF GRADE IX B STUDENTS OF MUHAMMADIYAH PRIVATE MIDDLE SCHOOL KUALA KAPUAS. Nhk技研, 151, 10–17.

Wahyuningsari, D., Mujiwati, Y., Hilmiyah, L., Kusumawardani, F., & Sari, IP (2022). Differentiated Learning in the Framework of Realizing Independent Learning. Jurnal Jendela Pendidikan, 2(04), 529–535. https://doi.org/10.57008/jjp.v2i04.301.

Wardhani, A. (2023). The Implementation of Diagnostic Assessment to Support Differentiated Instruction in English Learning at SMK N 1 Pringapus. 13(4), 586–595.

Zainuddin, M.-. (2017). Collaborative Learning Model Increases Student Participation, Social Skills, and Social Studies Learning Achievement. Journal of Social Sciences, 3(1), 75–83. https://doi.org/10.23887/jiis.v3i1.11474.