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Student Diversity and Fulfillment of Curriculum Targets in SDN Tegal Besar 02 Mathematics Subject Knowing Fractions in Class 2B

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ABSTRACT

Student diversity reflects the diversity of Indonesian society at large, including aspects of language, religion, gender, ethnicity and culture. Environmental differences are one form of diversity that is often found in the world of education. Quality education is education that is able to accommodate and meet the needs of each learner without setting aside the achievement of curriculum targets. Meeting the targets of the mathematics curriculum in the midst of student diversity requires a flexible and responsive learning approach.However, 2B learners face more difficult challenges in the learning process, especially when the learning material becomes more complex one of them is in math learning.The purpose of the study was to improve the learning outcomes of grade 2B students in the material of recognizing fractions in Mathematics subjects by using diverse scaffolding. This class action research method consists of several stages, namely planning, acting, observing, and reflecting. The results after the action is given there is a difference in percentage value, the percentage value of students' completeness is 82.14% and 89.28%. Based on the results have met the KKM value set. This research shows that the application of the project-based learning model in learning fractions can improve the learning outcomes of class 2B students at SDN Tegal Besar 02. In addition, the PjBL model also provides a more enjoyable learning experience and is relevant to everyday life.

Key Word *Diversity, Project Based Learning, Merdeka Curriculum, Classroom Action*
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INTRODUCTION

Student diversity reflects the diversity of Indonesian society at large, including aspects of language, religion, gender, ethnicity and culture (Sipuan et al., 2022). Factors such as environment, ethnicity, culture, gender and religion also influence the dynamics of learning in schools(Tomlinson & Jarvis, 2023). Environmental differences are one form of diversity that is often found in the

world of education. This results in variations in the character of each child, where each has its own uniqueness, differences and privileges, including in its potential (Safitri et al., 2024). Quality education is education that is able to accommodate and meet the needs of each learner without setting aside the achievement of curriculum targets (Lestari, 2022).

The curriculum is a collection of subjects and educational programs that include plans, objectives, and learning materials, including teaching methods (Usdarisman et al., 2024). The curriculum serves as a guide for educators in achieving learning targets and objectives effectively (Triwiyanto, 2022). To meet the needs of diverse learners, an appropriate teaching strategy is needed so that the teaching and learning process can run optimally in the classroom (Tomlinson & Jarvis, 2023). The diversity of students at SDN 02 Tegal Besar includes various aspects, such as differences in academic abilities, cultural backgrounds, learning styles, and individual interests. This variation requires educators to develop adaptive learning strategies so that each student can achieve the competencies set out in the curriculum, especially in mathematics (Widiyanti et al., 2024). An in-depth understanding of each student's unique characteristics is key in designing effective and inclusive learning processes(Handayani et al., 2024).

During the PPL process, students carried out observation activities of learner characteristics, it was found that students showed a high interest in learning mathematics subjects. However, 2B learners face more difficult challenges in the learning process, especially when the learning material becomes more complex. In addition, students are also actively involved when learning is carried out by adding additional learning media in the classroom, such as audio media, learning media, such as audio-visual media. This research is also based on data from cognitive diagnostic assessment results for group division according to the TaRL approach and noncognitive diagnostic results for teachers to design learning activities. Differences in initial abilities create challenges in the classroom, teachers must ensure that each learner gets support to improve learning abilities.to improve learning ability. This requires flexible and differentiated learning strategies in learning, so that learners can develop and successfully achieve their potential in learning for targets of the curriculum .

Meeting the targets of the mathematics curriculum in the midst of student diversity requires a flexible and responsive learning approach (Rifai et al., 2024). Differentiated learning is one of the strategies that can be applied, where teachers adjust learning content, processes and products according to the needs, interests and learning readiness of each student (Ade Sintia Wulandari, 2022).

This approach not only helps students understand math concepts better, but also increases their motivation and engagement in the learning process (Sri, 2024) .

The implementation of differentiated learning at SDN 02 Tegal Besar requires careful planning and commitment from all relevant parties. Teachers are required to continuously develop their competence in identifying students' learning needs and designing appropriate learning strategies (Surtini & Muhtar, 2024). In addition, support from the school and parents is essential in creating a conducive learning environment. With good collaboration, it is expected that the fulfillment of the mathematics curriculum targets can be achieved optimally, despite the diversity of student characteristics (Yani & Susanti, 2023).

Therefore, a learning design with the TaRL approach was obtained for cycle 1 and cycle 2 with PBL and PjBL models to determine the final results of students with different treatments. The learning outcomes test research instrument used was 20 multiple choice questions. The techniques used to obtain data or information in this study include observation, assessment, and documentation techniques (Fix et al., 2022). To support the data collection process, several instruments were used, such as documentation techniques, observation sheets related to observing learning activities, and evaluation sheets that function to measure the improvement of students' learning outcomes, both before and after the application of learning media.

Data analysis is carried out after the data collection process is complete. With the hope of providing a clear picture related to the effectiveness of the TaRL approach differentiation learning design through two different models. In class action research, the analysis techniques used include procedures for processing and interpreting the data that has been collected. The purpose of this data analysis is to identify patterns, draw conclusions, and make decisions based on the information obtained. The data analysis technique applied in this study is the calculation of the average and percentage of student learning outcomes (Darmayanti, 2023). The results of the analysis are then presented in the form of tables or diagrams, so that researchers can process and understand the data more clearly using the right method.

RESEARCH METHOD

The purpose of this study was to improve the learning outcomes of grade students 2B in the material of recognizing fractions in Mathematics subjects by using learning mediavarious . This research was conducted at SDN Tegal Besar 02 Jember involving 28 students. This research consists of several stages, namely planning, acting, observing, and reflecting (Reeve, 2024). The approach

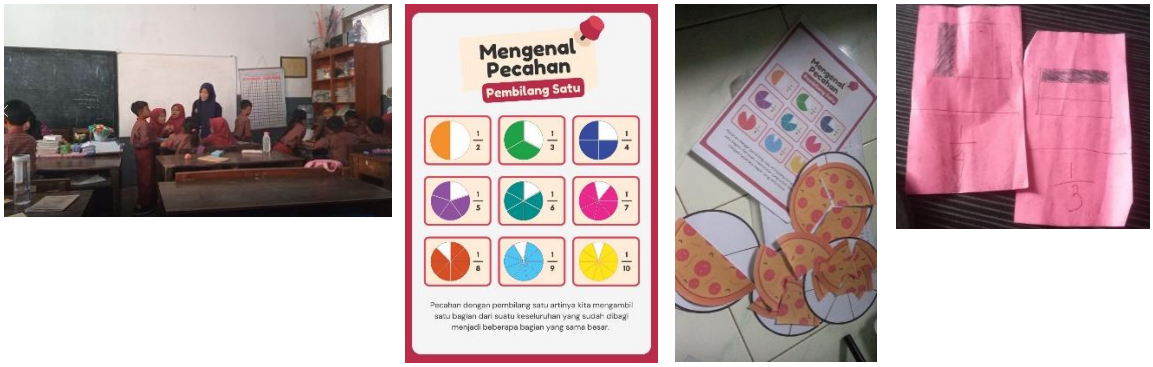
used in this research is collaborative classroom action, where PPG Pre-service students act as researchers as well as teachers, and fellow students act as observers. This research was taken on February , 2025 3-21 during PPL II.

RESULT AND DISCUSSION

Research Result

This study is a class action research, which is a research method that aims to improve the quality of learning in the classroom. PTK is an effective approach for teachers to understand their strengths and weaknesses, improve student learning outcomes, and improve the overall learning process (Adiyono et al., 2023). Therefore, the application of PTK is very important for educators. Classroom action research aims to identify problems in learning while finding the right solution to overcome them.

The implementation of differentiated learning in the Merdeka Curriculum at SDN Tegal Besar 02 involves adjustments to several key components: learning content, processes, and products. Details of the implementation of cycle I and II, as follows. Meanwhile, product differentiation allows students to demonstrate their understanding through different forms of output or work. Product differentiation is the way students show their work to the teacher in the form of assignments or projects. These products should provide challenge and variety. Work products can be writings, tests, performances, presentations, speeches, recordings, diagrams, or others. Most importantly, the product should reflect students' understanding of the learning objectives.



a. b. c. d.

Figure 1.
Application of TaRL Approach, Supplementary Reading Material for Guidance Need Group, Fraction Puzzle Media, and Product

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Observation and Reflection Cycle

Learning Outcomes

The purpose of Cycle I was to improve the learning outcomes of fractions by applying PjBL to class 2B students of in the SDN Tegal Besar 02 Jember 2025/2026 academic year. The results of cycle I research can be seen in table 1.

Table 1.
Results of Students' Grades in Cycle I

Parameter	Siklus
Average	81,25
Highest Score	100
Lowest Score	40
Learners Complete	23
Incomplete Learners	5
Percentage of Students Completed	82,14%
Classical Completeness	Completed

Table 2.
Results of Students' Grades in Cycle I

Parameter	Siklus
Average	87,32
Highest Score	100
Lowest Score	60
Learners Complete	25
Incomplete Learners	3
Percentage of Students Completed	89,28%
Classical Completeness	Completed

Table 1. And Table. 2 shows the value of the learning outcomes test after being given action there is a difference in percentage value, the value of percentagestudents' completeness is 82.14% and 89.28%. Based on the results have met the KKM value set. In cycle II, the learning outcomes of fractions of students in class 2B SDN Tegal Besar 02 have met the objectives of the study, so that no further cycles are needed.

Discussion

In practice, during the PPL at SDN Tegal Besar 02, you can start by conducting diagnostic assessments to identify each student's learning profile, interests and readiness to learn. This information becomes the basis for designing appropriate learning strategies. For example, in learning mathematics about fractions, high-ability students can be challenged with more complex problems, while students who need additional help can be given special

guidance or simplified materials. This approach has been proven effective in improving students' understanding of mathematical concepts (Marsela Yulianti et al., 2022).

Based on the summative test results with different model class actions, there was an increase in the lowest score from 40 to 60. In this case, teachers must be wise by adjusting the approach according to the characteristics and needs of students and giving sufficient attention (Darmayanti, 2023). One way that can be done is through differentiated learning (Haelermans, 2022). With this strategy, teachers can adjust teaching methods to achieve curriculum targets while remaining student-centered. This allows students to learn according to their readiness, interest and learning profile. It can be seen from the results of the research that participants are not complete or need guidance reduced from 5 students to 3.Therefore, teachers need to be able to deal with it without ignoring the objectives of the curriculum.

The diversity of learners is something that always exists in the learning process. Implementing differentiated learning requires commitment and collaboration between teachers, students and parents. Teachers are required to continuously develop their competence in identifying students' learning needs and designing appropriate learning strategies (Engeness, 2021). In addition, support from the school and parents is essential in creating a conducive learning environment. With good collaboration, it is expected that the fulfillment of the mathematics curriculum targets can be achieved optimally, despite the diversity of student characteristics (Demo et al., 2021).

Differentiated learning is an approach that adapts the learning process to students' individual needs, interests and abilities. This approach is in line with research that emphasizes the importance of adjusting learning based on the individual needs of students (Marsela Yulianti et al., 2022). In the context of Merdeka Curriculum, this approach is essential to ensure that every student gets an optimal learning experience, especially in mathematics subjects at SDN Tegal Besar 02. By implementing differentiated learning, teachers can accommodate students' individual differences, making learning more inclusive and effective. Content differentiation means teachers provide varied materials according to students' level of understanding (Pozas et al., 2020). This research uses materials supported by the application of everyday fractions in the cutting of suwar suwir cake and prol tape. Process differentiation involves a variety of learning methods and activities to accommodate students' various learning styles (Apriyantini & Sukendra, 2023). This research varies the process with the use of audio-visual media (YouTube animated videos) and visual text (posters) prepared by the teacher as well as the division of group tasks (LKPD according

to ability). Learning with process differentiation can increase students' enthusiasm for learning, as they can understand, explore and express themselves according to their individual learning styles or characteristics (Reeve, 2024). When learning is tailored to their needs, students will be more motivated to learn. Motivation to learn can arise from oneself, others, or the surrounding environment (Reeve, 2024). However, students still need encouragement or stimulus to generate motivation in themselves. This is in line with research (Handiyani & Muhtar, 2022) students are given motivation that can encourage them to have a desire to achieve learning goals or outcomes. This motivation can be obtained in two ways, namely from within oneself and from external environmental factors This research was conducted in 2 cycles. At the end of each cycle, learning outcome tests and observations of student and teacher activities during the learning process were conducted.

The application during PPL in fraction mathematics subjects gained good practical experience for the application of different learning that is more directed towards the TarL approach with the PjBL model with a percentage value of student completeness of 82.14% getting very good results as a follow-up to the learning cycle using the TarL PBL model with a percentage value of student completeness of 89.28%. Based on research (Wulandari et al., 2024) the application of the approachTeaching at The Right Level (TaRL) is effective in improving math learning outcomes in grade II students, especially in fraction materials. TaRL can be a very effective alternative in improving the quality of mathematics learning in elementary schools, especially in overcoming the difficulties faced by students in fraction material (Tiara et al., 2024). Meanwhile, based on research (Azizah & Wardani, 2019) the model Project Based Learning can improve student learning outcomes in the cognitive and psychomotor domains shown from 24 students and has met the predetermined achievement indicators. Therefore, PjBL can be used as an alternative in solving learning problems in students (Nadhifa & Lestari, 2023). The implication of this class action helps students learn more meaningfully and liberates students because teachers facilitate learning from cognitive and non-cognitive mapping to get an increase in the final results of learning mathematics on the topic of recognizing half and quarter fractions.

In the face of student diversity at SDN 02 Tegal Besar, the implementation of differentiated learning in mathematics has proven effective in meeting curriculum targets. This approach allows teachers to customize teaching strategies according to the needs, interests and abilities of each student, so that each individual can achieve the expected competencies. Studies show that

differentiated learning can improve students' learning activities and outcomes in math.

In addition, for planning as the end of PPG for UKIN with the use of augmented reality (AR) can be a tool in differentiated learning. This technology allows the presentation of mathematical material in an interactive and interesting way, so that it can increase student motivation and understanding. The implementation of AR in mathematics learning has shown positive results in increasing student engagement and concept understanding (Indrayati et al., 2024).

Challenges in implementing differentiated learning at SDN Tegal Besar 02 include the limited resources and time teachers have to design and implement diverse learning strategies. Therefore, support from various parties is needed, including training for teachers, providing adequate learning resources, and collaboration between teachers, students, and parents. With a joint commitment, the implementation of differentiated learning in Merdeka Curriculum is expected to improve the quality of mathematics learning and meet the learning needs of each student.

CONCLUSION

Based on the results of research conducted, the Collaborative Classroom Action Research (CCA) that involved cooperation between researchers, PPL II field supervisors (DPL), class teachers 2B or PPL II host teachers, and the principal of SDN Tegal Besar 02 Jember showed that the application of the learning model project-basedin learning fractions was able to improve the learning outcomes of class students 2B at the school. In addition, the PjBL model also provides a more enjoyable learning experience and is relevant to everyday life. complex . Therefore, the application of this model is recommended for future learning development.The PjBL model can be an effective learning alternative, especially for learners who have difficulty in understanding abstract and concepts

This study also suggests that teachers apply the PjBL learning model in the classroom, so that students can get a more meaningful and contextual learning experience. However, it should be noted that the implementation of PjBL requires careful planning and proper time management so that learning can take place effectively. In addition, teachers must also ensure the active involvement of learners and ensure that they really understand the material learned during the learning process. Further research can be reviewed with the help of (AR) augmented reality.

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