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Challenges in Implementing the TaRL Approach in Mathematics Learning for Grade VI Students

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ABSTRACT

The purpose of this research is to discover the problems that occur in the field by describing the problems or challenges teachers face in learning by applying the TaRL approach to mathematics subjects in class VI A SDN Banjar Agung 4. This research is a qualitative descriptive research. The primary and secondary data explored in this study are primary and secondary. Research data were obtained through interviews, observations, and documentation. Data analysis was done through data reduction, presentation, and conclusion drawing. Data validity was tested through triangulation techniques. The results showed that several problems challenge teachers in implementing the TaRL approach, namely (1) limited teacher understanding of TaRL concepts and techniques, (2) heterogeneous classroom environment with a large number of students, namely 36 students, (3) limited time and costs and monitoring the implementation of the learning process, (4) lack of resource support such as the preparation of learning tools, and (5) limited training and socialization regarding process planning and learning evaluation using the TaRL approach. The solution that can be given is that the school or principal, as the leader in the basic education unit, needs to provide resource support in the form of providing training on the TaRL learning approach to teachers and financial support in the form of comfortable facilities, learning resources, and financial support.

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1. INTRODUCTION

Education is an effort or effort made in order to help develop the abilities possessed by humans (Burmeister et al., 2012; Bui & Porter, 2014; Montessori, 2015). In its implementation, education is not only limited to providing knowledge to students, but it also plays a role in realizing the needs and desires of students and forming useful abilities in their lives (Slavich & Zimbardo, 2012; Priscilla & Yudhyarta, 2021; Aruzi et al., 2022). Learners in the education process are known as one of the human components that occupy a central position. Thus, to direct learners by learning objectives, the educational process should be adjusted to the circumstances and level of learners' abilities, characteristics, and interests (Dunlosky et al., 2013; Harackiewicz et al., 2016; Maman et al., 2021).

One of the disciplines that serves as a foundation for developing the critical thinking and problem-solving skills that pupils require in mathematics is this one (Sasson et al., 2018; Siagan et al., 2019; Cáceres et al., 2020; Widayanti & Juhji, 2023; Alhamuddin et al., 2023).

In the learning process, students often consider math concepts abstract and have a high difficulty level. However, an understanding of mathematical concepts is important for students to have because it can help develop their ability to solve various problems in real life. According to Permendiknas in Listiyaningsih (2021), learning mathematics in elementary schools has the aim of understanding mathematical concepts, using reasoning in learning, solving problems related to mathematical concepts, communicating ideas through the use of tables and diagrams, and having an attitude of appreciating mathematics and its functions in everyday life.

Given the significance of mathematics education for students, teaching them the subject must always be planned to maximize their potential and skills by applying the appropriate methodology and considering their skills. According to Ahyar in Hadiawati et al. (2024), teaching at the Right Level (TaRL) is an approach that has an orientation toward students so that the learning process is carried out according to the abilities possessed by students with a level of ability that is classified as low, medium and high ability. Thus, learning is not based on age or grade level. In line with the opinion of Mulyani et al. (2024) that grouping learners based on ability levels in the TaRL approach ensures that each learner can receive teaching that suits their needs, is not left behind or feels too challenged, or marginalized due to learning difficulties or too easy, thus enabling improved learning outcomes.

The mismatch between the learning approach and the learners' ability level can cause various negative impacts on the learning process. Such cases can lead to low-ability learners tending to experience difficulties in processing learning, leading to weak motivation and self-confidence. Meanwhile, high-ability learners tend to feel bored because they are not challenged by material that is too easy. It can hinder the achievement of optimal learning objectives, both in terms of mastery of material and the development of student's critical thinking and problem-solving skills. Thus, teachers need to be able to design inclusive mathematics learning by paying attention to students' ability level so that it can accommodate the individual needs of students, one of which is through efforts to apply the teaching at the Right Level (TaRL) approach to mathematics learning.

Previous relevant research is conducted by Listiyaningsih, Nugraheni, and Yuliasih (2023) titled "Improving Learning Outcomes Through the TaRL Approach PBL Model in Mathematics Class V SDN Bendan Ngisor." The study shows that learning mathematics by applying the teaching at the Right Level (TaRL) approach can improve student learning outcomes with a success index, namely the level of achievement of student learning outcomes reaches a percentage of 85% with a score ≥ 70. Another research was conducted by Kafah, Efianingrum, Kholifah, Pangestu, and Sugara (2024) with the title "Teaching at the Right Level-Based Project-based Learning on Mathematical Connections of Fourth Grade Elementary School Students," which shows that the application of Project-based Learning as a learning model with the TaRL approach can improve and influence the mathematical connection skills of fourth-grade elementary school students, especially in mathematics subjects. Although TaRL has been successfully applied in several studies, especially in the context of learning mathematics in elementary schools. However, in some schools, it is rarely explored in depth. Many teachers still use a uniform approach, encouraging learners to understand the material at the same speed and in the same way. At the same time, each individual's ability level is known to be very diverse. This study aims to explore the problems that occur in the field by describing the problems or challenges teachers face in learning by applying the TaRL approach to mathematics subjects in class VI A SDN Banjar Agung 4.

2. RESEARCH METHOD

The type of research used in this study is descriptive research using a qualitative approach. The qualitative approach aims to understand and explain social phenomena in depth by interpreting the context, experiences, and perspectives of individuals involved (Ardiansyah et al., 2023). The qualitative approach is used based on several reasons, namely allowing researchers to gain a deep understanding of the phenomena that occur, explore the various factors that influence this, and review the objectives of the research conducted, namely examining learning problems or problems in applying the Teaching at the Right Level (TaRL) approach in mathematics subjects in class VI A at SDN Banjar Agung 4. In addition, the qualitative approach also presents directly the nature of the relationship between researchers and respondents.

This research uses primary data and secondary data to reveal the actual situation. Data sources were obtained from the teacher as the homeroom teacher of class VI A SDN Banjar Agung 4, namely Mrs. Nina Rohmawati, S.Pd., as the primary data source. Meanwhile, secondary data sources were obtained from documents obtained by researchers through direct observation activities as a supporting source of primary data. Data collection techniques in this study were conducted through interviews, observations, and documentation. According to Sugiyono (2018), interviews are a data collection technique that asks questions to sources or research subjects to find the problem to be studied.

This interview technique was used to obtain data related to the implementation of learning and learning problems in applying the TaRL approach in Mathematics subjects in class VI A. Observation is a data collection technique that involves direct experience related to participants and the context involved in the research phenomenon (Ardiansyah et al., 2023). Observations in this study were carried out through observing the activities of teachers and students in learning mathematics and the situation around the school environment. Documentation is an information collection technique that searches for accurate evidence according to the focus of the problem under study (Waruwu, 2023). Documentation in this study is used as evidence to strengthen the data obtained directly from the research location, which includes written reports, books, or relevant documents and photos of research activities carried out.

The data analysis technique in this study refers to data analysis by Miles and Huberman, which includes 1) data reduction, 2) presentation of data, and 3) verification (Sofwatillah et al., 2024). Triangulation techniques were used in this study to check the validity of research data by checking data from the same source with different techniques (Sugiyono, 2018; Nurfajriani et al., 2024).

3. FINDINGS AND DISCUSSION

SDN Banjar Agung 4 is located on Jalan Sheikh Nawawi Al-Bantani KM 2, Banjar Agung sub-district, Cipocok Jaya sub-district, Serang City, Banten province. The facilities and infrastructure are complete and in good condition; there are 12 classrooms, a library room, a teacher's room, and a leadership room. Based on recap data in the odd semester 2024/2025, there are 12 study groups with 409 students. In general, the condition of the school building is still quite good, but the availability of books and learning support tools is still limited.

In the interview with the teacher of class VI A, she stated that lesson planning involves designing learning, and assessment is done by considering students' ability and their social, cultural, and economic backgrounds. In addition, communication tools and budgets are important, as economic and social backgrounds greatly affect the implementation of learning and assessment. In learning practices, especially in mathematics subjects, teachers have not conducted specific and comprehensive initial or diagnostic assessments of students' learning

styles or ability levels before designing lessons. However, efforts to find out the initial abilities of students are carried out by the teacher by giving pretest questions in the form of questions or by asking trigger questions related to the material to be learned so that the language style, level of ability, and understanding of students, reasoning power, and activeness of students before learning activities are carried out.

Based on further interviews, information was obtained that there are several ways that teachers design learning by taking into account the characteristics of students, one of which is by providing triggering questions that encourage students' critical thinking skills. Learners with higher ability levels can be recognized based on their ability to answer and ask questions actively and critically. Meanwhile, learners with lower abilities can be recognized by their lack of involvement in answering the teacher's questions. In addition to providing triggering questions, the way teachers design learning is also by observing the ability of students to participate in learning activities carried out and the learning outcomes of students periodically. The results of these observations show that there are learners with low ability levels, namely learners who are not yet fluent in reading or have low literacy and numeracy skills. Some are fluent in reading and writing but experience delays understanding and following learning activities. The teacher makes a group learning design to support learners' collaboration skills in learning and determines specific strategies for guiding learners with low ability levels.

Based on the results of interviews and observations, efforts to group learning by teachers based on their ability levels are sometimes carried out heterogeneously and homogeneously. Heterogeneous group learning with different ability levels is done to encourage students to collaborate and enable the creation of peer teaching-learning. In addition, grouping also occurs randomly, which creates a homogeneous group. However, the grouping can encourage less active learners to be able to participate more actively and encourage their attitude of responsibility in working to complete the task. It is in line with the observation that in its implementation in mathematics learning, teachers sometimes give freedom to learners to choose their groups to maximize interaction between learners with varying abilities and randomly trigger more active and effective group dynamics. It can increase learner participation and create a collaborative learning atmosphere in mathematics.

Furthermore, based on the results of interviews and observations, the assessments prepared by teachers for the assessment given to each learner are the same, and there is no difference between students with high and low ability levels. However, teachers make a difference in the standard of achievement of students' understanding or ability. For example, the assessment is conducted for students who cannot read fluently by considering their motivation, attendance, and involvement in learning activities. Based on the results of observations in mathematics learning in Chapter II with the topic of the Concept of Ratio, each learner gets the same assessment where the teacher gives questions according to the Package Book and LKS. It causes the assessment given to be less able to reflect the individual needs of learners, so some learners find it difficult to understand the task, while others feel less challenged.

The follow-up carried out on students who have not achieved learning objectives is by providing remedial questions for students who have not reached the KKM score, then repeating the material by re-explaining material that is difficult for students to understand. Students with a low level of ability are given treatment that is greater in proportion to help students improve their abilities and understanding in learning. Based on observations in mathematics learning, teachers provide re-explanations related to ratio material for students who have not reached the KKM in the Midterm Summative (STS) and are given remedial questions. For students who have reached the KKM value, more complex problems are given to develop a deeper understanding and train critical thinking skills.

Based on the interviews and observations, teachers have identified the different abilities possessed by Grade VI A students in the classroom and understand that the learning provided should be adjusted to their ability level. However, teachers still struggle to design and compile lesson plans, including the assessment forms and instruments used to integrate the Teaching at the Right Level (TaRL) approach. It is related to teachers' competencies, which can be influenced by the lack of training or socialization regarding applying the TaRL approach. Thus, there is limited teacher understanding of the concepts and techniques in applying the TaRL approach in the classroom. Another problem that hinders teachers from applying the TaRL approach is the heterogeneous classroom environment, with many students in one class, namely 36 students.

Based on the observation of learning in the classroom, it is known that teachers still have difficulties managing the class and creating an effective and conducive learning environment, especially in organizing students. In addition, the resource person stated that obstacles, including the lack of availability of time, materials, and costs, may be needed to prepare and implement this learning approach optimally. It is in line with the opinion of Firdaus and Prayudi in Wahira et al. (2024), which states that the problems that are a challenge for teachers in implementing Teaching at the Right Level (TaRL) include: 1) determining the appropriate level of learning for each learner, which requires careful evaluation and a good understanding of learners' abilities and needs; 2) appropriate classroom organization, given the different learning levels; 3) adjusting teaching delivery and learning materials, which requires preparation as well as flexibility; 5) managing time effectively and ensuring that teachers can adjust time to cover different skill levels without compromising the core curriculum; and 6) evaluating learners' progress on an ongoing basis and adjusting learning approaches, so teachers need effective evaluation tools and skills to respond to learners' changing needs.

The teaching module prepared by the teacher has not implemented the concept of Teaching at the Right Level approach. Both in the teaching modules that have been prepared and when the learning process is carried out, the learning approach used is only limited to student-centered, which encourages students to participate actively in learning activities in groups. Efforts made by teachers to identify the characteristics, including students' ability level, are carried out through question-and-answer activities in the classroom, paying attention to students' activeness when learning and periodically reviewing learning outcomes. Teachers have not specifically designed and provided diagnostic assessments to determine students' learning styles and ability levels, nor have they applied the results to design teaching modules and learning assessments using the Teaching at the Right Level approach principles. In its application, the Teaching at the Right Level approach needs to begin with the teacher's efforts to carry out diagnostic assessments that identify students' characteristics, potential, and learning needs. It can make it easier for teachers to understand students' development stages and learning achievements (Apriantini & Sukendra, 2023). The results of diagnostic assessments conducted by teachers must be followed up in planning learning activities and assessments given to learners according to their needs. The initial assessment involved in the TaRL approach can help teachers determine the basic abilities of each learner in reading and mathematics so that teachers can provide personalized attention and targeted instruction to help learners reach their maximum potential, especially in mathematics (Setyawati et al., 2024).

Meanwhile, the learning practice applied by teachers when grouping learners is done heterogeneously and homogeneously. Heterogeneous grouping aims to encourage learners' collaboration skills in learning to enable peer teaching activities. Meanwhile, homogeneous grouping can help less active learners become more actively involved and encourage their attitude of responsibility in completing tasks. The ability level of learners with prominent

differences is that one learner still has low literacy and numeracy skills, and one learner is less active, so he cannot participate in learning activities properly. For this reason, based on the observations made, it is known that the teacher makes efforts by giving special attention and guidance to these learners in the learning process in class. Grouping based on ability levels can make it easier for teachers to provide interventions to learners through the Teaching at the Right Level (TaRL) approach, including intensive guidance for learners with groups that will develop, guidance with lower intensity for learners who will develop, or have developed, teachers can also develop learning with peer tutors (Prihandini et al., 2023).

The evaluation or assessment used by teachers is prepared without differentiating the ability level of students and the follow-up carried out by teachers on the learning outcomes of students who have not achieved the learning objectives, namely through providing remedial in the form of practice questions and repetition of material. It is not to the principle of Teaching at the Right Level, where teachers need to develop differentiated learning designs in the form of content in the form of material taught, processes in the form of how to teach it, and products in the form of outcomes produced by students. Assessment has a very important role in implementing TaRL effectively because this approach emphasizes learner achievement and aims to facilitate the assignment of learners to the abilities and interests of each learner in order to develop their skills and knowledge properly (Harjanti & Prastiyo, 2024).

One alternate possibility is for the principal, the leader of the basic education unit, to promote the implementation of the TaRL learning model by offering financial assistance and teacher training. Training needs to be provided so that teachers understand the concept of Teaching at the Right Level. Teachers can practice it using various methods and strategies appropriate for learning mathematics to create more meaningful student learning. In addition, with financial support, schools can provide comfortable learning facilities, such as classrooms, chairs, and tables, which are comfortable for learning students. Schools can also provide textbook resources and learning support equipment, such as innovative learning media and learning aids like projectors, LCDs, and printers. These are indispensable in creating a meaningful student learning process (Wilujeng et al., 2024). The opinion supports this, according to Wahira et al. (2024), that overcoming the problems of implementing the TaRL approach requires a comprehensive or holistic approach and support from the school and professional development of teachers to apply the Teaching at the Right Level approach optimally.

4. CONCLUSION

Based on the study, while teachers have tried to align learning activities with students' abilities in mathematics, implementing the Teaching at the Right Level (TaRL) approach remains suboptimal due to various challenges. These include limited teacher understanding of TaRL, the complexity of managing large and heterogeneous classrooms, constrained time and resources, insufficient learning tools, and inadequate training on TaRL techniques. Prioritizing a comprehensive learner-centered approach is necessary to solve these problems. Providing resource support, such as focused teacher training, funding for educational facilities, and access to relevant learning materials, is mostly the responsibility of schools and administrators. These measures are essential for creating a conducive learning environment that caters to students' needs, ensures comfort and safety, and achieves optimal learning outcomes.

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