

TEACHING AT THE RIGHT LEVEL: ADAPTIVE INSTRUCTION AND STUDENT ENGAGEMENT IN SECONDARY EDUCATION

TEACHING AT THE RIGHT LEVEL: PEMBELAJARAN ADAPTIF DAN KETERLIBATAN SISWA DALAM PENDIDIKAN MENENGAH

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ABSTRACT

This study aims to examine the implementation of the Teaching at the Right Level (TaRL) approach at SMA Muhammadiyah Mlati and its influence on the learning process and student participation. The study employed a qualitative descriptive research design. Data were collected through classroom observations, semi-structured interviews with teachers and students, and documentation analysis. Observations focused on how teachers implemented diagnostic assessments, ability-based grouping, and differentiated instructional strategies during the learning process. Interviews were conducted to gain deeper insights into the experiences and perceptions of teachers and students regarding the implementation of TaRL. In addition, supporting documents such as diagnostic assessment results, lesson plans, learning modules, worksheets, and formative assessment records were analyzed to strengthen the research findings. The collected data were analyzed using an interactive qualitative analysis model consisting of data reduction, data display, and conclusion drawing. The results show that the implementation of TaRL begins with mapping students' initial abilities through diagnostic assessments, followed by grouping students based on their learning levels and adjusting instructional strategies according to students' needs. These practices contribute to increased student participation, confidence, and conceptual understanding, thereby improving the effectiveness of the learning process.

Keywords : Teaching at the Right Level (TaRL), Diagnostic Assessment, Differentiated Instruction, Student Participation

ABSTRAK

Penelitian ini bertujuan untuk mengkaji implementasi pendekatan Teaching at the Right Level (TaRL) di SMA Muhammadiyah Mlati serta pengaruhnya terhadap proses pembelajaran dan partisipasi siswa. Penelitian ini menggunakan desain penelitian deskriptif kualitatif. Data dikumpulkan melalui observasi kelas, wawancara semi-terstruktur dengan guru dan siswa, serta analisis dokumentasi. Observasi difokuskan pada bagaimana guru menerapkan asesmen diagnostik, pengelompokan berbasis kemampuan, dan strategi pembelajaran terdiferensiasi selama proses pembelajaran. Wawancara dilakukan untuk memperoleh pemahaman yang lebih mendalam mengenai pengalaman dan persepsi guru serta siswa terkait implementasi TaRL. Selain itu, dokumen pendukung seperti hasil asesmen diagnostik, rencana pelaksanaan pembelajaran, modul pembelajaran, lembar kerja, dan catatan asesmen formatif dianalisis untuk memperkuat temuan penelitian. Data yang terkumpul dianalisis menggunakan model analisis kualitatif interaktif yang terdiri atas reduksi data, penyajian data, dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa implementasi TaRL diawali dengan pemetaan kemampuan awal siswa melalui asesmen diagnostik, dilanjutkan dengan pengelompokan siswa berdasarkan tingkat kemampuan belajar, serta penyesuaian strategi pembelajaran sesuai dengan kebutuhan siswa. Praktik-praktik tersebut berkontribusi terhadap peningkatan partisipasi, kepercayaan diri, dan pemahaman konseptual siswa, sehingga meningkatkan efektivitas proses pembelajaran.

Kata kunci: Teaching at the Right Level (TaRL), Asesmen Diagnostik, Pembelajaran Terdiferensiasi, Partisipasi Siswa

1. INTRODUCTION

Improving the quality of the learning process remains a central priority in modern education systems, particularly at the secondary education level. Effective learning is not only determined by the delivery of but also by how instruction responds to the diverse abilities, needs, and learning characteristics of students (Syah et al., 2025). In many classrooms, however, instruction is still implemented using a uniform approach that assumes all students possess similar levels of understanding and readiness. Such practices often fail to accommodate individual differences in learning abilities, which may lead to disparities in learning outcomes among students. According to Tomlinson (2014), effective teaching should recognize student diversity and provide instructional strategies that adapt to varying readiness levels, interests, and learning profiles.

One of the major challenges faced in classroom instruction is the existence of significant variations in students' prior knowledge and academic abilities. When learning activities are designed solely according to grade-level curriculum expectations without considering students' actual competencies, some students may struggle to follow the lessons while others may not be sufficiently challenged (Saputra et al., 2025). This condition contributes to what scholars describe as the learning gap, a discrepancy between the instructional level of the curriculum and the students' actual learning levels. Diswantika & Yustiana (2022) and Flavell (1979) argue that many education systems encounter this problem because teaching is often aligned with curricular standards rather than with students' current cognitive readiness. Consequently, learning becomes less effective because students are required to engage with material that is either too advanced or insufficiently stimulating for their abilities.

To address these challenges, innovative instructional approaches that focus on student-centered learning and adaptive pedagogy have been increasingly promoted. One such approach is Teaching at the Right Level (TaRL), which emphasizes aligning instruction with students' actual learning levels rather than strictly adhering to grade-level expectations (Siswanto, Tarso, et al., 2025). The TaRL approach was originally developed and implemented by the educational organization Pratham to address learning disparities, particularly in literacy and numeracy education. According to Banerjee et al. (2007) and Tarso et al. (2026), the TaRL framework begins with diagnostic assessments to determine students' foundational competencies, followed by grouping students according to their ability levels so that instruction can be tailored more effectively. By focusing on students' existing knowledge and gradually advancing their learning, TaRL aims to ensure that all students acquire fundamental competencies before progressing to more complex concepts (Listyaningrum et al., 2024).

Empirical studies have demonstrated the effectiveness of the TaRL approach in improving learning outcomes and reducing learning inequalities. Research conducted by Pettersson (2021) and Hidayati et al. (2026) found that students who received instruction aligned with their learning levels showed significantly greater improvements in academic achievement compared to those who followed conventional grade-level instruction. Furthermore, adaptive instructional practices such as ability-based grouping and differentiated learning activities have been shown to help teachers provide targeted support to students with varying levels of understanding (Kintoko et al., 2026). These strategies enable teachers to address learning difficulties more effectively while simultaneously challenging students who demonstrate higher levels of competence.

In addition to improving academic outcomes, adaptive learning approaches such as TaRL can also enhance student engagement and participation in the learning process. Student participation is widely recognized as a critical factor influencing the effectiveness of classroom learning. Active participation in discussions, collaborative tasks, and problem-solving activities enables students to develop deeper conceptual understanding and stronger critical thinking skills. According to Fredricks et al. (2004) and Astuti et al. (2025), student engagement

encompasses behavioral, emotional, and cognitive dimensions that collectively contribute to meaningful learning experiences. When instructional strategies are aligned with students' abilities, learners tend to feel more confident and motivated to actively participate in classroom activities.

Despite the growing recognition of the TaRL approach in various educational contexts, its implementation within secondary education settings remains relatively underexplored, particularly in Indonesian schools. Understanding how TaRL is implemented in real classroom contexts and how it influences student participation and learning processes is therefore essential for improving instructional practices. Based on this consideration, the present study aims to examine the implementation of the Teaching at the Right Level (TaRL) approach at SMA Muhammadiyah Mlati and to explore how diagnostic assessment, ability-based grouping, and differentiated instruction contribute to enhancing student participation and the effectiveness of the learning process. Through this investigation, the study seeks to provide insights into the practical application of TaRL in secondary education and its potential contribution to improving teaching and learning quality.

2. LITERATURE REVIEW

2.1. Teaching at the Right Level (TaRL)

Teaching at the Right Level (TaRL) is an instructional approach that emphasizes aligning learning activities with students' actual ability levels rather than strictly following grade-level curricula. The concept was developed and widely implemented by the organization Pratham to address learning gaps among students, particularly in literacy and numeracy skills. According to Banerjee et al. (2007), TaRL focuses on assessing students' foundational skills and grouping them according to their learning levels so that instruction can be targeted effectively. This approach aims to ensure that students first master fundamental competencies before progressing to more complex concepts, thereby reducing learning disparities in the classroom.

Several studies have shown that TaRL significantly improves students' learning outcomes when instruction is tailored to their ability levels. Research conducted by Putri & Siswanto (2024) found that students who received instruction based on their learning level demonstrated greater improvements in literacy and numeracy compared to those who followed conventional instruction. Furthermore, emphasize that learning should be adapted to students' current cognitive readiness to ensure meaningful understanding (Fitriana et al., 2025). Therefore, TaRL is considered an effective strategy for addressing heterogeneous learning abilities and improving the overall quality of classroom instruction.

2.2. Diagnostic Assessment

Diagnostic assessment is an evaluation process conducted before instruction begins to identify students' prior knowledge, skills, and learning needs. This type of assessment enables teachers to understand students' strengths and weaknesses, allowing them to design instructional strategies that address specific learning gaps. According to Black & William (1998), diagnostic assessment plays a crucial role in formative learning because it provides teachers with essential information for planning effective instruction and supporting student learning progress.

In addition, Brookhart (2010) and Education Endowment Foundation (EEF) (2021) explains that diagnostic assessment helps teachers identify misconceptions and conceptual difficulties that students may experience during the learning process. By understanding these learning barriers early, teachers can implement targeted instructional interventions to improve students' comprehension (Astiwi et al., 2024; Hakim & Siswanto, 2026). Within the context of TaRL, diagnostic assessment becomes a fundamental step because it determines how students are grouped and what type of learning support they require. Consequently, the use of diagnostic assessment contributes to more responsive and effective learning processes.

2.3. Differentiated Instruction

Differentiated instruction refers to a teaching approach that adapts instructional methods, learning materials, and assessment strategies to accommodate students' diverse learning needs, interests, and abilities. According to Pozas et al. (2023), differentiated instruction enables teachers to design flexible learning environments where students can access learning in ways that match their readiness levels and learning profiles. This approach recognizes that students learn at different paces and therefore require varied instructional strategies to achieve optimal learning outcomes.

Research by Milinga et al. (2023) and Suryani et al. (2024) highlights that differentiated instruction can improve student engagement and academic achievement because it provides opportunities for personalized learning experiences. In the context of TaRL, differentiated instruction plays a crucial role because teachers must adapt their teaching strategies according to students' learning levels. By providing varied learning tasks and appropriate scaffolding, teachers can help students gradually develop their understanding and progress toward higher levels of learning.

2.4. Student Participation

Student participation refers to the active involvement of students in learning activities, including discussions, problem-solving tasks, collaborative learning, and interactions with teachers and peers. Active participation is considered an important indicator of effective learning because it reflects students' engagement and motivation in the classroom. According to Apriwulan et al. (2025) and Li et al. (2022), student engagement including behavioral participation plays a significant role in improving academic achievement and learning outcomes.

Furthermore, (Adeoye et al., 2024) emphasizes that active learning strategies, such as collaborative discussions and problem-based activities, can significantly enhance students' understanding of complex concepts. When students are actively involved in the learning process, they tend to develop deeper conceptual comprehension and stronger critical thinking skills. In the context of TaRL implementation, increased student participation often occurs because learning activities are tailored to students' ability levels, making them more confident and willing to engage in classroom interactions. Therefore, fostering student participation is essential for creating meaningful and effective learning experiences.

3. METHODS

This study employed a qualitative descriptive research design to explore the implementation of the Teaching at the Right Level (TaRL) approach at SMA Muhammadiyah Mlati. The research focused on understanding how teachers map students' initial abilities, group students based on learning levels, adjust instructional strategies, and improve students' participation and conceptual understanding in the classroom. Data were collected through classroom observations, semi-structured interviews, and documentation analysis. Observations were conducted during the learning process to examine how teachers implemented TaRL practices, particularly diagnostic assessments, ability-based grouping, and differentiated instructional strategies. Interviews were carried out with teachers and students to obtain deeper insights into their experiences and perceptions regarding the implementation of TaRL in the learning process (Naufal et al., 2025). In addition, documentation such as diagnostic assessment results, lesson plans, learning modules, worksheets, and formative assessment records was analyzed to support and validate the findings. The collected data were analyzed using an interactive qualitative analysis model consisting of data reduction, data display, and conclusion drawing to ensure systematic interpretation of the findings. This approach allowed

the researcher to obtain a comprehensive understanding of the implementation of TaRL and its impact on the learning process and student outcomes (Kulimbang et al., 2026).

4. RESULTS AND DISCUSSIONS

4.1. RESULTS

4.1.1. Mapping Students' Initial Abilities as the Basis for Learning

Based on classroom observations conducted at SMA Muhammadiyah Mlati, teachers carried out an initial assessment of students' abilities before starting the learning process. This mapping was conducted through diagnostic assessment activities administered at the beginning of the lesson to determine students' level of understanding of the material to be studied. Teachers provided several basic questions related to prerequisite concepts of the subject matter. The observation results indicate that this activity helped teachers identify variations in students' abilities, enabling the learning process to be designed more effectively and in a more targeted manner.

Interviews with teachers revealed that mapping students' initial abilities is an important step in implementing the Teaching at the Right Level (TaRL) approach. Teachers explained that each student possesses a different level of understanding; therefore, an ability mapping process is necessary to identify the learning needs of each student. Through the initial assessment, teachers are able to determine appropriate learning strategies according to students' conditions, ensuring that the learning process focuses not only on delivering material but also on meeting students' learning needs.

These findings are further supported by documentation showing the existence of students' diagnostic assessment data as well as records of students' learning ability analyses. The documents contain the results of initial tests, a list of students' levels of concept mastery, and follow-up learning plans. This documentation demonstrates that the process of mapping students' initial abilities has become an integral part of the learning planning conducted by teachers in implementing the TaRL approach at SMA Muhammadiyah Mlati.

4.1.2. Grouping Students Based on Learning Ability Levels

Classroom observations indicate that after mapping students' initial abilities, teachers grouped students based on their level of learning ability. This grouping was carried out to facilitate the delivery of instruction that matches students' needs. In practice, students were divided into several groups according to their level of conceptual understanding, allowing each group to receive different guidance and learning activities tailored to their abilities.

Based on interviews with students, they stated that the grouping helped them understand the learning material more effectively. Students felt more comfortable learning with peers who had relatively similar levels of understanding. Teachers were also able to provide more focused explanations to each group without having to wait for other students who had different levels of comprehension. As a result, the learning process became more effective and better adjusted to the pace of students' understanding.

Learning documentation also shows the existence of group divisions and lesson plans that were adapted to each group. In the learning instruments prepared by the teacher, there are records regarding group organization, learning activities, and worksheets used by each group. This documentation indicates that student grouping constitutes an important component in the implementation of the TaRL approach at SMA Muhammadiyah Mlati.

4.1.3. Adjustment of Learning Strategies According to Students' Needs

Based on classroom observations, teachers adjusted their instructional strategies according to the students' ability levels that had been previously identified. Teachers applied various learning methods, such as group discussions, gradual practice exercises, and direct assistance for groups requiring more intensive support. This strategy enabled students to learn

progressively according to their level of understanding of the material. Interviews with teachers revealed that the TaRL approach provides flexibility in the learning process. Teachers can adjust teaching methods, instructional media, and the level of difficulty of the tasks given to students. Teachers also stated that this approach helps them focus more on students' learning development, as each group receives attention and guidance according to its specific learning needs.

These findings are supported by documentation of learning materials showing variations in instructional resources, modules, and student worksheets with different levels of difficulty. The documents illustrate that teachers designed diverse learning activities so that students could learn according to their ability levels. This indicates that the implementation of TaRL encourages teachers to apply more adaptive and responsive learning strategies to meet students' needs.

4.1.4. Improvement of Students' Participation and Learning Understanding

Classroom observations show that the implementation of the TaRL approach increased students' participation in learning activities. Students appeared more active in group discussions, completing assignments, and asking questions to the teacher. Learning processes that were adjusted to students' ability levels made them more confident in participating in classroom activities. Based on interviews with students, they stated that learning through the TaRL approach made the material easier to understand. Students felt that teachers provided explanations that were clearer and more appropriate to their level of ability. In addition, group learning activities helped students discuss and exchange ideas regarding the material being studied.

Documentation of students' learning outcomes also indicates an improvement in conceptual understanding among most students after the implementation of the TaRL approach. This can be seen from the results of formative assessments, students' assignments, and evaluation records that show the development of students' abilities. The documentation data demonstrate that the implementation of TaRL has a positive impact on both the learning process and student learning outcomes at SMA Muhammadiyah Mlati.

4.2. DISCUSSIONS

The findings of this study indicate that the implementation of Teaching at the Right Level (TaRL) at SMA Muhammadiyah Mlati begins with mapping students' initial abilities through diagnostic assessment. This process enables teachers to identify variations in students' abilities before the learning process begins. This finding is consistent with the fundamental concept of TaRL, which emphasizes the importance of identifying students' actual ability levels as the basis for designing appropriate learning strategies. According to Ainun et al. (2023) and Muammar et al. (2023), the TaRL approach positions initial assessment as a crucial step to ensure that the learning process does not merely follow the curriculum linearly, but also adapts to students' real learning abilities. Therefore, mapping students' initial abilities becomes an important strategy to reduce learning gaps within the classroom.

Furthermore, the results of this study show that teachers group students based on their level of learning ability. This grouping aims to ensure that students receive learning experiences that better match their needs. This finding is consistent with the study conducted by Aprilia et al. (2025), Kintoko et al. (2025) and Susetyawati (2024), which found that instruction adjusted to students' ability levels through grouping can significantly improve learning effectiveness. Ability-based grouping allows teachers to provide more focused attention to each group, making the learning process more inclusive and responsive to the diversity of students' abilities (Maba et al., 2025).

In addition, this study reveals that teachers adjust instructional strategies according to the needs of each student group. Teachers apply various learning methods, such as group

discussions, gradual practice exercises, and intensive assistance for students who require additional support. This indicates that the implementation of TaRL encourages more adaptive teaching practices. These findings are supported by (Novantoro et al., 2025; Rochmat et al., 2025; Shigematsu et al., 2025), who state that learning aligned with students' ability levels can improve instructional effectiveness because students learn at a level appropriate to their cognitive readiness. In other words, the TaRL approach enables teachers to optimize the learning process through differentiated instructional strategies.

Moreover, the findings show that the implementation of TaRL contributes to increased student participation in the learning process. Students become more active in group discussions, completing assignments, and asking questions to the teacher. This condition suggests that learning aligned with students' ability levels can enhance students' confidence and engagement in classroom activities. This finding is consistent with the research of Loukomies et al. (2013), Siswanto et al. (2025) and Susetyawati et al. (2026), which demonstrates that instruction tailored to students' abilities can improve students' learning motivation and participation in classroom activities.

Overall, the implementation of TaRL at SMA Muhammadiyah Mlati also demonstrates an improvement in students' conceptual understanding, as reflected in formative assessment results and documented learning outcomes. This indicates that the TaRL approach influences not only the learning process but also student learning outcomes. These findings reinforce the research of Deda et al. (2023), Handayani (2025) and Rambe et al. (2025), which states that the TaRL approach has proven effective in improving students' literacy and numeracy skills because learning is focused on specific learning needs. Therefore, the implementation of TaRL can be considered an effective instructional strategy for improving the quality of learning in secondary schools.

5. CONCLUSION

The findings of this study indicate that the implementation of Teaching at the Right Level (TaRL) at SMA Muhammadiyah Mlati plays an important role in improving the effectiveness of the learning process. The implementation begins with mapping students' initial abilities through diagnostic assessments, followed by grouping students based on their level of understanding, adjusting instructional strategies according to students' learning needs, and encouraging greater student participation in classroom activities. These practices enable teachers to design more adaptive and targeted learning processes, resulting in improved student engagement and conceptual understanding. Therefore, it is recommended that schools continue to strengthen the implementation of the TaRL approach by providing professional development for teachers, integrating diagnostic assessment into regular learning planning, and encouraging the use of differentiated instructional strategies. Future research is also suggested to explore the long-term impact of TaRL implementation on students' academic achievement and learning motivation in various educational contexts.

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