

TaRL APPROACH AS AN INNOVATIVE STRATEGY FOR IPAS LEARNING IN PRIMARY EDUCATION

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Abstract

This study aims to analyze the implementation of the Teaching at the Right Level (TaRL) approach in IPAS (Science, Environment, and Social Studies) learning, specifically on the topic of the digestive system, in Grade 5 at SD Kanisius Kembaran, Yogyakarta. A descriptive qualitative method was employed, with data collected through interviews with teachers and students, as well as a review of relevant literature. The findings indicate that the TaRL approach positively impacts student learning outcomes, with approximately 60% of students showing improved comprehension and more active engagement. However, the implementation also faces several challenges, such as time management difficulties, limited learning media, and initial student resistance to ability-based grouping. Despite these obstacles, effective teacher communication strategies have improved student acceptance of the method, fostered group collaboration and increased learning motivation. Moreover, TaRL has proven helpful in addressing varying levels of student understanding, promoting more equitable academic development. This study concludes that the success of the TaRL approach depends on well-planned differentiation strategies and continuous formative assessment. Therefore, its application requires careful planning and adaptation to maximize learning outcomes in IPAS subjects at the primary school level.

Introduction

According to Solikah (2025), *Merdeka Belajar* (Freedom to Learn) is a natural learning process aimed at achieving educational freedom. Within this concept, students are encouraged to learn without pressure, to express themselves freely, and to innovate without constraints that hinder their development. Consequently, teachers play a crucial role in addressing educational challenges in Indonesia, including the development of teaching tools that support optimal learning. One essential instructional component in the *Merdeka* Curriculum is the teaching module (Angelina, Bistari, & Halidjah, 2024).

Teaching modules serve as structured tools designed in alignment with the curriculum to help achieve predefined competency standards. Through such modules, teachers can design more systematic and innovative learning processes, enhancing classroom effectiveness (Salsabilla, Jannah, & Juanda, 2023). In this context, the Teaching at the Right Level (TaRL) approach aligns well with the principles of *Merdeka Belajar*, as it accommodates students' learning needs based on their level of understanding rather than their age or grade.

TaRL is a teaching method that groups students according to their competency levels to ensure each receives instruction appropriate to their abilities (Attahira et al., 2023). This

approach prevents lower-performing students from falling behind and keeps advanced students from becoming disengaged due to overly simple content. Typically, TaRL begins with an initial assessment to identify students' proficiency levels, which then informs the formation of learning groups (Gempita et al., 2023). As a result, this method creates a more adaptive and inclusive learning environment.

The TaRL approach emphasizes learning outcomes based on mastery of specific competencies (Muammar et al., 2023). Within a single class, it allows instruction to be tailored to each student's progress, enabling more effective learning. This aligns with the *Merdeka Belajar* principle of empowering students to develop according to their individual potential.

Learning outcomes are critical in evaluating the effectiveness of any teaching method. Alafnan (2025) defines learning outcomes as the skills and knowledge acquired by students through the learning process, encompassing cognitive, affective, and psychomotor domains. Asbari & Nurhayati (2024) adds that learning outcomes reflect students' achievements as assessed against national education standards. Thus, in this study, learning outcomes serve as the primary indicator of the effectiveness of the TaRL approach.

In educational institutions, the subject of IPAS (Integrated Natural and Social Sciences) plays a vital role in the curriculum. This research specifically focuses on the science component, which is highly relevant to daily life, both in problem-solving and in the application of technology (Lubis et al., 2023). The application of science spans diverse fields, including pharmaceuticals, soap production, and food processing. Therefore, effective science instruction is essential for enhancing students' understanding of the environment and technology.

A previous study by Muri, Hasbi, & Purwanti (2025) showed that the TaRL method successfully improved students' mathematical achievement, participation, and motivation. Building on those findings, the present study aims to explore the effectiveness of the TaRL approach in improving IPAS learning outcomes among Grade 5 students. The research was conducted at SD Kanisius Kembaran, Yogyakarta, as part of the 2024 PPL (Field Experience Program) for prospective teachers from Sanata Dharma University.

Method

This study employs a descriptive qualitative method by analyzing the teaching module designed by the model teacher, conducting interviews with both the teacher and students, and examining student learning outcomes. The primary data collection technique used in this research is a literature review.

According to Sujdarwo (2011, p. 25), qualitative research is a method that does not rely on statistical principles but is based on qualitative evidence. In another source, qualitative research is described as an approach grounded in field realities and the lived experiences of respondents, which are then interpreted using relevant theoretical frameworks.

A literature review is a research approach that focuses on analyzing and synthesizing literature or information sources relevant to the research topic (Barry, Merkebu, & Varpio, 2022). The purpose of using this method is to gain a deeper understanding of concepts, theories, and previous findings related to the TaRL (Teaching at the Right Level) approach and its impact on student learning outcomes in Grade 5 IPAS subjects.

By relying on existing literature, this research aims to provide a comprehensive and in-depth insight into how the TaRL approach influences students' understanding, engagement, and academic performance in IPAS learning.

Table 1. Research Method and Data Collection Techniques

Aspect	Description
Research Method	Descriptive qualitative
Focus of Analysis	- Teaching module (created by model teacher) - Teacher and student interviews - Student learning outcomes
Data Collection Technique	Literature review
Theoretical Basis	Based on real-world experiences and qualitative evidence, not statistical data
Research Objective	To analyze the impact of the TaRL approach on students' understanding, engagement, and learning outcomes in IPAS

Results

The following are the learning outcomes of Grade 5 IPAS students before and after the implementation of the Teaching at the Right Level (TaRL) approach, based on their summative scores:

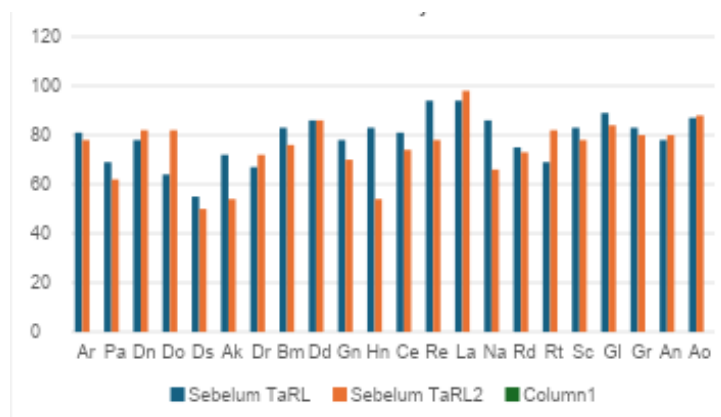


Figure 1. Student Learning Outcomes

Based on the data presented in Figure 1, the average student score prior to the implementation of the TaRL approach was 73.8, while the post-implementation average increased to 74.8. This 1.0-point improvement indicates a positive trend; however, further analysis is required to assess whether this difference represents a statistically and academically significant change.

From a statistical perspective, this improvement can be further examined using a paired t-test to evaluate whether the observed change results from random variation or reflects the direct impact of the TaRL approach. In addition, an exclusive reliance on mean scores may obscure critical individual differences in learning outcomes. A more nuanced analysis should consider the distribution of scores across the student cohort to identify whether the improvement was uniform or concentrated within specific subgroups. For instance, if the increase was more substantial among lower-performing students, it would indicate that the TaRL approach plays a significant role in reducing learning disparities and supporting those most in need. Conversely, if the gains were distributed evenly across performance levels, this

would highlight the general effectiveness of the approach in enhancing overall academic achievement.

In addition to quantitative data, qualitative impacts should also be considered. Factors such as increased student motivation, greater engagement in the learning process, and deeper conceptual understanding are important indicators of instructional effectiveness that may not be fully captured through numerical scores. Previous research by Mustafa, Ilmi, & Suliati (2024) highlighted that the success of the TaRL approach should not be judged solely by academic scores but also by students' ability to apply learned concepts in real-world contexts.

Therefore, while the 1.0-point increase in the average learning outcome indicates some improvement, a more comprehensive evaluation is needed to assess the true impact of the TaRL approach on student learning. This includes statistical testing, analyzing individual learning trajectories, and considering broader educational factors that contribute to long-term learning effectiveness.

Discussions

This study was conducted in a 5th grade IPAS (Science and Social Sciences) classroom, where the model teacher implemented the Teaching at the Right Level (TaRL) approach. According to Adawiyah et al. (2024), building on the insights of Ismail et al. (2024), TaRL emphasizes student achievement by adapting teaching methods to individual competence levels. This strategy allows students to attain targeted competencies more effectively (Ningrum et al., 2023) while providing tailored learning support without isolating learners through rigid groupings (Emiliani, 2023). In this model, the teacher's role shifts from a knowledge transmitter to a facilitator who guides learning based on students' specific needs.

The primary aim of this study was to assess the effectiveness of the TaRL approach in improving IPAS learning outcomes in Grade 5. Using a descriptive qualitative method, the research analyzed teacher-designed instructional modules, interviews with the model teacher and students, and students' learning outcomes. The instructional modules outlined competencies and learning objectives adjusted to students' learning stages. TaRL was implemented through student worksheets (LKPD) designed according to these stages.

The results showed an increase in the average score from 73.8 to 74.8 following the implementation of TaRL. Although this 1.0-point gain suggests modest improvement, it remains limited and does not meet the threshold of statistically significant academic progress. Further analysis using inferential statistics, such as paired t-tests, is recommended to validate the robustness of this improvement. Prior studies (Mustafa, Ilmi, & Suliati, 2024; Putra et al., 2025) have indicated that TaRL tends to be more effective for lower-performing students, whereas high-performing students may not experience substantial gains in standardized test scores.

A wide range of individual learning gains was also observed. For instance, students such as Re and Ld consistently maintained high scores (close to 100), reflecting strong prior understanding and indicating a minimal effect of the intervention. Conversely, students such as Dn, Rt, and Ao demonstrated notable improvement, which aligns with constructivist learning theories (Saputri & Wahyuningtyas, 2024) suggesting that scaffolding and the zone of proximal development help maximize student potential.

However, several students—including Hn, Gn, and Na—showed a decline in performance. This may be attributed to cognitive overload (Sweller & Paas, 2023) or external factors such as

absenteeism, health conditions, or psychological challenges (Widodo & Supriadi, 2021). These findings highlight that TaRL may not be universally suitable and reinforce the need for further exploration of differentiated strategies tailored to diverse learner profiles.

The implementation of TaRL in the digestive system unit of IPAS also presented challenges. As noted by Fatma & Listiawan (2025), managing time was particularly difficult when covering complex topics such as enzymatic digestion while simultaneously adapting instruction to multiple competence levels. Additional challenges included the lack of suitable instructional media (Cayabas Jr & Sumeg-ang, 2023; Adil et al., 2022) and initial resistance from high-performing students due to psychosocial concerns (Boyle, 2020). Nevertheless, once students understood the rationale behind ability-based grouping, most developed a more positive response to the approach.

Overall, approximately 60% of students demonstrated either improvement or sustained high scores following TaRL implementation. These findings suggest that the overall effectiveness of TaRL depends on careful planning, consistent execution, and alignment with learners' needs (Sefriyana et al., 2025). Recent literature also underscores the importance of refining instructional differentiation (Tomlinson, 2023) while accounting for external influences such as family support and access to supplementary resources (Wiebe et al., 2022; Dewantari & Nuris, 2024).

Recommendations

Based on the findings, several recommendations can be made to strengthen the application of the TaRL approach. First, statistical validation through inferential tests, such as paired-sample t-tests, is needed to assess whether observed improvements are statistically significant. Second, the adoption of continuous formative assessments is recommended to monitor student responses and adjust instruction in real time. Third, more nuanced grouping strategies should be developed that incorporate not only academic ability but also emotional, cognitive, and social dimensions. Fourth, teacher training in differentiated instruction should be expanded to ensure that educators are adequately prepared to implement the TaRL framework across diverse learner needs. Finally, future research should investigate the long-term effects of TaRL across various subject areas and learner profiles, with particular attention to the role of technological integration and family involvement in enhancing learning outcomes.

Conclusion

The findings of this study indicate that the implementation of the Teaching at the Right Level (TaRL) approach in a 5th grade IPAS class on the digestive system topic at SD Kanisius Kembaran, Yogyakarta, produced varied impacts on student learning outcomes. Approximately 60% of students demonstrated notable improvement in performance following the application of this method, while others showed either limited gains or a decline, highlighting the differentiated effects of TaRL across learner profiles.

To optimize the effectiveness of TaRL, this study recommends the adoption of more specific differentiation strategies, including grouping students according to their initial levels of understanding and conducting regular diagnostic assessments. Continuous formative evaluation should also be emphasized to enable instructional strategies to adapt responsively to students' evolving needs. Furthermore, the development of interactive learning media tailored to the complexity of the digestive system content is strongly advised to enhance student comprehension and engagement.

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