

Edisi : Vol. 10, No. 1, April/2026, hlm. 48-64

Improving the Cognitive Abilities of Grade III Students through the Application of the Teaching at the Right Level (TaRL) Approach in Science Subjects

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Abstract

This study aims to improve the cognitive abilities of third-grade elementary school students through the implementation of the *Teaching at the Right Level* (TaRL) approach in the subject of Natural and Social Sciences (IPAS). The background of this research is the low cognitive achievement of students due to instructional strategies that are not aligned with their level of understanding. The research was conducted as a Classroom Action Research (CAR) using the Kemmis and McTaggart model over two cycles, involving 28 students at SDN Julang, Bogor City. Data were collected through observations and cognitive achievement tests, analyzed both quantitatively and qualitatively. The results showed a significant improvement in student learning outcomes. The percentage of students achieving mastery increased from 35.71% in the pre-cycle to 64.29% in the first cycle and reached 89.29% in the second cycle. The average score also increased from 61.07 (pre-cycle) to 77.86 (cycle II). The implementation of TaRL, supported by ability-based grouping, tiered LKPD, visual media, and interactive educational games through Wordwall, proved effective in creating a more contextual, enjoyable, and meaningful learning experience. Therefore, TaRL can be considered an adaptive and inclusive learning strategy to enhance cognitive development in IPAS learning at the elementary level. **Keywords:** Teaching at the Right Level (TaRL); Cognitive Ability; IPAS; Differentiated Learning; Elementary School.

INTRODUCTION

Basic education has a very crucial role in supporting the development of students' potential as a whole, covering cognitive, affective, and psychomotor dimensions. In order for the learning process at this level to run optimally, a teaching strategy is needed that is responsive to the diversity of students' learning abilities (Ulfah & Arifudin, 2021). The reality in the field shows that teachers often face situations where there are significant differences in the

understanding capacity of students in one class, especially related to the mastery of basic material in thematic lessons such as Natural and Social Sciences (IPAS). If the learning approach applied is not adjusted to the individual needs of students, this can hinder the effectiveness of learning and cause gaps in learning outcomes (Alfatonah et al., 2023).

The learning gap phenomenon in elementary schools remains a real challenge, particularly given the diverse abilities of students within a single class. The uniform nature of instruction means that not all students receive learning experiences tailored to their needs. High-ability students tend to have an easier time following lessons, while low-ability students struggle to grasp concepts. This situation leads to learning gaps, low student engagement, and decreased self-confidence in participating in the learning process, particularly in subjects that require conceptual understanding, such as Natural and Social Sciences (IPAS).

This condition is an important background for the birth of the Independent Curriculum which aims to provide teachers with the freedom to design learning based on the actual needs of students. One approach that is in line with the objectives of the Independent Curriculum is Teaching at the Right Level (TaRL), a learning method that adapts teaching materials to the level of student ability, not based on class level or age alone (Fitriani, 2022). This approach emphasizes initial assessment as the basis for grouping students, followed by skill-level-based learning, mentoring, and ongoing monitoring (Ningrum et al., 2023).

The Teaching at the Right Level (TaRL) approach also aligns with the concept of differentiated learning, which emphasizes tailoring learning processes, content, and products based on students' readiness, interests, and learning profiles. According to Tomlinson, differentiated learning provides opportunities for students to learn according to their needs, thereby increasing learning effectiveness. In this context, TaRL is a concrete implementation of differentiated learning, particularly in grouping students based on their cognitive abilities.

The TaRL approach has been widely used in a number of developing countries and has shown positive results in helping students improve their basic skills, especially in literacy and numeracy. In Indonesia, this approach has begun to be adapted as an alternative to address the challenges of differentiation in students' learning abilities, especially after the pandemic which has caused learning loss at many levels of education (Khalishatun et al., 2024).

Science subjects as part of strengthening science and social literacy require students to not only memorize concepts, but also be able to relate them to the realities of life. In grade III of elementary school, science learning often presents its own challenges because it must

bridge various thinking skills, from concrete to abstract. In practice, teachers still tend to deliver material uniformly to all students, without considering differences in cognitive readiness levels, which results in inequality in learning outcomes.

Several previous studies also show that the implementation of the TaRL approach has a positive impact on student learning outcomes. Satriani et al., (2024) revealed that the TaRL approach increased the average learning outcomes of students in mathematics from 63 to 86 points, and increased the percentage of completion from 41.7% to 75%.

Research conducted by Rahma et al., (2024) revealed that the Teaching at the Right Level (TaRL) approach was proven effective in improving mathematics learning outcomes of class XI students at SMA Negeri 3 Medan. The average student score increased from 62.72 in the pre-cycle to 72.05 in cycle I, and continued to increase to 85.27 in cycle II. The percentage of learning completion also increased significantly, from 30.55% in the pre-cycle to 66.66% in cycle I, and reached 83.33% in cycle II. These results indicate that the implementation of TaRL has succeeded in improving students' cognitive abilities in mathematics learning. Meanwhile, in the research of Vitaloka et al., (2024) which focused on the subject of science in grade IV of elementary school, it was found that TaRL encourages increased critical thinking skills and students' ability to connect concepts with surrounding phenomena. This finding supports the use of the TaRL approach in elementary school learning and strengthens the urgency of this approach in learning that focuses on student needs.

However, a research gap remains in studies related to TaRL implementation. Most previous research has focused on literacy and numeracy subjects and was conducted at the secondary education level. Research specifically examining the application of TaRL in science learning in lower elementary school grades is still very limited. Yet, science, as an integrative subject, requires a learning approach that can develop students' cognitive abilities in a gradual and contextual manner. These limitations highlight both the opportunity and the need for more specific research in this context.

Based on these phenomena and research gaps, this research is crucial and urgent. The urgency of this research lies in addressing the gap in students' learning abilities through an adaptive approach tailored to their level of readiness. Furthermore, this research is expected to provide empirical contributions to the development of differentiation-based science and science learning strategies and serve as a reference for teachers in effectively implementing the Teaching at the Right Level (TaRL) approach in lower elementary school grades.

The novelty of this study lies in the combination approach between TaRL and interdisciplinary science subjects. In addition, this study also emphasizes the differentiation of learning instruments, including the development of graded LKPD and integration of visual media for each ability group. This makes this study not only an implementation study, but also an innovation in learning based on actual learning needs.

In general, the Teaching at the Right Level (TaRL) learning approach is used based on the level of cognitive ability of students. This approach is considered effective in overcoming differences in learning abilities in one class, because it provides learning that is adjusted to the level of understanding of each student, not just based on age or grade level (Arfani et al., 2023). In the context of basic education, especially in lower grades such as grade III, variations in student abilities tend to be more striking, so teachers are required to adopt an adaptive approach and focus on student learning needs.

Natural and Social Sciences (IPAS) subjects are integrative thematic subjects that integrate basic concepts from two disciplines, thus demanding students' cognitive abilities in understanding the relationship between concepts contextually. When students do not receive learning that is appropriate to their cognitive level, then their understanding of IPAS material tends to be shallow and does not last long.

Based on this, the main focus of this study is to improve students' cognitive abilities through the application of the TaRL approach. This study aims to measure the extent to which the cognitive abilities of grade III students increase after applying the TaRL approach in science learning with the material of regional structure and local government. This approach is applied in two action cycles as part of Classroom Action Research (CAR) with the Kemmis and McTaggart model. It is hoped that the results of this study can show that the TaRL approach has a positive influence on students' understanding of science material in a more optimal and meaningful way.

RESEARCH METHOD

The method used in this study is Classroom Action Research (CAR). CAR is one way that can be applied by teachers to overcome problems in the learning process. This study adopts the Kemmis and McTaggart spiral model CAR cycle consisting of 1) planning, 2) action and observation, 3) reflection. The study was conducted in two cycles with the aim of improving the cognitive abilities of grade III students through the application of the Teaching at the Right Level (TaRL) approach in science learning.

This research was conducted at SDN Julang, Bogor City, in the even semester of the 2024/2025 academic year, precisely in February 2025. The subjects of this study were 28 grade III students, consisting of 16 males and 12 females. The selection of subjects was based on the results of initial observations which showed variations in the level of understanding and academic achievement of students in science learning, especially the material on regional structure and local government. The object of this research is the cognitive abilities of students as measured through the results of learning evaluations after they participated in learning with the TaRL approach.

The planning stage is carried out by designing learning tools that are adjusted to the results of the initial assessment. The tools prepared include teaching modules, graded Student Worksheets (LKPD), visual-based learning media, and evaluation instruments in the form of written tests. Furthermore, at the implementation stage of the action, learning is carried out adjusted to the level of ability of each group of students. The teacher facilitates guidance and activities that are relevant to the learning needs of their group in stages. Students are facilitated to discuss in homogeneous groups and complete LKPD with different levels of difficulty.

During the learning process, researchers conducted direct observations of student involvement, group interactions, task completion, and responses to the material provided. Observation data were recorded in a structured manner using a previously prepared observation sheet. In addition, at the end of each cycle, a cognitive evaluation was conducted to determine the level of student understanding of the material that had been studied.

The research instruments used in this study included cognitive learning outcome tests and student activity observation sheets. The tests were designed based on competency achievement indicators in the regional government structure material and were validated by expert judgment, namely the class teacher and the supervising lecturer. Instrument validity was assessed by adjusting the test items to the learning objectives and the students' cognitive levels. Meanwhile, instrument reliability was tested simply through a consistency test of results in each cycle. The observation sheets were used to observe student engagement during the learning process and were designed based on learning activity indicators such as discussion participation, task completion ability, and group interaction.

Reflection is done together with the class teacher to evaluate the results of each action. Reflection is used to review the effectiveness of learning activities, identify obstacles faced,

and design corrective actions for the next cycle. Reflection is also the basis for decision making to adjust learning methods or media to be more targeted.

Data analysis techniques use qualitative and quantitative analysis techniques. Quantitative techniques aim to analyze and calculate the percentage of students' cognitive levels based on the Minimum Completion Criteria (KKM) set by the school, which is 75. Qualitative data analysis focuses on descriptions in narrative form. The study is considered successful if the percentage of students who complete is more than or at least 80% of all students.

RESULT AND DISCUSSION

Result

The results of the initial cognitive assessment conducted before the action showed that the majority of grade III students did not yet understand the prerequisite material in the science subject, especially in the topic of regional government structure and its function in everyday life. Of the total 28 students, only 10 students (35.71%) showed sufficient initial understanding of the material, while the rest were still confused in linking the concept of administrative areas to everyday life.

To measure the achievement of students' learning outcomes during the classroom action process, a cognitive test was conducted at the end of each cycle. The learning completion threshold (KKM) for the subject of science and science was set at 75. A summary of students' cognitive ability data is presented in Table 1.

Table 1. Data on the Results of Cognitive Abilities of Grade III Science Students

Aspect	Pre Cycle	Cycle I	Cycle II
Total Value	1710	1932	2180
Average	61,07	69,00	77,86
Percentage of Completion	35,71%	64,29%	89,29%

Based on the table above, in the pre-cycle stage, only 10 out of 28 students obtained scores above the KKM (≥ 75), so that the class completion percentage reached 35.71%. The highest score achieved by students at this stage was 85, while the lowest score was 40. The total score of all students was 1710 with a class average score of 61.07.

In cycle I, there was a significant increase. A total of 18 students achieved KKM and 10 students had not completed it. The percentage of completion increased to 64.29% with a total class score of 1932 and a classical average of 69.00. The highest score in cycle I was 92, and the lowest score increased to 50.

In cycle II, student learning outcomes increased optimally. A total of 25 students were declared complete and only 3 students had not reached the KKM. The percentage of completion increased drastically to 89.29%. The highest score reached 100, and the lowest score was 70. The total score of the entire class was 2180 with a classical average of 77.86.

To clarify the improvement in student learning outcomes in each cycle, the data is presented in the following graph.

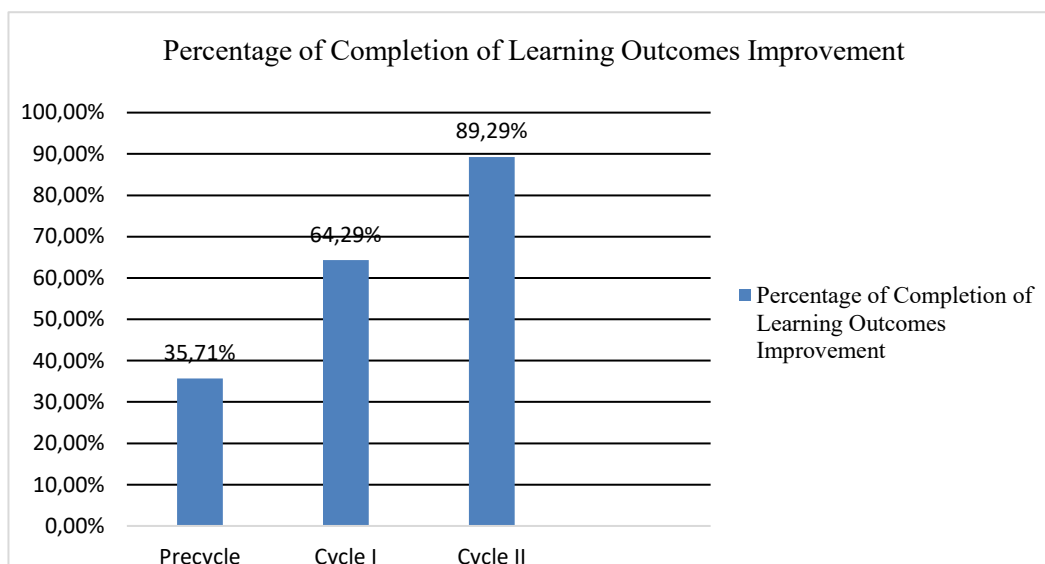


Chart 1. Results of Cognitive Abilities of Grade III Science Students

Based on these results, it can be concluded that there was a significant increase in both the average score and the percentage of learning completion in each cycle. This indicates that the Teaching at the Right Level (TaRL) approach applied in science learning effectively improved the cognitive abilities of third-grade students. In addition, the strategy of grouping based on cognitive ability levels and compiling student worksheets (LKPD) according to students' thinking levels contributed significantly to the gradual improvement in conceptual understanding. Although the improvement in learning outcomes demonstrates the

effectiveness of the TaRL approach, this improvement was not solely influenced by the learning approach. Other factors such as the use of engaging learning media, the implementation of the Problem-Based Learning (PBL) model, and increased teacher guidance intensity also contributed to the results obtained. Furthermore, the repetition of material in each cycle enabled students to understand concepts more deeply. Therefore, the improvement in learning outcomes in this study was the result of a combination of various mutually supporting factors, not just a single learning approach.

Discussion

As shown in Table 1, the data on the results of learning science through the implementation of the Teaching at the Right Level (TaRL) approach shows a significant increase in the cognitive abilities of grade III students in each cycle of action. In the pre-cycle, a diagnostic assessment was conducted to assess students' initial understanding of the material on the structure of regional government. The assessment results revealed that only 10 out of 28 students (35.71%) achieved the Minimum Completion Criteria (KKM), which was 75. This indicates that the majority of students do not fully understand the relationship between regional government institutions and their roles in everyday life.

Problems that arise in the pre-cycle stage are caused by previous learning strategies that are uniform and less adaptive to differences in students' cognitive abilities. Lecture methods and the use of learning resources that are not varied make students with low abilities feel left behind, while students who understand faster feel less challenged. As explained by Asrini et al., (2024) choosing the right learning approach greatly determines the effectiveness of learning in the classroom, especially in classes with high ability heterogeneity.

In response to these conditions, the author and the class teacher decided to implement the Teaching at the Right Level approach. Based on the views of Suharyani et al., (2023) this approach emphasizes the importance of initial assessment as a basis for designing learning strategies that are appropriate to the level of student ability. In this study, diagnostic assessments were used as a basis for grouping students into several levels of ability, so that learning materials and activities can be adjusted to the needs of each group.

The TaRL approach has a positive impact not only in improving learning outcomes, but also in building students' motivation and self-confidence. Students who previously had difficulty understanding lessons became more active and showed enthusiasm when receiving assignments that were tailored to their ability level. When they were able to complete

assignments and see progress in their learning outcomes, a sense of self-confidence and enthusiasm to continue learning emerged. This strengthens the statement that the TaRL approach is inclusive and able to accommodate the learning needs of each individual. The findings presented by Zakiyah et al., (2024) support this, by showing that the TaRL approach is able to encourage improved learning outcomes and develop critical thinking skills and student motivation through the presentation of learning that is tailored to their initial abilities.

In the pre-cycle stage, 10 out of 28 students or 35.71% had achieved a score above 75, which is the learning completion limit. This result shows that most students have not fully understood the main material regarding the structure and function of regional government. The low completion in this pre-cycle indicates significant problems in the learning methods used previously. These problems can be caused by several factors, such as undifferentiated learning strategies, lack of contextual learning media, and low student involvement in the learning process. Thus, this result reinforces the urgency of implementing an approach that adapts teaching to the actual level of understanding of students, such as TaRL, to encourage the achievement of optimal and equitable learning outcomes.

After the implementation of the pre-cycle stage which showed that the majority of students had not met the Minimum Completion Criteria (KKM), it encouraged teachers and researchers to reflect and prepare an action plan in cycle I. The identification results showed that the main problem lay in the mismatch of learning strategies with the level of student learning readiness. Therefore, in cycle I a number of improvements were made which included the preparation of more contextual teaching tools, the use of PPT-based learning media and interactive videos, the provision of Student Worksheets (LKPD) designed based on each ability level, with the application of the Teaching at the Right Level (TaRL) approach integrated into the problem-based learning model (Problem Based Learning/PBL).

In its implementation, students are grouped based on the level of ability that has been identified through diagnostic assessment. Groups with low basic abilities receive more intensive guidance and LKPD with a lighter level of complexity, while more advanced groups are given problem-solving challenges that encourage high-level thinking. According to Archi Mauliyda et al., (2021) grouping students based on ability allows teachers to design more targeted strategies, media, and approaches so that learning becomes more effective.

The learning process begins with the provision of stimulus through visual media, followed by group discussion activities to complete the LKPD. The discussions carried out not only make it easier for students to understand the material, but also develop their

communication, collaboration, and problem-solving skills. When students work in groups, they share their understanding and discuss various ideas, creating a more active and participatory learning process. This statement is in line with the opinion of Mubarokah (2022), who stated that the TaRL approach encourages active participation of students in the learning process by emphasizing the mastery of basic skills that are appropriate to their developmental stages.

The achievement at the end of cycle I showed progress in learning outcomes. Of the total 28 students, 18 (64.29%) managed to exceed the KKM score, increasing from 35.71% in the pre-cycle phase. The average class score also increased, from 61.07 to 69.00. This development reflects that the implementation of grouping strategies and contextual learning has begun to have a positive influence on improving students' cognitive abilities. However, there are still 10 students who have not achieved completion, indicating the need for further improvements in the learning process.

From the results of observations and reflections in cycle I, several challenges were found that needed to be followed up, such as uneven student involvement, limited interaction between teachers and students, and difficulties for some groups in completing LKPD independently. In addition, student learning motivation was also not fully optimal, which resulted in low participation in discussions and problem solving. Therefore, in cycle II a series of strategic improvements were designed to overcome these problems. Improvements include strengthening more contextual learning materials, especially in the aspect of analyzing relationships between levels of regional government, so that students can more easily relate concepts to the realities of their lives. Teachers also began to utilize visual media such as interactive maps and government flowcharts to clarify the structure and function of regional institutions.

In addition to strengthening materials and media, the collaborative approach is enhanced through more intensive group discussions, accompanied by question and answer sessions to strengthen interactions between teachers and students. The role of teachers is also expanded to become active mentors in small groups, who directly guide students according to their level of understanding. To increase enthusiasm for learning, teachers integrate educational games as part of problem-solving activities in LKPD, so that the learning atmosphere becomes more enjoyable and participatory. It is hoped that through these improvements, active participation and conceptual understanding of students will increase

evenly, and the Teaching at the Right Level approach can be applied more effectively in the context of science learning in lower grades.

According to Awaludin Akbar (2022) mentoring and reflection activities at the end of learning are very important to ensure that students understand the material that has been studied. Reflection not only helps students evaluate themselves but also clarifies parts of the material that have not been understood well. The teacher also provides a conclusion as an affirmation of the important points of the learning, while also providing direction for the next learning cycle. The TaRL approach, in this case, not only contributes to improving learning outcomes but also strengthens the learning process that is reflective and adaptive.

Thus, the implementation of actions in cycle I shows that the application of the Teaching at the Right Level approach combined with the Problem Based Learning model, interesting learning media, and strengthening the role of teachers as facilitators can bring learning to a more meaningful and inclusive direction. Although not yet fully optimal, the improvements that occurred are a strong basis for developing more effective strategies in the next cycle.

Cycle II was implemented as a response to the results of reflection in cycle I, which revealed a number of obstacles in learning activities, including suboptimal student involvement, difficulties in completing LKPD, and limited interaction between teachers and students. Based on these findings, improvements were designed in cycle II that referred to the previous plan, namely through contextual reinforcement of materials, the use of visual media to support conceptual understanding, and improving collaborative approaches in learning.

Learning in cycle II is arranged and implemented based on the results of improvements formulated from the reflection of cycle I. The learning process begins with an apperception activity in the form of playing a video related to the structure of government, which aims to arouse students' curiosity about the material to be discussed. Furthermore, the teacher guides the initial discussion using visual media in the form of PPT and administrative area maps, so that students have a concrete picture of the structure of regional government.

After that, students are divided into groups that have been rearranged based on the results of the cycle I test. The number of group members is reduced so that discussions are more effective and teachers can provide more intensive guidance. Students then work on LKPD which contains activities to trace the relationship between levels of government through observation of visual information, discussion, and grouping government structures

based on their functions. This activity is in line with the achievements of IPAS learning which helps students develop critical thinking skills and understand the government system in relation to the local context.

The core activities are carried out through small project-based group work, where students compile the results of their discussions in the form of visual representations (e.g. charts or sequences of government structures). The teacher facilitates the discussion process by asking provocative questions and providing assistance according to the needs of each group. In this activity, student involvement began to increase compared to the previous cycle. They were more active in asking questions, discussing, and answering questions from friends and teachers.

In closing, the teacher gave a learning evaluation in the form of an interactive quiz using digital-based educational game media through the Wordwall platform. This quiz was packaged in the form of a game that displays questions about the material that has been studied, such as the structure of regional government, the role of regional heads, and the functions of government institutions. Students took the quiz in groups with enthusiasm, because the game format offered by Wordwall felt fun and challenging.

This media not only functions as an evaluation tool, but also encourages students to think quickly, understand important terms such as "province," "district," "mayor," "governor," and "government functions," and strengthen cooperation between group members. Through this activity, students are not only tested cognitively, but also trained in collaboration, communication, and reflection skills on their learning outcomes. The use of Wordwall has been proven to increase student enthusiasm and engagement at the end of the learning session, as well as providing a more active and enjoyable evaluation experience.

The results of the implementation in cycle II showed a significant increase. The average score of students increased to 77.86, with 25 out of 28 students (89.29%) successfully exceeding the Minimum Completion Criteria (KKM). When compared to the achievement in cycle I which only reached 64.29%, it can be concluded that the corrective steps implemented have had a real positive impact. Students also appear more confident in expressing their opinions, more active in group discussions, and demonstrate a deeper understanding of the concept of regional government.

Reflection at the end of cycle II strengthens the finding that the TaRL approach is able to provide a significant contribution to improving students' cognitive abilities. Although there are still some students who have not reached the KKM, the overall level of completion

has exceeded the set standards. This improvement was achieved through the implementation of the Teaching at the Right Level (TaRL) approach, with success indicators that have been met. Therefore, this approach is worthy of consideration as an effective strategy in improving students' cognitive abilities, especially in science learning in lower grades that are faced with variations in diverse learning abilities.

The improvement in student learning outcomes observed in each cycle demonstrates that the implementation of the Teaching at the Right Level (TaRL) approach has had a positive impact on the learning process. This improvement is evident not only in the quantitative aspect of learning outcomes, but also in student engagement and active participation throughout the learning process.

The results of this study align with previous research showing that the TaRL approach is effective in improving learning outcomes because learning is tailored to the students' ability levels. This approach allows students to learn at their own pace, thereby reducing the gap in understanding between students in a class.

Theoretically, this finding is also supported by constructivism theory, which states that students construct knowledge based on meaningful learning experiences that are appropriate to their level of cognitive development. When learning is tailored to their initial abilities, students understand the material more easily, gain more confidence, and are more active in the learning process.

Furthermore, the implementation of TaRL in this study was combined with the Problem-Based Learning (PBL) model, which provides opportunities for students to actively engage in problem-solving. This combination encourages critical thinking, discussion, and collaboration, thereby strengthening their understanding of the concepts being studied.

However, the improvement in learning outcomes in this study was not solely due to the implementation of TaRL. Other factors likely contributed, such as increased student motivation, a more interactive learning environment, and the teacher's role in facilitating optimal learning. Therefore, the results of this study cannot be completely generalized as a sole impact of TaRL implementation.

This study has several limitations: it was conducted in only one class with a limited number of subjects, so generalizing the results to a broader context requires caution. Furthermore, the instruments used in this study were limited to learning outcome tests and observations, so they do not fully reflect the complexity of the learning process as a whole.

Based on the research results and discussion described above, this study shows several novelties compared to previous studies. The novelty in this study lies in the

application of the Teaching at the Right Level (TaRL) approach in the context of science learning in lower elementary school grades, which is still rarely studied. Unlike previous studies that generally focus on literacy and numeracy, this study integrates the TaRL approach in science subjects that are thematic and interdisciplinary, thus demanding students' conceptual and contextual thinking skills.

Furthermore, the novelty of this research is also evident in the TaRL implementation strategy, which combines the use of tiered student worksheets (LKPD), visual learning media, and the integration of digital-based educational games such as Wordwall. This combination not only supports the improvement of students' cognitive abilities but also creates a more interactive, enjoyable learning experience that is tailored to the characteristics of lower-grade students.

Another novelty lies in the concrete reinforcement of differentiated learning practices by grouping students based on cognitive ability and providing specific interventions for each group. This demonstrates that the TaRL approach is not merely theoretical but can be implemented practically and adaptively in science and science learning in elementary schools.

Thus, this research contributes not only to the practical aspects of classroom learning, but also to the development of scientific studies related to the implementation of the TaRL approach in integrative thematic learning, especially at the lower elementary school level.

CONSLUSION

Based on the research findings and discussions that have been explained, it can be concluded that the Teaching at the Right Level (TaRL) approach has proven effective in improving the cognitive abilities of grade III students in the subject of science. The implementation of this approach through two cycles of action in Classroom Action Research (CAR) showed a significant increase in student learning outcomes, both in terms of average scores, the number of students who achieved the Minimum Completion Criteria (KKM), and the percentage of completion in a classical manner.

In the pre-cycle stage, it was found that students' initial abilities were still low, with a completion percentage of 35.71% and an average score of 61.07. After the actions were taken in cycle I, there was an increase in the completion percentage to 64.29%, and the average score increased to 69.00. Improvements made based on reflections on cycle I, such as strengthening contextual materials, using visual media, grouping based on ability levels, and evaluation in the form of interactive quizzes through wordwalls, contributed to the results in cycle II. In cycle II, student learning outcomes increased significantly with a completion percentage reaching 89.29% and an average score of 77.86. The consistent improvement

from pre-cycle to cycle II indicates that the Teaching at the Right Level approach supported by grouping based on ability, the use of tiered LKPD, visual learning media, and educational game-based evaluation is able to create more effective, interactive, and meaningful learning.

The implications of this research indicate that the Teaching at the Right Level (TaRL) approach can be a solution to address the learning gap between students in heterogeneous classrooms. This approach encourages teachers to design more adaptive and differentiated learning according to student needs, thereby improving not only learning outcomes but also student engagement and motivation. Furthermore, the use of varied and interactive learning media contributes to creating a more enjoyable and contextual learning environment.

Based on the findings of this study, it is recommended that elementary school teachers implement the TaRL approach more broadly across various subjects, including thematic learning such as science and science. Teachers also need to conduct regular diagnostic assessments to determine students' ability levels as a basis for designing appropriate learning. For future researchers, it is recommended to develop research with a broader scope, involving more subjects, and examining other aspects such as affective and psychomotor to gain a more comprehensive understanding of the effectiveness of the TaRL approach.

REFERENCES

- Alfatonah, I. N. A., Kisda, Y. V., Septarina, A., Ravika, A., & Jadidah, I. T. (2023). Kesulitan Belajar Peserta Didik pada Mata Pelajaran IPAS Kurikulum Merdeka Kelas IV. *Jurnal Basicedu*, 7(6), 3397–3405.
- Archi Maulyda, M., Affandi, L. H., Rosyidah, A. N. K., Oktaviyanti, I., Erfan, M., & Hamdani, I. (2021). Profil Wawasan Guru Sekolah Dasar Dalam Pembelajaran Numerasi Berbasis Level. *Jurnal Pembelajaran Matematika Inovatif*, 4(3), 619–630.
- Arfani, S., Sitti, Y., R., & Bahariyah, U. (2023). Penerapan Model Pembelajaran Discovery Learning dan Pendekatan Teaching At The Right Level (TaRL) Untuk Meningkatkan Motivasi Belajar IPA Peserta Didik Kelas VIII di SMP Negeri Pamboang. *JP-3: Jurnal Pemikiran Dan Pengembangan Pembelajaran*, 3, 21–31.
- Asrini, N. M. N. A., Juwana, I. D. P., & Wirasti, N. K. (2024). Penerapan Pendekatan Teaching at The Right Level (TaRL) untuk Meningkatkan Hasil Belajar Matematika Siswa. *Jurnal Widyadari*, 25(2), 240–249.

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- Awaludin Akbar, L. (2022). Pengaruh Program Maulana Terhadap Profesionalisme Guru Dan Kemampuan Literasi Dasar Siswa. *BADA'A: Jurnal Ilmiah Pendidikan Dasar*, 4(1), 40–53.
- Fitriani, S. N. (2022). Analisis Peningkatan Kemampuan Literasi Siswa Dengan Metode ADABTA Melalui Pendekatan TARL. *BADA'A: Jurnal Ilmiah Pendidikan Dasar*, 4(1), 69–78.
- Ikasari, F., Nasti, F. S., Nurfatihah, F., Zam-Zam, F. A., Namira, H., & Rohman, H. F. (2023). Implementasi Pendekatan Teaching At The Right Level (TaRL) dalam Meningkatkan Kemampuan Literasi Numerasi Siswa Kelas VI Di Sekolah Dasar. *Jurnal Teknologi Pendidikan : Jurnal Penelitian Dan Pengembangan Pembelajaran*, 8(2), 470.
- Khalishatun, Z., Diansyah, A., & Gultom, I. M. (2024). Penerapan Pendekatan Teaching at the Right Level (TaRL) untuk Meningkatkan Hasil Belajar Sejarah This research aims to find out how the Teaching at the Right Level (TaRL) approach is implemented as a strategy to improve learning outcomes. TaRL adapts learnin. *ALACRITY: Journal of Education*, 18(2), 107–118.
- Mubarokah, S. (2022). Tantangan Implementasi Pendekatan TaRL (Teaching at the Right Level) dalam Literasi Dasar yang Inklusif di Madrasah Ibtida'iyah Lombok Timur. *BADA'A: Jurnal Ilmiah Pendidikan*, 4(1), 165–179.
- Ningrum, M. C., Juwono, B., & Suchayo, I. (2023). Implementasi Pendekatan TaRL untuk Meningkatkan Motivasi Belajar Peserta Didik pada Pembelajaran Fisika. *PENDIPA Journal of Science Education*, 7(1), 94–99.
- Rahma, F. L., Siregar, W., & Aisyah, S. (2024). Penerapan Pendekatan Teaching at the Right Level (TaRL) untuk Meningkatkan Hasil Belajar Matematika Peserta Didik di SMA Negeri 3 Medan. *Jurnal Penelitian Dalam Bidang Pendidikan Dan Pengajaran*, 18, 265.
- Satriani, Irwan, & H, A. (2024). Pembelajaran dengan Pendekatan TaRL untuk Meningkatkan Hasil Belajar Matematika Peserta Didik Siswa Kelas X TJKT 1 di SMKN 1 Gowa. *Global Journal Education Humanity*, 1(1), 121–129.
- Ulfah, U., & Arifudin, O. (2021). Pengaruh Aspek Kognitif, Afektif, dan Psikomotor terhadap Hasil Belajar Peserta Didik. *Jurnal Al-Amar: Ekonomi Syariah, Perbankan Syariah, Agama Islam, Manajemen Dan Pendidikan*, 1–9.

Edisi : Vol. 10, No. 1, April/2026, hlm. 48-64

- Vitaloka, D. H., Andriani, D. N., & Purwati. (2024). Peningkatan Hasil Belajar Peserta Didik melalui Pendekatan Teaching at the Right Level (TaRL) pada Mata Pelajaran IPAS Kelas IV SDN 01 Klegen. *Seminar Nasional Sosial Sains, Pendidikan, Humaniora (SENASSDRA)*, 3(2), 545–553.
- Zakiah, F. I., Pratiwi, D. E., & Wati, E. S. (2024). Peningkatan Hasil Belajar Peserta Didik melalui Penggunaan Pendekatan Pembelajaran Teaching at The Right Level (TaRL) Pada Pembelajaran IPAS Kelas VI Sekolah Dasar. *Journal of Educational Science and E-Learning*, 3(2), 69–77.