

Journal of Mathematics Education

Website: https://journal.usn.ac.id/index.php/JME
Email: pengelolajme@gmail.com
p-ISSN 2528-2468; e-ISSN 2528-2026



DOI: https://doi.org/10.31327/jme.v10i1.621

IMPROVEMENT OF LEARNING RESULTS THROUGH THE WEEKLY PROJECT OF PROBLEM SCHEME WITH THE TEACHING AT THE RIGHT LEVEL APPROACH

M. Mahmudi Prasetiyo*1, Sikky El Walida2

¹Department of Professional Teacher Education, Faculty of Teacher Training and Education, Universitas Islam Malang ²Departement of Mathematic Education, Faculty of Teacher Training and Education, Universitas Islam Malang

Article Info

Article history:

Received 15 Apr, 2025 Revised 15 Mei 2025 Accepted 02 Jun 2025

Keywords:

Weekly Project of Problems (W-PoP) Scheme Teaching at the Right Level (TARL) Approach Learning Outcomes

ABSTRACT

The problems that occur in learning outcomes are generally influenced by learning activities that are less interactive and less interesting so as to reduce student motivation and enthusiasm, which is caused by the learning methods and styles used in the classroom. Based on observations at SMAN 8 Malang, it is known that the implementation of mathematics learning is still one-way and students are only involved in doing assignments. This has an impact on the results of the assessment carried out by the teacher in learning mathematics. To improve student learning outcomes, effective and relevant learning methods are needed in accordance with the lesson plans that have been prepared. The approach and learning model that aims to provide solutions to overcome the challenges of improving learning outcomes is the Weekly Project of Problems (W-PoP) Scheme with the TARL Approach. The research method used is Classroom Action Research with data collection techniques consisting of initial assessment, observation, written tests, interviews, and questionnaires. Through this research, an increase in the percentage of student learning completeness was obtained in the summative assessment in cycle 2 which reached 79%, an increase of 32% compared to the summative assessment in cycle 1 and an increase of 38% from the pre-cycle. The average score of all students also increased significantly in each cycle. Thus, the application of the Weekly Project of Problems (W-PoP) with the TARL Approach can provide equal opportunities for students to receive learning materials and have equality in getting treatment in learning to gain understanding abilities to improve student learning outcomes.

This is an open access article under the <u>CC BY</u> license.



Corresponding Author:

M. Mahmudi Prasetiyo, Departement of Teacher Professional Education, Universitas Islam Malang, Indonesia Email: <u>mmahmudip@gmail.com</u> Phone Number: 085179801202

How to Cite:

Prasetiyo, M. M., & Walida, S. E. (2025). Improvement of Learning Results Through the Weekly Project of Scheme with The Teaching at The Right Level Approach. *JME:Journal of Mathematics Education*, 10 (1), 15-29.

1. INTRODUCTION

The sustainable development goals on education address the commitment to ensure quality and inclusive education for all people in the world and the opportunity and right to lifelong learning (Yulianto et al., 2024). Quality education can build a strong foundation in helping the development of society and the country to be able to follow the direction of changes that are relevant and effective in facing various challenges in the technological era (Nadia et al., 2022). Quality education has an influence in encouraging the readiness of students to face various challenges in the future so that they are able to adapt to the nature of nature and the times around them (Arisanti, 2022). In addition, quality education is also influential in overcoming challenges in improving student learning outcomes, especially in learning mathematics (Handayani et al., 2024).

Quality education and learning outcomes have a very close relationship. Learning outcomes are usually measured using tests or other academic evaluations, but they are not limited to academic assessments (Prabowo, 2021). Learning outcomes are often measured regarding learners' understanding of learning materials, the ability to apply concepts and learning basics in everyday life, and the ability to solve various problems. In addition, learning outcomes also include the development of learners' attitudes, the ability to work hard and work smart, the ability to communicate in social to a sense of responsibility (Suyuti et al., 2023).

Problems that occur in learning outcomes are usually influenced by learning activities that are less interactive and less attractive to the motivation and enthusiasm of students (Listyaningsih et al., 2023). In addition, learning outcome problems are also caused by the learning methods and styles used in the classroom that affect the active involvement of students in the classroom. Another problem in learning outcomes is the collaboration of learning in the classroom that is not yet learner-centered (Budianti et al., 2023). Therefore, this is a challenge for teachers to create quality education in improving student learning outcomes (Harefa, 2023).

To improve students' learning outcomes, effective and relevant learning methods are needed in accordance with the lesson plan that has been prepared. Innovative and creative lesson plans must contain various mastery such as methods, teaching styles, learning objectives, and assessment plans that will be used (Asari et al., 2021). One of the innovative and creative learning plans that teachers can use to achieve quality education is through a differentiated learning approach (Putri et al., 2024).

A differentiated learning approach is a learning approach that divides learners according to their abilities, interests, talents to learning styles and background diversity (Adni et al., 2025). A differentiated learning approach is a solution that can overcome the challenges of improving learning outcomes with various learning techniques and methods (Ryan & Bowman, 2022). The learning techniques and methods used adjust the learning

needs of students, which are usually adjusted to the ability of initial understanding in mastering learning materials.

To measure learning outcomes and fulfill learners' learning needs in terms of measuring initial comprehension skills, teachers can use the Teaching at the Right Level (TaRL) approach (Handayani et al., 2024). The Teaching at the Right Level (TaRL) approach is a differentiated approach that focuses on meeting the learning needs of learners based on their initial understanding of the learning material (Wirjana & Sumandya, 2023). The Teaching at the Right Level (TaRL) approach contains various techniques and methods used such as content differentiation, process differentiation to product differentiation. The Teaching at the Right Level (TaRL) approach provides opportunities for teachers to create learning activities that are fully learner-centered and ensure their learning engagement (Prasetiyo et al., 2024).

One model that can be used to overcome the challenges of improving learning outcomes in mathematics learning is the Problem Based Learning (PBL) learning model. The Problem Based Learning (PBL) model is a problem-based learning model by encouraging students to be actively involved in finding solutions to problems given by the teacher (Andari et al., 2024). The Problem Based Learning (PBL) model provides an opportunity for teachers to create a learning scheme that involves students actively by arranging study groups and discussing problems based on the Teaching at the Right Level (TaRL) approach (Herniatsih et al., 2024).

The learning scheme offered is the Weekly Project of Problem (W-PoP) scheme. The Weekly Project of Problem (W-PoP) scheme is a learning method that utilizes weekly time for teachers and learners to solve problems on the basis of producing a project at the end of learning (Prasetiyo et al., 2023). Projects can range from products and notes to media and technology. In the Teaching at the Right Level (TaRL) approach, teachers can utilize this W-PoP scheme in the differentiation of processes and products used. In addition, the Weekly Project of Problems (W-PoP) scheme can provide an easy way of teaching for teachers by adapting each phase in meetings based on the Problem Based Learning (PBL) model which prioritizes problem solving in each sub chapter and material taught (Amanda et al., 2024). Through this scheme, it is expected that there is a stimulation of knowledge on improving students' learning outcomes with the communication of exchanging ideas among students in group activities.

Based on the observation of researchers at SMAN 8 Malang, it is known that the implementation of learning, especially in mathematics, carried out by teachers is still unidirectional and students are only involved in doing assignments. In this learning activity, students only act as recipients of learning materials, recording learning materials, doing assignments to remember the material presented without active interaction and the latest innovations in learning. Teachers do not implement the latest learning approaches, do not use interactive and creative teaching styles and are not fully centered on students to be involved in learning. This affects the results of assessments carried out by teachers in mathematics learning. The results of the summative assessment carried out by the teacher had an average score of 70. In the cognitive diagnostic assessment carried out by the researcher, the average score obtained was 65. This is the motivation for researchers to carry out research to improve student learning outcomes. In addition to cognitive diagnostics, researchers also conducted interviews to find out behavior during the learning process in the classroom. Researchers found several facts that some students were easily bored with learning mathematics, lack of creative learning in the classroom,

until there was never an active question and answer process in the classroom because students felt not fully involved in learning.

Harefa (2023) mentioned that learning outcomes are influenced by the application of a suitable model in order to improve the quality of learning and students' cognitive learning outcomes, where each student gets the opportunity to make their contribution and listen to their own views and thoughts. Furthermore, (Handayani et al., 2024) suggests that to measure learning outcomes and meet the learning needs of students, teachers can use the Teaching at the Right Level (TaRL) approach. Therefore, through the application of the Teaching at the Right Level (TaRL) approach with the Problem Based Learning (PBL) model and the Weekly Project of Problem (W-PoP) scheme, it is hoped that all students have the same opportunity to receive learning materials and have equality in getting treatment in learning to get the ability to understand to improve student learning outcomes. This research is a novelty solution offered in overcoming the problems of student learning outcomes, because there has never been a study that uses the Weekly Project of Problem (W-PoP) scheme in the Problem Based Learning (PBL) model with the Teaching at the Right Level (TARL) approach. The advantage of this solution compared to previous research is the existence of a new learning scheme in modeling the application of learning and learning approaches. This scheme is expected to be able to help teachers in creating innovative and creative learning that adapts to the learning needs of students and improves students' understanding abilities. In addition, the scheme offered by the researcher is expected to be able to create and improve the quality of learning and students' cognitive learning outcomes evenly. Based on these background thoughts, researchers compiled an approach and learning model that aims to create solutions in overcoming the challenges of improving learning outcomes, namely the Weekly Project of Problem (W-PoP) Scheme with the Teaching at the Right Level (TARL) Approach.

2. METHOD

The research method used in this research is classroom action research (PTK) or Teacher Action Research (TAR) research using the Arikunto cycle flow (in Muslimin et al., 2022). Action research includes a flow of activities per cycle in the form of planning, implementation, observation/assessment and reflection stages (Dakhi, 2022). The cycle flow can be seen in Figure 1.

The research, which was structured based on the flow of the cycle, was carried out from February 6, 2025 to March 20, 2025. Data collection used by researchers included several techniques including initial assessment, observation, written tests, interviews, and questionnaires. The initial assessment aims to assess the initial understanding ability of learners in the classroom. Observation aims to assess the active involvement of students in learning. Written tests aim to measure the improvement of pre-cycle to post-cycle learner learning outcomes. Interviews aim to determine the usefulness of the research process on changes in the process and learning outcomes of students in the classroom. Meanwhile, the questionnaire acts as a reflection tool for learning improvement on changes in the behavior of students in the classroom in adjusting their interest in learning to get better learning results (Prabowo, 2021).

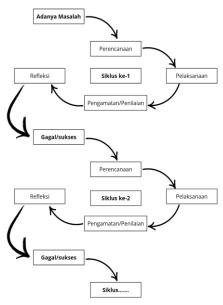


Figure 1. Flow of the PTK Cycle

In addition to determining data collection techniques, researchers also determine the data analysis techniques used to describe the learning outcomes of each cycle. The data analysis technique used by researchers is descriptive quantitative to explain the test results and descriptive qualitative to explain the results of observations, interviews and questionnaires. The data is presented in the form of diagrams and tables, while the explanation is done by displaying the data into a simpler and easier to understand form through narrative exposure.

Classroom Action Research (PTK) can be said to be successful if the results of summative assessments, observations, interviews and questionnaires on students have increased, both in learning outcomes, interest in learning or active involvement in classroom learning. If the implementation of the cycle has not reached the predetermined success standards, then the next cycle is carried out until it meets the predetermined criteria. The success criteria in this study can be seen in Table 1 below.

Instrument	Success Criteria	Data Collection Technique
Summative Assessment	≥ 70% of students get good grades with complete learning criteria	Written test
Summative Assessment	Based on the reference standard results, the percentage of the class average score reached >75%	Written test
Learner observation sheet	The average percentage of learner activeness or responses assessed by the observer has reached >75%	Observation
Interview	Positive responses that reached $\geq 75\%$ of learners on the usefulness of the research process	Interview

Table 1. Action Success Indicator

	on changes in the process and learning outcomes of learners in the classroom	
Questionnaire	≥ 75% of learners have the ability to self-reflect and make improvements to changes in behavior during the learning process	Inquiry

To strengthen the results of the action success indicators at the end of the implementation of each cycle, researchers measured the comparison of summative assessments to determine the success of learning objectives through improving student learning outcomes. Learning outcomes in the form of grades are converted into learning reference results through a scale of five. Learning outcomes and criteria as well as learning completeness are listed in Table 2.

		=
Learner scores	Learning outcome criteria	Learning completeness
91 – 100	Excellent	Completed
76 - 90	Good	Completed
61 - 75	Less	Not Completed
46 - 60	Low	Not Completed
< 46	Very Low	Not Completed

Table 2. Student Score Completion

In addition to calculating the percentage of students who are complete, researchers also convert the average class score to strengthen the completeness of the achievement of the cycle in the classroom. The following table 3 is presented to determine the standard reference results of learning in the classroom.

Table 3. Learning Outcome Standard

Class average score

Cycle completeness/succe

Class average score	Cycle completeness/success criteria
90% < PR ≤100%	Completed
$75\% < PR \le 90\%$	Completed
$60\% < PR \le 75\%$	Not completed
$45\% < PR \le 60\%$	Not completed
PR ≤45%	Not completed

To measure the standard of learning reference results that assess the success of the cycle, the following formula is used:

Percentage of class average score (PR) =
$$\frac{\sum Score\ off\ all\ participants\ obtained}{\sum All\ students} \times 100\%$$

The research subjects involved by the researchers were students of class XI-4 SMAN 8 Malang which amounted to 34 people. The subject taught in this study was mathematics with circle material. Researchers were assisted by observers from peers and



class teachers who teach math subjects. Observers were in charge of assessing the continuity and behavior of learning activities in the classroom. The research instruments designed include teaching modules, teaching materials, LKPD using the TARL approach, formative and summative assessments and student observation sheets (Ujud et al., 2023)

3. RESULTS AND DISCUSSION

3.1. Results

In the pre-cycle stage, researchers carried out observations and also cognitive diagnostic assessments needed to find out the problems in the classroom. Through observation, the results obtained were that students of class XI-4 SMAN 8 Malang experienced problems with learning styles in the classroom that were not in accordance with their learning needs. Through cognitive diagnostic assessment, the results obtained show the facts on observation that students experience problems in math learning outcomes. Therefore, researchers prepare lesson plans starting from setting learning objectives, determining learning assessments, to preparing learning designs in the classroom such as teaching modules, teaching materials, learning media, to the assessment rubrics used. Then, researchers began to enter into the implementation stage of PTK research. In the implementation stage, researchers implemented the Weekly Project of Problem (W-PoP) scheme using the Problem Based Learning (PBL) model through the Teaching at the Right Level (TaRL) approach. Meanwhile, the cycle needed to solve the problem consisted of two cycle stages. The first cycle and the second cycle were carried out as many as 3 meetings with each 1 meeting used as an evaluation and reflection of each cycle's results obtained.

In the implementation of cycle 1, based on the pre-cycle results, the Teaching at the Right Level (TaRL) approach was used. Through the application of the Teaching at the Right Level (TaRL) approach, learners are divided into 3 groups, namely: groups needing guidance, advanced, and very advanced. Participants in the group needing guidance use the reference criteria of very low and low, the advanced group uses the reference criteria of less and good, while the very advanced group uses the reference criteria of very good. The model used is Problem Based Learning (PBL) which focuses on students as the main subject of learning. By using 5 phases of learning, students who have been divided into groups are fully involved in learning activities.

In the learning phase, there are group activities. In group activities, researchers apply the Weekly Project of Problems (W-PoP) scheme to make it easier for learners to solve a problem into a project that can improve their learning outcomes. This scheme offers learners to fully solve various problems presented by researchers, to be solved with their groups which are then made into a project result in order to increase learning engagement and learning outcomes. The resulting project will then be presented for the next meeting to achieve the best results. Then enter the reflection and evaluation stage to determine the success of the cycle 1 process that has been implemented. At this stage of reflection and evaluation, all data is analyzed to reach conclusions about the success or failure of the cycle. The following table presents the results of the data analysis of the implementation of cycle 1.

Table 4. Cycle 1 Results Data

Instrument	Success Criteria	Cycle 1 Results	Successful/Needs Improvement
Summative Assessment	≥ 70% of students get good grades with complete learning criteria	The results of the cycle explained that students who received complete criteria in learning only reached 47% of the 34 students in the class	Needs Improvement
Summative Assessment	Based on the reference standard results, the percentage of the class average score reached >75%	The results of the cycle showed that the percentage of class average scores obtained by all students was 79.7%	Success
Learner observation sheet	The average percentage of learner activeness or responses assessed by the observer has reached >75%	The results of the cycle show that the response or activeness of students assessed by the observer has reached 85.7%	Success
Interview	Positive responses that reached ≥ 75% of learners on the usefulness of the research process on changes in the process and learning outcomes of learners in the classroom	The results of the cycle showed that almost all students gave a positive response to the usefulness and usefulness of the research process on changes in learning processes and outcomes which reached 85%	Success
Questionnaire	≥ 75% of learners have the ability to self-reflect and make improvements to changes in behavior during the learning process	The results of the cycle show that students who are able to self-reflect and make improvements to changes in behavior are only about 58%	Needs Improvement

Based on Table 4, there are still 2 points that need improvement, namely summative assessment on the total number of students who are complete in learning and questionnaires. The points that need improvement should be continued in cycle 2 by paying attention to the shortcomings that emerged in cycle 1.

In cycle 2, learning activities were applied that were almost the same as cycle 1. The thing that differentiated cycle 1 and cycle 2 was the division of groups and the successful implementation of the cycle. The criteria used to divide the groups were also the same, namely based on the results of the learning reference through a scale of five. Meanwhile, reflection and evaluation in cycle 2 were used to show the success in improving students' learning outcomes to the maximum. After the process of action implementation, reflection, and evaluation has been carried out, the collected data is processed using the data analysis methodology that has been determined in the research

method. In addition to the summative assessment data, researchers also collected the results of students' activities. The following table presents the results of data analysis of cycle 2 implementation.

Table 5. Cycle 2 Results Data

Instrument	Success Criteria	Cycle 2 Results	Successful/Needs
	~ HOUSE CLIVELIN	The results of the cycle	Improvement
Summative Assessment	≥ 70% of students get good grades with complete learning criteria	explained that students who received complete criteria in learning had reached 79% of the 34 students in the class. This shows that there has been a significant improvement in learning	Success
Summative Assessment	Based on the reference standard results, the percentage of the class average score reached >75%	The results of the cycle show that the percentage of the class average score obtained by all students has reached 87.2%. This shows that all students have been able to improve their comprehension skills in learning The results of the cycle	Success
Learner observation sheet	The average percentage of learner activeness or responses assessed by the observer has reached >75%	show that the response or activeness of students assessed by the observer has reached 94% because students have adapted well to the learning process presented by the researcher	Success
Interview	Positive responses that reached ≥ 75% of learners on the usefulness of the research process on changes in the process and learning outcomes of learners in the classroom	The results of the cycle showed that almost all students gave a positive response to the usefulness and usefulness of the research process in changing the process and learning outcomes which reached 91% because students actively participated in the learning process	Success
Questionnaire	≥ 75% of learners have the ability to self-reflect	The results of the cycle show that students who	Succes

Instrument	Success Criteria	Cycle 2 Results	Successful/Needs Improvement
	and make	are able to self-reflect and	
	improvements to	make improvements to	
	changes in behavior during the learning	changes in behavior have reached 82% because students have found	
	process	interest in learning	

Based on Table 5, cycle 2 has achieved the specified success criteria. The implementation of cycle 2 was able to provide a significant improvement in the learning process because the achievement of success indicators was better than cycle 1. Therefore, it can be concluded that the implementation of the cycle can be stopped.

3.2. Discussion

To strengthen the evidence of the success of improving student learning outcomes, researchers also present data on the comparison of student scores during the pre-cycle, post-cycle 1, and post-cycle 2. Data in the form of scores, both diagnostic assessments and summative assessments are collected and then analyzed to produce a comparative result of completeness. The results of the comparison of completeness on diagnostic assessments, summative assessments of cycle 1 and cycle 2 in the standard score of students can be seen in the following table.

Table 6. Comparison of Student Score Completion

Learner Scores	Learning Outcome Criteria	Learning Completeness	Lots Of Learners Diagnostic Assessment	Lots Of Learners Summative Assessment Cycle 1	Lots Of Learners Summative Assessment Cycle 2
91 - 100	Excellent	Completed	10	12	11
76 - 90	Good	Completed	4	4	16
61 - 75	Less	Not completed	4	10	7
46 - 60	Low	Not completed	10	8	0
< 46	Very Low	Not completed	6	0	0

Table 6 shows that at the end of cycle 1 there was an increase in the summative scores of learners compared to the diagnostic assessment. Learners who were successfully completed also experienced an increase, which initially in the pre-cycle amounted to 14 learners, with cycle 1 learners who completed the summative assessment amounted to 16 learners. Meanwhile, in cycle 2 learners experienced a significant increase that 27 learners successfully went through learning activities by getting a summative assessment score above 75. The data that has been analyzed shows that an increase in learner learning outcomes can be obtained through the application of the Weekly Project of Problem (W-PoP) scheme using the Problem Based Learning (PBL) model through the Teaching at the Right Level (TaRL) approach. However, the thing that affects the difference in success or failure of cycles 1 and 2 is the percentage of completeness. Comparison of the

41%

47%

79%

Not completed

Completed

Completed



percentage of completeness in achieving learning objectives to improve learning outcomes can be seen through Table 7 below.

Percentage Many learners Learning of Completion Cycle Outcome Percentage Not Many **Objectives Completed** of average completed Learners score

70,9%

79,7%

87,2%

Pre-cycle

Cycle 1

Cycle 2

14

16

27

20

18

7

Table 7. Comparison of Achievement of Learning Outcome Improvement

Table 7 shows that the average percentage of learning reference results in the classroom showed a good increase in each cycle because it managed to reach the expected level of completeness. In cycle 1, the average score of all students in the class reached 79.7% with good criteria and successfully completed the standard of learning reference results in the classroom. However, cycle 1 still needs improvement because the percentage of learners' completeness in the class only reached 47%. This shows that the number of students who are complete in learning has not reached half of the total number of students in the class. The 47% of learners who were complete were mostly learners who were in the very advanced group and the rest were advanced group learners.

When cycle 2 took place, the researcher made new groups according to the results of the summative assessment of cycle 1. The results of cycle 2 provided a significant change in learning outcomes and the activeness of learners in the classroom to solve various problems given. In cycle 2, it shows that students who are complete have increased significantly with a total of 27 students with a percentage of completeness reaching 79%. This increased by 32% from the percentage of completeness in cycle 1. In addition to increasing the number of students who were complete, cycle 2 also showed that the average score of students based on the standard learning reference results reached 87.2%.

Based on the results obtained in cycle 2, this study shows that students who are able to improve learning outcomes not only come from groups with very advanced and advanced categories, but groups needing guidance are also able to improve their learning outcomes to the maximum if given scaffolding that suits their learning needs. With a learning style that is tailored to the learning needs of the class, it has an effective impact on improving student learning outcomes. The need for understanding in class mastery clearly has a significant impact on how each learner learns to achieve the best results. The following is presented as a diagram of the completeness of the improvement of student learning outcomes starting from pre-cycle, cycle 1 to cycle 2.

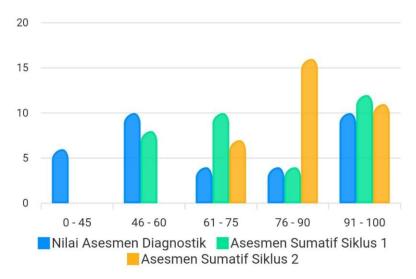


Figure 2. Diagram of Learning Outcome Improvement

Based on the results, it can be concluded that there has been an increase in student learning outcomes with the application of the Weekly Project of Problem (W-PoP) Scheme using the Problem Based Learning (PBL) Model through the Teaching at the Right Level (TaRL) Approach. These results strengthen the success of previous research conducted by Prasetiyo et al., (2023) which explains that the exchange of ideas in learning activities based on appropriate groups and alignment of learning that adjusts the target of problem solving can significantly improve learning outcomes in accordance with the knowledge that has been obtained. The exchange of ideas is inseparable from the learning stages that have been arranged according to the scheme based on the learning needs of students. With the appropriate scheme, it can play an important role in improving the quality of students' learning by understanding earlier a given problem to achieve better learning outcomes.

Important steps in learning activities cannot be separated from the designs and plans used by teachers such as schemes, models, and approaches. The freedom to determine the learning design designed by the teacher must still be adjusted to the learning needs of students and the conditions of the learning environment. This strengthens the results of research conducted by Amanda et al., (2024) who explained that the Weekly Project of Problems (W-PoP) scheme is able to improve the quality of learning in the classroom, because this scheme is able to adjust any approach implemented by the teacher in learning activities. On the other hand, teachers also need to continue to make improvements and revisions of a design and plan that has been prepared in order to achieve the effectiveness of learning activities.

In addition, the suitability of the model and approach implemented in learning will be able to provide a stimulus or trigger to students to further raise their interest in learning so that it can affect their learning outcomes. The behavior carried out by the teacher through the approach that has been designed, is able to provide comfort for students in carrying out learning activities because it is adjusted to positive environmental conditions in the classroom. This is in accordance with the results researched by Prasetiyo et al., (2024) that learning activities are also getting better and better with the realization of learning activities through the Problem Based Learning (PBL) Model which requires students to interact with each other both in group discussions and during the problem-solving process. Furthermore, Prasetiyo et al., (2024) also mentioned that there was an

increase in mindset with the division of groups based on the Teaching at the Right Level (TaRL) approach so that each learner had the opportunity to process and find a safe and comfortable way of learning in the classroom and full of equality without any significant differences to understand a material.

In improving learning outcomes, it turns out that a variety of suitable methods are needed in order to increase the interest and activeness of students' learning so that it can affect the quality of learning and learning outcomes. This is reinforced by Harefa, (2023) explanation, that learning outcomes are influenced by the application of a suitable model in order to improve the quality of learning and students' cognitive learning outcomes, where each student gets the opportunity to make their contribution and listen to their own views and thoughts. In improving learning outcomes, teachers must be able to master various novelty methods by adjusting the learning needs of students and the characteristics of students. Teachers are required to be more open and able to filter all the novelty that emerges and develops in order to be able to create more interactive learning to encourage the improvement of students' understanding abilities.

4. CONCLUSION

The Based on the results of the research that has been carried out, it can be concluded that the application of the Weekly Project of Problem (W-PoP) scheme using the Problem Based Learning (PBL) model through the Teaching at the Right Level (TaRL) approach is able to significantly improve student learning outcomes. This is evidenced by an increase in the percentage of students' learning completeness in the summative assessment in cycle 2 reaching 79%, an increase of 32% compared to the summative assessment in cycle 1 and an increase of 38% from the pre-cycle. The increase in the percentage of each cycle proves that the actions provided are able to increase the percentage of students' learning completeness. Meanwhile, the average score of all learners also increased significantly in each cycle. Thus, the application of the Weekly Project of Problem (W-PoP) Scheme using the Problem Based Learning (PBL) Model through the Teaching at the Right Level (TaRL) Approach can improve students' learning outcomes which are characterized by an increase in the percentage of students' learning completeness and the average score of all students in each cycle that has been implemented.

REFERENCES

- Adni, H., Istiningsih, S., Nurhayati., (2025). Application of Teaching at the Right Level (TaRL) Approach in Improving Students' Activeness in Mathematics Learning. 6(2).
- Amanda, P. S., Yunus, M., Ashari, A., (2024). Weekly Project of Problem (W-PoP): A Pathway to Boosting Students' Speaking Ability in the English Classroom. *Journal of Research, Education, and Learning, 19*(10).
- Andari, R. M., Krisdiana, I., & Hidayati, S. N. (2024). Improving Mathematics Problem Solving Ability through the Application of Problem Based Learning Model with TaRL Approach on Straight Line Equation Material in Class VIII C SMP Negeri 3 Madiun. *INNOVATIVE: Journal Of Social Science Research*, 4(3), 9924–9938.
- Arisanti, D. A. K. (2022). Analysis of the Independent Curriculum and Independent Learning Platform to Realize Quality Education. *Journal of Quality Assurance*, 8(02), 243–250. https://doi.org/10.25078/jpm.v8i02.1386

- Asari, S., Pratiwi, S. D., Ariza, T. F., Indapratiwi, H., Putriningtyas, C. A., Vebriyanti, F., Alfiansyah, I., Sukaris, S., Ernawati, E., & Rahim, A. R. (2021). PAIKEM (Active, Innovative, Creative, Effective and Fun Learning). *DedikasiMU: Journal of Community Service*, 3(4), 1139. https://doi.org/10.30587/dedikasimu.v3i4.3249
- Budianti, Y., Rikmasari, R., & Oktaviani, D. A. (2023). Use of Interactive Powerpoint Media to Improve Learning Outcomes of Elementary School Students. *Journal of Elementary School Education and Learning Innovation*, 7(1), 127. https://doi.org/10.24036/jippsd.v7i1.120545
- Dakhi, O. (2022). Implementation of Cooperative Problem Solving Learning Model to Improve Creativity and Learning Achievement. *Educativo: Journal of Education*, *I*(1), 8–15. https://doi.org/10.56248/educativo.v1i1.2
- Darmawan Harefa. (2023). Effectiveness of Talking Chips Learning Model to Improve Student Learning Outcomes. *TUNAS: Journal of Biology Education*, *4*(1), 83–99. https://doi.org/10.57094/tunas.v4i1.1011
- Handayani, R., Hawazi, D., & Mataram, U. (2024). Use Of Augmented Reality Media Using A Tarl Approach To Improve Primary School Students 'Mathematics Learning. 4(2), 91–100.
- Herniatsih, N. A., Zamroni, N., & Winarti, E. R. (2024). Improving Students' Critical Thinking Ability Using PBL Model with TaRL Approach Assisted by Geogebra on Function Material and Its Modeling Class XI SMAN 12 Semarang. *Proceedings of the Webinar on Strengthening Professional Teacher Candidates*, 1044–1052.
- Listyaningsih, E., Nugraheni, N., & Yuliasih, I. B. (2023). Improving Learning Outcomes Through the PBL Model in Mathematics Class V SDN Bendan Ngisor. *Madani: Multidisciplinary Scientific Journal*, *1*(6), 620–627. https://doi.org/10.5281/zenodo.8139269
- Muslimin, M., Hirza, B., Nery, R., Yuliani, R. E., Heru, H., Supriadi, A., & Khairani, N. (2022). Improving Student Mathematics Learning Outcomes Through Differentiated Learning in Realizing Independent Learning. *Journal of Mathematics Education RAFA*, 8(2), 22–32.
- Nadia, A. I., Afiani, K. D. A., Naila, I., & Muhammadiyah, U. (2022). The Use of Wordwall Application to Improve Mathematics Learning Outcomes During the Covid-19 Pandemic. *Journal of Indonesian Learning Technology Muhammadiyah Surabaya University*, 12(1), 33–43.
- Prabowo, A. (2021). The Use of Liveworksheet with Web-Based Application to Improve Learners' Learning Outcomes. *Indonesian Journal of Education and Technology*, *I*(10), 383–388. https://doi.org/10.52436/1.jpti.87
- Prasetiyo, M. M., Amanda, P. S., & Fathani, A. H. (2023). Development of Project Based Learning Model Weekly Project of Problem Scheme as Supporting Independent Learning of Class XI Students of SMAN 1 Bululawang. *Constructivism: Journal of Education and Learning*, 15(2), 289–299. https://doi.org/10.35457/konstruk.v15i2.2946
- Prasetiyo, M. M., Sunismi, S., & Fathani, A. H. (2024). Penerapan Pembelajaran Teaching at The Right Level (Tarl) untuk Meningkatkan Minat Belajar dan Pemahaman Konsep Peserta Didik Kelas Vii A Smp Wahid Hasyim Tahun Ajaran 2023/2024. *Brilliant: Jurnal Riset dan Konseptual*, *9*(3), 646–654. https://doi.org/10.28926/briliant.v9i3.1935.

- Putri, N. S., Firmansyah, E., Chairy, B., Bustaren, R., & Rahmawati, F. (2024). *Improving mathematical critical thinking skills through Problem Based Learning model with Culturally Responsive Teaching and Teaching at the Right Level approaches*. 5(2), 1–15.
- Ryan, J., & Bowman, J. (2022). Teach cognitive and metacognitive strategies to support learning and independence. *High Leverage Practices and Students with Extensive Support Needs*, 3(3), 170–184. https://doi.org/10.4324/9781003175735-15
- Suyuti, S., Ekasari Wahyuningrum, P. M., Jamil, M. A., Nawawi, M. L., Aditia, D., & Ayu Lia Rusmayani, N. G. (2023). Analysis of the Effectiveness of Using Technology in Education on Improving Learning Outcomes. *Journal on Education*, 6(1), 1–11. https://doi.org/10.31004/joe.v6i1.2908
- Ujud, S., Nur, T. D., Yusuf, Y., Saibi, N., & Ramli, M. R. (2023). Application of Discovery Learning Model at SMAN 10 Ternate City on Environmental Pollution Material. *Bioeducation Journal*, *6*(2), 337–347.
- Wirjana, I. M. A. Y., & Sumandya, I. W. (2023). Implementation of Teaching At the Right Level (Tarl) to Increase Students' Participation in Learning Mathematics Class XI SMA. *Widyadari*, 24(2), 263–275. https://doi.org/10.59672/widyadari.v24i2.3190
- Yulianto, D., Junaedi, Y., Juniawan, E. A., & Anwar, S. (2024). Higher Level Thinking Ability of Junior High School Students through Realistic Mathematics Approach with PBL and CTL Model Based on Project-Based Learning on AKM Problem Solving in Lebak Banten Regency. *Theorem: Mathematics Theory and Research*, 9(1), 57. https://doi.org/10.25157/teorema.v9i1.13457