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Increasing Student Activeness Using the TaRL Approach Through Differentiated Learning on Statistics Material

Lomak Norita Simanjuntak*[1], Yantoro Yantoro[2], Habibah Anna Radmika[3], Basyir Basyir[4]
[1,2]Universitas Jambi, Indonesia
[3,4]SD Negeri 42 Kota Jambi, Indonesia
ppg.lomaksimanjuntak12@program.belajar.id*[1], yantoro@unja.ac.id[2], habibahanna090491@gmail.com[3], pakbasyir17@gmail.com[4]
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ABSTRACT
The aim of this research is to examine student activity. This research uses Classroom Action Research (PTK). The subjects and location of this research were class VB students at SDN 42 Jambi City, totaling 24 students. The research model used is research which includes four stages of action, namely planning, action, observation and reflection. The data analysis technique used is quantitative descriptive. The research results showed that students experienced significant improvement during the two cycles using each completeness percentage. In the pre-cycle, students' completeness was 40%. In cycle I the completeness obtained was 53% and in cycle II it reached 77% completeness or an increase of 37%. With a pre-cycle average of 40% to 53% in cycle I and increasing in cycle II to 77%. So, it can be concluded that the TaRL approach can increase student activity in teaching and learning activities in the VB class at SDN 42 Jambi City. So, it can be recommended to use the TaRL learning approach to increase student activity.
Keywords: Learning Media, Student Activity, TaRL Approach.

ABSTRAK
Tujuan dari penelitian ini adalah untuk mengkaji keaktifan peserta didik. Penelitian ini menggunakan Penelitian Tindakan Kelas (PTK). Subjek dan lokasi penelitian ini yakni peserta didik kelas VB SDN 42 Kota Jambi yang berjumlah 24 peserta didik. Model penelitian yang digunakan yakni penelitian riset yang mencakup empat tahap Tindakan yaitu perencanaan, tindakan, observasi, dan refleksi. Teknik analisis data yang digunakan yakni deskriptif kuantitatif. Hasil penelitian menunjukkan bahwa peserta didik mengalami peningkatan yang signifikan selama dua siklus dengan menggunakan masing-masing presentase ketuntasan. Pada pra-siklus ketuntasan yang dimiliki oleh peserta didik sebesar 40%. Pada siklus I ketuntasan yang di peroleh sebesar 53% dan pada siklus II mencapai ketuntatasan 77% atau terjadi kenaikan sebesar 37%. Dengan rata-rata pra siklus 40% menjadi 53% pada siklus I dan mengalami peningkatan pada siklus II menjadi 77%. Maka dapat disimpulkan bahwa pendekatan TaRL dapat meningkatkan keaktifan peserta didik pada kegiatan belajar mengajar di kelas VB SDN 42 Kota Jambi. Sehingga, dapat disarankan untuk menggunakan pendekatan pembelajaran TaRL dalam meningkatkan keaktifan peserta didik.
Kata kunci: Keaktifan Peserta didik, Media Pembelajaran, Pendekatan TaRL

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Introduction

Education plays a very important role in the development of individuals and society (Pradana et al., 2021; Shaturaev, 2021; Szymkowiak et al., 2021). Through education, individuals acquire the knowledge, skills, and values necessary to face the challenges

of the modern era. Individually, education opens the door to opportunities to achieve goals, improve one's standard of living, and develop one's potential optimally. Apart from that, education is also the foundation for the social and economic development of a country (Oliinyk et al., 2021; Schofer et al., 2021). Countries that invest their resources in education tend to have higher rates of progress. Education also plays a role in reducing social inequality, because it provides more equal access to opportunities and resources. Thus, education not only changes individual lives, but also builds a solid foundation for the progress and stability of a nation.

Indonesia places education as one of the most important basic rights in the life of the Indonesian people as written in the fourth paragraph of the opening of the 1945 Constitution, namely to educate the nation (Shaturaev, 2021; Subawa & Hermanto, 2023; Usman, 2020). One of the institutions holding the duty to carry out this obligation is elementary schools which play an important role in the education process in Indonesia. One of the elementary schools in Jambi City is SDN 42 Jambi City. SDN 42 Jambi City has a variety of student characters in the classroom, therefore one of the important tasks of teachers is to maximize the quality of the teaching and learning process in the classroom. The best teaching and learning process is one that focuses on students, which is also in accordance with the policy of the Ministry of Education and Culture through the Independent Curriculum (Subawa & Hermanto, 2023).

A learning process that focuses on students will not occur and develop if there is no direct active war from students (Goldenberg, 2020; Rudolph et al., 2023). The active role of students is a concept where students not only act as passive recipients of information from educators, but are also actively involved in the learning process (Carless, 2022; Sekwena, 2023). This includes a variety of activities such as group discussions, collaborative projects, experiments, and problem solving, which encourage students to engage directly in understanding the material and developing skills. This approach aims to increase deeper understanding, critical thinking skills, and student independence in the learning process.

Students' activeness in learning reflects their level of involvement and participation in the learning process (Hulaikah et al., 2020; Qureshi et al., 2023). This involves students' proactive attitude in seeking understanding, asking questions, discussing, and being active in problem solving. Student activity enriches the classroom atmosphere with diverse interactions, enables the exchange of ideas, and encourages critical thinking. Research shows that student activity has a positive impact on their academic achievement and deepens understanding of the concepts taught (Chen & Hwang, 2020). Apart from that, student activity also contributes to the development of social skills, creative thinking abilities, and increases students' intrinsic motivation for

learning(Gürkan & Dolapçioglu, 2020). Thus, encouraging student activity becomes an important aspect in an effective learning approach, where the teacher acts as a facilitator to stimulate student involvement in the learning process (Li, 2022; Wang & Ji, 2021).

Then, apart from that, one of the approach techniques to create active student activity in the learning process is to use the TaRL approach (Fauzi et al., 2023; Ningsih, 2023). The TaRL (Teaching at the Right Level) approach is an approach in the field of education that aims to improve students' literacy and numeracy skills, especially at the elementary level (Binaoui et al., 2023; Jazuli, 2022; M. A. Pratama et al., 2024; Teaching, 2023). This approach focuses on adapting learning to students' individual skill levels, so that they can master basic material well before moving on to the next level. This method includes a careful initial evaluation to identify the student's level of ability, as well as the use of learning based on the results of that evaluation (Chien et al., 2019; Sabagh et al., 2021). The main goal is to provide an appropriate learning approach that suits students' needs, so that they can achieve significant progress in academic achievement. It is expected that this research can contribute to providing new knowledge for the use of the TaRL approach in elementary schools for mathematics learning topics.

Research Methods

The Classroom Action Research (PTK) method utilizes the Teaching at the Right Level (TaRL) approach which is an interesting approach to use. TaRL is a learning approach that emphasizes adapting learning materials to the individual student's level of understanding (Asiza et al., 2023). In the PTK context, teachers can use the TaRL approach to adapt teaching methods and learning materials to the needs of students in the class. Teachers can carry out an initial evaluation of students' level of understanding in literacy and numeracy, then design learning that suits each student's skill level. Implementation of the TaRL approach in PTK allows teachers to effectively improve students' academic achievement by paying attention to their individual needs (Apriati et al., 2023; Madihah, 2023; A. Pratama et al., 2023).

The application of the PTK method which combines the TaRL approach will also provide a significant contribution to research. By utilizing this approach, researchers can collect data regarding changes in student understanding and achievement before and after implementing corrective actions consistent with the TaRL approach. The data can be analyzed to evaluate the effectiveness of the method in improving student learning (Supriyatno et al., 2020). In addition, researchers can also reflect on their experiences in implementing PTK with the TaRL approach, thereby providing valuable insight for developing more effective learning approaches in the future.

This research uses descriptive qualitative methods using the classroom action research cycle. This cycle consists of several stages which include problem identification, action planning, implementation, evaluation, and reflection. The first stage is problem identification, where the observer identifies certain problems or challenges in the learning process in the classroom. Next, action planning is carried out which includes making plans for concrete steps to overcome the problem. The third stage is implementation, where the action plan is implemented in the classroom learning process. After that, an evaluation is carried out on the effectiveness of the actions that have been taken to see the extent of changes or improvements that have occurred. The final stage is reflection, where the observer reflects on the results of the evaluation and identifies the next steps that need to be taken. This process repeats cyclically until the learning objectives are achieved.

In this research, researchers also used several additional instruments such as observation sheets, formative tests, as well as lesson plans and other learning media that support the TaRL approach in the learning process. Observation sheets are used to determine student activity during the learning process. Formative test instruments are used to determine students' understanding of the topics being studied. Learning plans are used to see teacher planning and evaluate achievement of learning objectives. The location chosen was SDN 42 Jambi City, this was based on the researcher's main duties as PPG Program Implementer, one of which was successful in finding learning problems in the form of the low active role of students in the VB class, totaling 24 students.

The learning materials used in this research are basic statistics: Mean, Median and Mode. These three statistical concepts provide a deep understanding of data distribution and the patterns that may occur in it. The mean (average) provides an overview of the middle value of a data set, while the median (middle value) provides an overview of the middle value that is not influenced by outliers or extreme values. Meanwhile, the mode (the most frequently occurring value) provides information about the most common or frequently occurring values in the data set. By using mean, median, and mode, research can identify trends, patterns, and characteristics from the resulting data, which can provide valuable insights for decision making in educational contexts, such as improving learning strategies, identifying student needs, and developing educational programs. which is more effective.

Cycle 1 and cycle 2 regarding the TaRL (Teaching at the Right Level) learning approach show a significant evolution in learning on basic statistical topics: Mean, Median and Mode. Cycle 1 focuses on introducing the TaRL method in a classroom context, evaluating its impact on student understanding and providing critical feedback for

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further adjustments. Meanwhile, cycle 2 involved further adjustments of the TaRL strategy based on the findings of the previous cycle, optimizing the presentation of material, and adjusting the approach to increase learning effectiveness.

The success indicator in this Action Research is 76%. Based on pre-cycle observations and the results of observations on student activity indicators, it was found that the level of student activity was only 40%, this indicates the need for action to increase student activity in class V B. These results were obtained from the results of observation analysis which have been written in Table 2.

Result and Discussions

The initial stage carried out by the author was to classify students based on differentiated learning, namely auditory, visual and kinesthetic. The classification results are presented in Table 1. After classifying each category, the author designs the stages of applying TaRL to learning in the classroom so that differentiation learning can run well.

Table 1. Classification of Student Learning Abilities

No	Category	Students
1	Audio	8
2	Visual	4
3	Kinesthetic	12

In the next stage, the author provides basic statistical material: mean, median and mode by explaining using a projector in front of the class, as well as providing stimulus questions and cooperative activities that can observe the level of student activity in the class. From the 4 indicators it can be concluded that the category of student activity has been achieved. found in this case it can be seen that the level of activity is still relatively low. This can be seen in the tabulation results obtained by researchers through direct observation in Table 2.

Table 2. Tabulation Results of Pre-Cycle Learning Success Indicators

No	Indicator	Yes	Nope	Percentage
1	Student participation in determining learning objectives	11	13	46%
2	Student participation in teaching and learning activities	10	14	41%
3	Relationship with study groups	10	14	41%
4	Opportunity to make decisions	8	16	33%
	Total			40%

Class Presentation

At the presentation stage in cycle I, the teacher begins collaboration between cooperative learning and game media. This approach aims to improve several indicators that have been previously detected as areas that require attention in student understanding. By utilizing PPT media, teachers can create an interactive and interesting learning environment, which allows students to learn in a fun way while remaining involved in the cooperative learning process. Collaboration between cooperative learning and PPT can stimulate student participation, increase their involvement in learning, and strengthen understanding of basic statistical concepts more effectively.

In the first cycle, it was seen that students had not fully participated actively as a whole class, because only a few students were willing to get involved and the others still tended to be shy, afraid or lack self-confidence. Students who have an auditory character seem to only listen to me without any reciprocity in the form of questions or answers to questions. This also happens to the children who have a visual character, where most of them seem to just follow along. For students with kinesthetic characteristics, a small number of them are more active in showing themselves by asking questions, but their questions are still not entirely about the substance of the learning. This is in accordance with the results of observing the level of student activity in the classroom in the tabulation above.

In cycle II, it shows a positive impact on students' understanding and activeness in basic statistics material. Both students who have auditory, visual and kinesthetic characteristics show a significant increase in active learning and also their understanding of basic statistical concepts and their ability to apply these principles. Careful evaluation of students' responses to theoretical and practical questions directly or via PPT shows that the TaRL approach is able to address students' activeness problems effectively, by providing appropriate adjustments to their individual level of understanding. The results of cycle II can be seen in Table 3.

Table 3. Tabulation Results of Cycle I Learning Success Indicators.

No	Indicator	Yes	Nope	Presentage
1	Student participation in determining learning objectives	12	12	50%
2	Student participation in teaching and learning activities	13	11	54%
3	Relationship with study groups	14	10	58%
4	Opportunity to make decisions	12	12	50%
	Total			53%

Department of Mathematics Education, Universitas Muhammadiyah Purwokerto, Purwokerto, Indonesia
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Data Collection Game (Playing Dice)
Learning is carried out through a series of activities using dice games. Students are asked to roll the dice, record the results of the throw, and calculate the mean, median, and mode of the data obtained. During the learning process, students are divided into several groups and the teacher provides guidance and guidance to students to understand basic statistical concepts.

The results in cycle I, the same as in the class presentation stage, showed that students had not fully participated actively as a whole class. There are only a few students who are interested in the game of collecting data through dice learning media. It is not yet clear whether the whole or large part of the impact of using dice games in learning has succeeded in increasing students' active learning in basic statistical concepts. Students in the play group have not shown a higher level of participation in learning activities, such as group discussions, dice data analysis, and problem solving, as can be seen from the results of the researcher's observations and also the analysis of test results on the LKPD that the researcher provided, where the results are still quite low.

The results of cycle II showed a significant increase in student learning activity. Experimental group students showed a higher level of participation compared to the previous cycle. Observation results showed that the improvements made were successful in increasing their learning activity both in terms of indicators of active participation, productive work and also mutual respect because they seemed very active in discussions and group work.

Data analysis shows that the average score of the playing group students was significantly higher than their score in cycle I. The numeration results from cycle II above can be seen in the Table 4.

Table 4. Tabulation Results of Cycle II Learning Success Indicators

No	Indicator	Yes	Nope	Presentage
1	Student participation in determining learning objectives	18	6	75%
2	Student participation in teaching and learning activities	20	4	83%
3	Relationship with study groups	19	5	79%
4	Opportunity to make decisions	17	7	71%
	Total			77%

Based on the exercises that have been given to VB students, the implementation of Teaching at the Right Level (TaRL) has increased student activity in the learning process. The magnitude of student growth can be seen in the following graph.

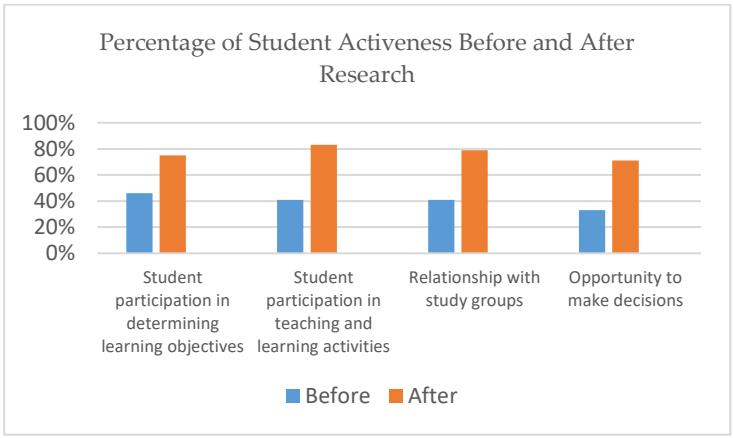

Figure 1. Presentation of the Application of Tarl in Before and After Research

Based on Figure 1, it can be concluded that there has been an increase from Pre-Cycle of 40% to Cycle I of 13%, then conditions in Cycle I of 53% to Cycle II of 24%, and indicators of success in action of 75% have been achieved, and the action ends in the cycle. II with a percentage of 77%. The results of this research show success in carrying out learning actions. This is proven by the increase in student success from pre-cycle to cycle 2. This is also shown in the (Norrizqa & Sugianoor, 2024) research carried out which completed the cycle up to cycle 2. This research also reaped success in the second cycle with a success rate of >76%, which was obtained in cycle 2 namely 77%, which means researchers do not need to continue research to the next cycle.

Conclusion

This research shows that the use of TaRL in learning basic statistics can be an effective and enjoyable alternative for fifth grade B students. The practical implication of this research is the importance of integrating TaRL-based learning approaches in the mathematics curriculum to increase students' understanding of abstract concepts such as statistics. Based on the findings from this research, it can be concluded that the application of the TaRL Approach effectively increases the level of participation and involvement of students in the learning process. This approach also provides a better response to students' individual needs, allowing for the presentation of material tailored to their level of understanding. This is evident from the increase in the percentage of active indicators which have a positive impact on understanding basic statistical concepts among students. The results of this research can be evidence that the TaRL method can increase student learning activity and participation.

The TaRL approach in differentiated learning has succeeded in overcoming differences in levels of understanding and learning readiness among students. Through this

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approach, teachers can present material more flexibly, facilitating more interesting and relevant learning for each student. By considering individual needs, learning becomes more inclusive and responsive to the diversity of students in the classroom. The results of this research provide an important contribution for educational practitioners in designing more effective learning strategies. Integration of the TaRL approach in differentiated learning can be the right step in increasing students' active learning and understanding of statistical concepts. Thus, efforts to apply the TaRL Approach in the context of statistics learning can be an effective solution in achieving learning goals that are more inclusive and oriented towards optimal learning outcomes.

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