Increase Interest Participant Educate Class 2 on Hots Based Sharing Material Through The Application of The Problem Based Learning Model

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Abstract
This research aims to enhance the learning interest of 4th-grade students at SDN 076107 Ramba-Ramba Boholu towards division topics through the implementation of the Problem Based Learning (PBL) model using Higher Order Thinking Skills (HOTS) based Student Worksheets (LKPD). Using the Classroom Action Research (CAR) method, the study involves 12 students and focuses on changes in students' learning interest throughout four learning sessions. Research instruments include observations, interviews, and document analysis. The results of the study show a significant improvement in students' learning interest, measured through an assessment scale. It is important to note that the research results indicate a progressive increase in students' learning interest. This provides empirical support for the effectiveness of learning strategies focused on concrete problem-solving and higher-order thinking. This improvement is not only quantitatively measured through assessment scales but is also reflected in student engagement and their positive responses to the learning process. Based on these findings, recommendations are provided to guide future approaches and learning practices. Teachers are reminded to be active in implementing PBL in various mathematical contexts and to design LKPD that are more focused on HOTS. Active student engagement and the implementation of collaborative methods are also considered crucial in maximizing learning outcomes. Furthermore, additional research is recommended to explore the long-term impact of implementing PBL and HOTS-based LKPD on students' understanding of concepts and skills at the elementary level.

Keyword: Learning interest, Division, Problem Based Learning, Higher Order Thinking Skills, Student Worksheets.

1. INTRODUCTION

In the learning context, division material has a crucial role in building the foundation for understanding mathematical concepts (Hasan, 2017; Purwandari & Wahyuningtyas, 2017). Division skills not only provide the basis for understanding more complex mathematical operations, but also play a key role in developing students' critical and analytical thinking abilities (Benyamin et al., 2021; Kurnia Asih et al., 2017). Therefore, an in-depth understanding of the division material is essential to provide solid knowledge to students learners. The background to this research arises from awareness of the important role of quality learning for elementary school students 076107 Ramba-Ramba Boholu , especially in understanding division material. Responding to the gap between previous research, focusing on developing interest in learning through *Higher Order Thinking Skills* (HOTS) is an urgent need (Khotimah & Sari, 2020; Siregar & Nasution, 2019). It's important to take notes that low interest participant educate in finish problem HOTs-based is not only a local challenge, but also a broader problem in the world of education. Therefore, this research not only provides practical solutions for the grade level concerned, but also contributes to the literature and global understanding of effective learning strategies in increasing students' interest in learning and critical thinking abilities. The application of *Problem Based Learning* (PBL) as a solution to overcome students' low interest (Firdaus et al., 2021) in solving HOTs-based problems is relevant and urgent. The PBL approach is a promising solution, as a method that not only teaches concepts, but also involves students in solving real problems (Ashari & Salwah, 2018; Nurwahid & Shodikin, 2021). PBL offers a task-oriented or

real-problem approach (Akmalia et al., 2016), creating a learning environment that motivates and arouses interest learners. Through solving concrete problems, students not only understand mathematical concepts, but also develop high-level thinking skills that are very necessary in facing the challenges of the 21st century (Zubaidah, 2019). By focusing on PBL and sharing materials, this research seeks to fill knowledge gaps and provide innovative alternatives in an effort to build an educational foundation mathematics Which strong for generation coming. So that benefit This research is very significant in the context of developing mathematics education at the elementary school level. By applying the PBL learning model to division material, it is hoped that students will not only achieve a better understanding of the concept, but will also be able to apply it in solving everyday problems. In addition, this research can be a reference for educators to design learning strategies that motivate students, encourage active involvement, and develop their critical thinking skills. The main aim of this research is to evaluate the effectiveness of the learning model PBL in increase interest Study participant educate grade 2 SDN 076107 Ramba-Ramba Boholu regarding distribution materials. In addition, this research aims to provide practical guidance for teachers in designing learning that can stimulate HOTs. By focusing on certain aspects of the model In this study, it is hoped that this research can provide conceptual and practical contributions in overcoming the challenges of mathematics learning at the elementary level. Through an in-depth understanding of the benefits and objectives of this research, it is hoped that the results can be adopted and applied more widely in various educational contexts in Indonesia.

2. RESEARCH METHODOLOGY

This research used a Classroom Action Research (PTK) approach involving 18 grade 2 students. The application of PBL is the main basis for actively involving students, exploring their understanding through solving concrete problems. Systematic PTK steps are used to monitor, measure and improve learning outcomes, providing in-depth understanding of the positive impact of this learning model on students' learning interest. In designing the research instrument, we used a combination of observation, interviews and document analysis methods. Observations were carried out to monitor student interactions during the PBL learning process. Interviews were conducted to obtain more in-depth views from teachers and students regarding their experiences in using this learning model. In addition, document analysis was carried out on the LKPD (Learner Worksheets) used during learning to evaluate the extent to which the LKPD supports PBL syntax and facilitates understanding of HOTS-based division material. The LKPD used was designed taking into account PBL principles. Each worksheet is designed to present a math challenge or problem that is relevant to everyday life, requiring critical thinking and deeper solutions. PBL syntax is implemented through giving project assignments, organizing students in groups, and providing guidance for students to identify and solve problems. This approach is expected to motivate students to achieve a better understanding of the concept of division, as well as develop higher level thinking skills. During implementation, the teacher as a facilitator provides support and guidance to groups of students. This process aims to help students overcome problems obstacle and stimulate that discussion deep. With combine holistic research instruments and structured PBL syntax, this research seeks to provide a comprehensive picture of the impact and effectiveness of the PBL learning model in increasing the learning interest of grade 2 elementary school students. 076107 Ramba-Ramba Boholu regarding HOTS-based distribution material.

3. RESULT AND DISCUSSION

From implementation PTK, seen enhancement significant in interest Study participant educate on the distribution material. Data analysis shows that the implementation of PBL is effectively stimulating HOTS and give experience study which more comprehensive. This findings makes an important contribution to improving the quality of learning, as well as responding to gaps in previous research which did not emphasize aspects of developing interest in learning. Data analysis revealed significant changes in students' learning interest after implementing the HOTS-based PBL and LKPD approach. The table below presents a comparison between the level of interest in learning before and after implementation, measured by the assessment scale developed.

Table 1: Results Interest Analysis Study Before and After Learning

No.	Session Learning	Interest Study Before (%)	Interest Study After (%)
1	Meeting 1	60	75
2	Meeting 2	65	80
3	Meeting 3	70	85
4	Meeting 4	75	90

The table reflects the progressive increase in students' learning interest over the four learning sessions. These results indicate that the PBL approach with HOTS-based LKPD positively influences students' learning interest in the distribution material. Factors such as active involvement in problem solving and the use of intellectually challenging worksheets encourage increased student interest in learning. The discussion shows that the implementation of HOTS-based PBL and LKPD not only helps students understand the division material more deeply, but also stimulates their desire to be actively involved in learning. By combining quantitative and qualitative analysis, this research provides a holistic understanding of the positive impact of this approach on students' learning interest. The implications of these findings can be interpreted as a positive contribution to efforts motivate students to understand mathematical concepts as a whole. In exploring the effectiveness of HOTS-based LKPD, this research presents examples of questions that detail aspects of higher-order thinking that are emphasized in each learning session. The following are some examples of questions described in the LKPD: 1) meeting 1 is related to understanding students' concepts with the question form "Explain the basic concept of division to your classmates using illustrations and concrete examples". 2) meeting 2 is related to application in a Real Context with the form of questions "A farmer own 120 Apple Which must shared flat in 5 basket. How many Which apples will be in each basket? Explain the steps to solve your problem.” 3) meeting 3 is related to solving complex problems in the form of questions "In a development project, construction materials must be divided proportionally based on the area of the building to be built. If the area of building A = 300 m² and the area of building B = 500 m², determine the ratio of the amount of material needed for the two buildings," and 4) meeting 4 is related to reflection and development with form question “Discuss together your group One matter new Which has you learn about division and how you can apply it in everyday life. Give concrete examples.” The research findings show that the HOTS-based LKPD is successful in stimulating students to think critically, connect mathematical concepts with real situations, and develop in-depth problem solving. Observations and interviews with students reveal that these questions provide challenges appropriate to the students' cognitive level, encouraging them to be actively involved in learning. The preparation of HOTS-based questions in LKPD plays an important role in forming students' thinking patterns that are more analytical and critical. Thus, the results of these findings provide concrete support for the success of the PBL learning model with HOTS-based LKPD in increasing students' interest and learning skills regarding distribution material. The implications of these findings can be integrated into curriculum design and mathematics learning practices at the wider elementary school level.

4. CONCLUSION

Overall, this research confirms that the application of the PBL learning model can increase the learning interest of grade 2 elementary school students 076107 Ramba-Ramba Boholu regarding distribution materials. The practical implications include recommendations for involving learning methods that encourage HOTS on an ongoing basis. It is hoped that this research can become the basis for a more effective learning approach in responding to needs and challenges in increasing students' interest in learning in the future. This research provides strong evidence regarding the effectiveness of the Problem Based Learning (PBL) learning model with Student Worksheets (LKPD) based on Higher Order Thinking Skills (HOTS) in increasing the learning interest of grade 2 elementary school students. 076107 Ramba-Ramba Boholu regarding distribution materials. The research results show a progressive increase in students' interest in learning, in line with the implementation of learning strategies that are oriented towards concrete problem solving and higher level thinking. Based on findings study, a number of suggestion can submitted:

1. Teachers should consider implementing the PBL learning model in various aspects of mathematics learning at the elementary level. This can stimulate students' interest in learning and develop their critical thinking skills
2. Developing Student Worksheets that are more focused on the Higher Order Thinking Skills aspect can be a valuable investment in increasing learning effectiveness. Teachers need to pay attention to the diversity of questions designed to accommodate students' cognitive levels
3. Teacher expected involve participant educate in a way active in learning, provide space for group discussions, and encourage students to find solutions together. This can increase students' sense of ownership of the learning process.

In an effort to continue to improve the quality of mathematics education at the elementary level, further research can be conducted to explore the long-term impact of implementing HOTS-based PBL and LKPD models on students' understanding of concepts and skills Through implementing the suggestions above, it is hoped that the learning approach resulting from this research can become a reference and inspiration for mathematics educators in facing the challenge of increasing students' interest and learning skills at the elementary school level.

REFRENCES

Akmalia, NN, Pujiastuti, H., & Setiani, Y. (2016). Identification of Mathematical Creative Thinking Stages Through the Application of the Problem Based Learning Model with Problem Posing Tasks. *Jppm* , *9* (2), 183–193.

Ashari, N. W., & Salwah. (2018). Problem Based Learning For Increase Self Directed Learning in Problem Solving of Prospective Teacher Students: A Literature Study. *Journal of Research in Mathematics and Mathematics Education* , *1* (1), 24–31.

Benyamin, B., Qohar, A., & Sulandra, IM (2021). Analysis of Critical Thinking Ability of Class X High School Students in Solving SPLTV Problems. *Scholar's Journal : Journal of Mathematics Education* , *5* (2), 909–922. https://doi.org/10.31004/cendekia.v5i2.574

Firdaus, A., Asikin, M., Waluya, B., & Zaenuri, Z. (2021). Problem Based Learning (PBL) For Improve the ability of Student Mathematics. *QALAMUNA: Journal of Education, Social Affairs, and Religion* , *13* (2), 187–200. https://doi.org/10.37680/qalamuna.v13i2.871

Hasan, QA (2017). Development of Division Operation Learning by Emphasizing Understanding Aspects. *Journal of Education* , *18* (2), 106–114.

Khotimah, RP, & Sari, MCP (2020). Developing Student Worksheets Based on Higher Order Thinking Skills (Hots) Using Environmental Context. *AKSIOMA: Journal of the Mathematics Education Study Program* , *9* (3), 761–775. https://doi.org/10.24127/ajpm.v9i3.2909

Kurnia Asih, A., Bambang Irawan, E., & Sa'dijah, C. (2017). Application of Realistic Mathematics Education For Increase Ability Think Critical Student Class

Nurwahid, M., & Shodikin, A. (2021). Comparison of Problem Based Learning and Inquiry Based Learning Models in View of Concept Understanding Ability and Student Mathematical Problem Solving in Quadrilateral Learning. *Scholar's Journal : Journal of Mathematics Education* , *5* (3), 2218–2228. https://doi.org/10.31004/cendekia.v5i3.346

Purwandari, A., & Wahyuningtyas, DT (2017). Experiment of Teams Games Tournament (Tgt) Learning Model Assisted by Grain Basket Media on Learning Outcomes of Multiplication and Division Material for Class II Students of Sdn Saptorenggo 02. *Elementary School Science Journal* , *1* (3), 163–170. https://doi.org/10.23887/jisd.v1i3.11717

Siregar, NF, & Nasution, EYP (2019). Mathematics Learning Based on Higher Order Thinking Skills. *Proceedings: National Tadris Seminar (Education) Mathematics* , 21–27.

V. *Journal of Education: Theory, Research, and Development* , *2* (4), 524–530. http://journal.um.ac.id/index.php/jptpp/

Zubaidah, S. (2019). Empowering 21st Century skills through Project Based Learning . *National Seminar on Biology Education* , *October* , 1–19.