
Improving Student Literacy Through a *Problem-Based Learning Model* With An Interactive Video-Assisted Tarl Approach

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ABSTRACT

Literacy is the ability to process and understand information while reading and writing. The literacy movement is a program that is being intensively implemented through literacy culture that can affect students' understanding of concepts in learning. This study aims to (1) Determine the improvement of students' literacy skills through the *Problem Based Learning* (PBL) learning model with the *Teaching at Right Level* (TaRL) approach assisted by interactive videos (2) Determine the application of the Problem Based Learning model with the TaRL Approach assisted by Interactive Videos. (3) To find out which aspects of literacy skills have improved after the application of the Problem Based Learning model with the Interactive Video TaRL Approach. The implementation of this research was carried out through two cycles, namely cycle I and cycle II with the *Problem Based Learning* (PBL) model and the *Teaching at Right Level* (TaRL) approach assisted by Interactive Videos. The stages in each meeting are planning, implementation, observation/observation and reflection. The data analysis techniques used in this study are quantitative data analysis techniques using tests and qualitative techniques through observation or observation. The results of classroom action research through the Problem Based Learning model with the TaRL approach assisted by interactive videos are proven to improve student literacy. Based on the results of evaluation and observation, it shows that the classical percentage in the first cycle of 42% increased in the second cycle to 87% while the results of the observation percentage of literacy increase in the first cycle of 44% increased to 71% of the average literacy observation. The aspect of increased literacy ability is in the aspect of students' ability to analyze and analyze information in interactive videos with problem orientation.

Keywords: *PBL Model, TaRL, Interactive Video, Literacy*

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INTRODUCTION

Law No. of 2003 concerning the National Education System states that education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble morals, and skills needed by themselves, society, nation and state.

Educating children is not an easy thing and it is also not a difficult thing to do. In educating children, what needs to be considered is the way of teaching and the teaching situation in the classroom. Learning in a monotonous way will make students/children easily feel bored. Meanwhile, ineffective and unpleasant learning situations will make students reluctant to learn.

The role of schools in efforts to realize educational goals through the teaching and learning process in schools is highly expected. However, realizing these goals is not easy because there are many obstacles faced in the field. One of the important competencies that should be developed is literacy. Literacy is the language ability possessed by a person in communicating (reading,

speaking, listening, understanding, and writing) in different ways according to his or her purpose. Four aspects of skills that must be possessed by students are listening, speaking, reading, and writing skills. Literacy skills play an important role in determining student learning success. At this level, reading and comprehension skills need to be introduced. In the learning process, these two abilities can be combined as learning abilities because almost all abilities to obtain information in learning depend on these abilities.

The definition of literacy in the context of the School Literacy Movement is the ability to access, understand, and use something intelligently through various activities, including reading, seeing, listening, writing, and/or speaking. The term literacy is defined as the ability to understand language symbols or literacy skills. Literacy is seen as a tool used to communicate information. Literacy was initially seen as the ability to read, write, listen, and speak as efficiently as possible to improve thinking and communication skills. Based on the above statement, it can be concluded that literacy is a person's ability to read and write, to process and understand information critically so that they are able to increase knowledge and critical thinking skills in solving problems.

Based on the results of learning observations in Grade IV Science, the researcher found several problems, namely the lack of literacy and students' understanding of concepts in learning. Low literacy can affect the absorption process of learning materials and the achievement of learning objectives during instruction. In addition, the evaluation questions used do not contain literacy aspects that can lead students to understand and use the results of their reading in the form of conclusions or descriptions so that students are not accustomed to working on questions that contain literacy aspects. The observation results showed that, out of 24 students, only six students achieved the Learning Goal Achievement Criteria (KKTP). These findings indicate a gap between the expected literacy competence and the actual learning outcomes achieved by students.

One learning model that can facilitate students in improving literacy and conceptual understanding is the Problem Based Learning (PBL) model. Sembiring (2020) stated that Problem Based Learning is a learning model that exposes students to authentic (real) problems so that students are expected to be able to compile their own knowledge, develop higher-order thinking skills, become independent, and increase their confidence. Likewise, Arends, as cited in Anugeraheni (2018), explains that Problem Based Learning involves students in learning activities and prioritizes real problems in the school, home, and community environment as the basis for acquiring knowledge and concepts through critical thinking and problem-solving skills.

To maximize the implementation of Problem Based Learning, the Teaching at The Right Level (TaRL) approach can be integrated into the learning process. Teaching at The Right Level (TaRL) is a learning approach that orients instruction according to students' ability levels, consisting of low, medium, and high achievement levels rather than grade level or age (Ahyyar et al., 2022). Before being implemented in Indonesia, this approach had been implemented in several countries, including India, where it was introduced to address students' low literacy and numeracy skills. Through this approach, teachers first conduct diagnostic assessments to identify students' characteristics, needs, and potential so that learning activities can be adjusted according to students' initial abilities (Suharyani et al., 2023).

Furthermore, the implementation of learning can be supported by interactive video media. According to Prastowo, interactive learning videos are learning media that combine elements of sound, movement, images, text, or graphics interactively to connect learning media with their users (Wardani & Syofyan, 2018). Niswa also explains that interactive learning videos contain practical learning guidance presented through audio-visual media accompanied by clear instructions, enabling students to learn independently and supporting a deeper understanding of the learning material (Wardani & Syofyan, 2018).

Based on the problems identified, improving students' literacy skills requires learning that actively involves students in solving authentic problems, accommodates differences in students' learning abilities, and utilizes interactive learning media. Therefore, this classroom action research aims to improve students' literacy through the implementation of the Problem Based Learning model combined with the Teaching at The Right Level (TaRL) approach assisted by interactive videos in Grade IV students of SD Negeri 3 Karangtengah. This study is expected to

provide an innovative contribution to improving elementary students' literacy skills by integrating student-centered learning, differentiated instruction, and technology-based learning media.

METHOD

The Classroom Action Research Method (PTK) which aims to research the learning process in the classroom is used in this study. The classroom action research cycle model of Kemmis and Mc. Taggart was selected for the study. The cycle in the Kemmis and Mc. Taggart model consists of four components, namely planning, acting, observing, and reflecting. The PTK design applied is as follows:

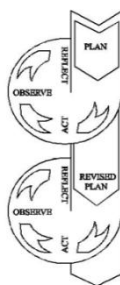


Figure 1. The PTK design applied

The research utilizes the Kemmis and Mc. Taggart model so that the data is known on the success rate of the actions taken against the problems that occur. The stages outlined in the Kemmis and Mc. Taggart models are simple to understand, can be completed, and largely correspond to the final outcome of the classroom action research to be conducted. The subject of the study is grade IV students of SD Negeri 3 Karangtengah, Baturaden District, Banyumas Regency, Central Java Province for the 2024/2025 school year with a total of 24 grade IV students.

FINDINGS AND DISCUSSION

Classroom action research was carried out using the Problem Based Learning (PBL) model with the help of Interactive Videos on the most important process photosynthesis material on earth in grade IV of SD Negeri 3 Karangtengah, Baturaden District, Banyumas Regency. The class action research lasted for 2 cycles on August 21, 2024 – September 18, 2024. In each cycle there are 2 x meetings with the time allocation for each meeting is 2 x 35 minutes. The implementation of class action research in each cycle consists of planning, implementation of actions, observation, and reflection.

Findings

Research findings during learning using the Problem Based Learning (PBL) model with the TaRL approach assisted by Interactive Video were collected using literacy improvement observation sheets and student evaluation results. Evaluations are carried out individually by students at each meeting to measure students' understanding of photosynthesis materials and improve student literacy.

The results of the first cycle on the observation of the classical average and the observation of literacy improvement have not shown satisfactory results where there are still many students who have not reached the classical average or the average percentage of literacy improvement. This happens because students are not able to understand and absorb information properly so that students are not able to master the aspects of literacy to solve the orientation of the problem in the evaluation questions by drawing conclusions and answering the questions using their own language.

Discussion

The implementation of the first cycle of actions refers to the teaching modules that have been prepared. Cycle I was held on Thursday, August 22, 2024 and Wednesday, August 28, 2024 in grade IV of SD Negeri 3 Karangtengah consisting of 24 students with an allocation of 2 x 35 minutes in each meeting.

The learning outcomes per element of the students are able to describe the process of photosynthesis and relate it to other living things.

The pre-activity was carried out for approximately 10 minutes to prepare the learning devices to be used such as LCD, Laptop, Power point, LKPD, and evaluation sheets. Pre-activities are carried out before learning starts.

a. Observation Results of Cycle I

1) Results of observation of student evaluation in Cycle I

The implementation of student evaluations is carried out every meeting of the learning process. The results of student evaluation observation in learning using the Problem Based Learning model with the Interactive Video-assisted TaRL approach are as follows:

Table 1. Evaluation Results of Cycle I Students	
Remarks	Cycle 1
Number of students	24
MOH	70
Number of students completed	10
The number of students is incomplete	14
Percentage of completion of Cycle I	42%

2) Results Percentage increase in literacy

Based on the results of observations during learning activities and the results of student worksheets, the results of the recapitulation of the percentage increase in student literacy through the Problem Based Learning model with the TaRL Approach assisted by Interactive videos are shown as follows:

Table 2. Observation of Literacy of Students Cycle I	
Cycle I	Presentation Per-Aspect
Aspect 1	32%
Aspect 2	50%
Aspect 3	51%
Aspect 4	54%
Average presentation of aspects	44%

Cycle II

a. Findings

Ipas learning using the PBL model with the Interactive Video-assisted TaRL approach has made progress in literacy aspects and evaluation results compared to the first cycle. The classroom atmosphere is quite conducive to learning

b. Discussion

The implementation of cycle II refers to the teaching modules that have been prepared. Cycle II will be held on September 11, 2024 and September 18, 2024 in grade IV of SD Negeri 3 Karangtengah consisting of 24 students.

- c. Results of observation cycle II
- 1) Results of observation of the evaluation of students in cycle II
- Student evaluation assessments are carried out at the end of learning. The questions that students must do are in the form of literacy-based questions as many as 4 questions with a maximum score of 10. The results of the evaluation of cycle II students can be seen in the table as follows:

Table 3. Evaluation Results of Cycle II Students	
Remarks	Cycle 1
Number of students	24
MOH	70
Number of students completed	21
The number of students is incomplete	3
Percentage of completion of Cycle II	87%

- 2) Results of the percentage increase in literacy of students in the second cycle
- Based on the results of observations during learning activities and the results of student worksheets, the results of the recapitulation of the percentage increase in student literacy through the Problem Based Learning model with the TaRL Approach assisted by Interactive videos are shown as follows:

Table 4. Literacy Observation of Cycle II Students	
Cycle II	Presentation Per-Aspect
Aspect 1	84%
Aspect 2	84%
Aspect 3	85%
Aspect 4	87%
Average presentation of aspects	71%

CONCLUSION

Based on the results of the Classroom Action Research (PTK) that has been carried out in 2 cycles in the subject of IPAS photosynthesis material The most important process on earth as one of the fulfillment of the needs using the Problem Based Learning model with the TaRL Approach, it can be concluded that the application of the Problem Based Learning (PBL) model with the TaRL Approach assisted by Interactive Videos can increase the literacy of grade IV students of SD Negeri 3 Karangtengah. By applying the Problem Based Learning (PBL) model with the TaRL approach assisted by Interactive Video in grade IV students of SD Negeri 3 Karangtengah, there was a significant increase in literacy based on the results of observations showing that literacy prevalence in the first cycle reached 44%, increasing in the second cycle to 71%, while the results of student evaluation completion in the first cycle increased by 42% in the second cycle to 87%. The literacy aspect that increased significantly after the application of the

Problem Based Learning model with the Interactive Video-assisted TaRL approach was the aspect of the ability to analyze and relate information in interactive videos with problem orientation in cycle I 54% while in cycle II it reached 87%.

Recommendations based on experience during conducting Classroom Action Research (PTK) using the Problem Based Learning (PBL) model integrated with the Teaching at The Right Level (TaRL) approach assisted by Interactive videos in grade IV of SD Negeri 3 Karangtengah are as follows:

- a. The application of the PBL model should be done by presenting problems related to the real experience of students. The problems presented must be relevant to the student's life so that the student can better understand the material. Easy-to-understand material is expected to improve student literacy.
- b. In the implementation of TaRL integrated PBL, teachers must guide students in carrying out discussions on LKPD work with different levels of student ability so that there is no social gap and students can follow learning well and learning activities can increase so that literacy and student learning outcomes increase

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