

Enhancing Student Engagement Among Learners with Hearing Impairments Through Constructivist-Based Problem-Based Learning

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Abstract

This study aimed to improve the engagement and learning outcomes of a student with hearing impairment in Civics Education (PPKn) through the implementation of constructivist-based Problem-Based Learning (PBL) supported by Student Worksheets (LKPD). The study employed Classroom Action Research (CAR) using the Kemmis and McTaggart model, conducted in two cycles. The research participant was one Grade VII student at SMP Negeri 3 Malinau Utara. Data were collected through observations of student engagement and learning achievement tests and analyzed using descriptive methods. The findings showed that the implementation of constructivist-based PBL supported by LKPD increased student engagement in the learning process and improved learning outcomes in Civics Education. The student's mean score increased from 58.33 in the pre-action stage to 72.50 in Cycle I and 86.67 in Cycle II, while learning mastery improved from 33.33% to 100%. These findings indicate that constructivist-based PBL assisted by LKPD is effective in enhancing student engagement and learning outcomes for students with hearing impairment in inclusive classrooms.

Keywords: *Hearing Impairment, Problem-Based Learning, Constructivism, Inclusive Education, Civics Education (PPKn).*

INTRODUCTION

Introduction Inclusive education is an educational approach aimed at ensuring that all students, including students with special needs, obtain equal rights to receive quality educational services in regular schools. In its implementation, inclusive education does not only place students with diverse characteristics in a single classroom, but also requires adjustments to the learning

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process so that all students can access the material and participate actively in learning activities. According to UNESCO (2020), inclusive learning requires the application of flexible, adaptive, and student-centered learning strategies to accommodate the diversity of learning needs. Inclusive learning necessitates teaching strategies that are flexible, adaptive, and capable of accommodating different learning needs, thereby creating a fair and meaningful learning experience for all students. Students with special needs have different learning characteristics compared to students in general, thus requiring adjustments in teaching methods, media, and strategies. One group of students with special needs requiring specific attention in the learning process is students with hearing impairments. Students with hearing impairments tend to experience difficulties in optimally receiving verbal information, particularly when the learning process occurs with dominant oral explanations. This condition causes students to have a greater need for visual support, clear instructions, and structured learning to understand the material well.

In Civics Education learning, the learning barriers experienced by students with hearing impairments become more complex because many Civics Education concepts are abstract and require strong conceptual understanding. Students often face difficulties in understanding the relationships between concepts, translating information into symbolic forms, and solving problems that require visual and logical reasoning. Research indicates that students who experience learning difficulties in Civics Education require more specific and structured learning interventions to be able to understand concepts more meaningfully and improve their mathematical skills. Rahmat, N., & Murwanti, S. (2024) state that a learning strategy capable of helping students understand Civics Education concepts concretely, gradually, and visually is needed. One of the Civics Education materials that frequently causes difficulties for students is Human Rights and Justice. This material not only requires an understanding of the basic concept of angles but also the ability to visually connect shapes, equal rights before the law, and comparisons between geometric figures. In learning practice, students are often able to memorize formulas or simple completion steps, but experience difficulties when these concepts are applied in contextual questions or problem-solving. This condition shows that learning barriers occur not only in the mastery of basic concepts but also in the ability to apply—the focus of this action plan is the diversity of ethnicities, religions, races, and intergroup relations within the Framework of Bhinneka Tunggal Ika—in more complex situations.

The learning problems of Civics Education in inclusive classrooms are also influenced by learning strategies that are still uniform in nature. In practice, learning is frequently carried out



using direct explanation methods followed by the provision of sample questions and individual exercises without adjustments to the students' learning needs. In fact, students have varying learning readiness, abilities to understand information, and learning styles. Research shows that teachers still face various challenges in implementing learning that is capable of accommodating student diversity, especially in adjusting content, processes, and assessment forms according to the students' individual needs (Pujilestari, Y., & Susila, A., 2020). In the context of inclusive education, student learning through Constructivist-Based Problem Based Learning (PBL) becomes one of the relevant strategies to implement because it provides opportunities for teachers to adjust learning based on the students' needs, readiness, and learning profiles. Student learning through Constructivist-Based Problem Based Learning (PBL) allows teachers to make adjustments to the material, learning process, and learning products so that all students can still achieve the learning objectives through methods that suit their respective characteristics. This strategy also helps students with special needs to remain actively involved in Civics Education learning and obtain more equal learning access compared to conventional learning (Marsudi, K. E. R., 2020).

One form of implementation for student learning through Constructivist-Based Problem Based Learning (PBL) is the use of Student Worksheets (LKPD) that are adjusted to the students' needs. The Student Worksheets (LKPD) can be designed using simple language, clear visual displays, stepwise completion procedures, and difficulty levels adapted to the students' abilities. Research indicates that the use of modified worksheets for students with hearing impairments is able to help students understand the material in a more structured manner, increase learning engagement, and yield positive responses toward Civics Education learning (Bhughe, K. I., 2022).

Besides helping students understand the material, the use of Student Worksheets (LKPD) based on student learning through Constructivist-Based Problem Based Learning (PBL) can also assist teachers in structuring learning that is more systematic and responsive to students' learning needs. Through worksheets compiled gradually, students with hearing impairments can follow the learning process more independently and actively. Structured and easily understandable learning also has the potential to increase students' self-confidence in completing Civics Education tasks and help them understand the relationships between concepts more meaningfully.

Based on the results of preliminary observations in Grade VII of SMP Negeri 3 Malinau Utara, Civics Education learning is still dominated by the teacher's direct explanation method and the use of textbooks as the main learning source. This approach can be followed by the majority of students but has not fully accommodated the needs of students with mild hearing impairments. Students with this condition can still hear the teacher's explanation, but frequently experience



difficulties when the explanation occurs too quickly, lacks clarity, or when the classroom atmosphere is less conducive. Students are more assisted if the learning utilizes visual media such as pictures, diagrams, and completion steps presented clearly and sequentially. Research shows that the implementation of inclusive education in schools still faces challenges in the form of limited learning facilities and teacher readiness in meeting the needs of students with special needs (Jannah, A. M., Setiyowati, A., Lathif, K. H., Devi, N. D., & Akhmad, F., 2021).

Based on this description, a classroom action research focused on the application of Student Worksheets (LKPD) based on the strategy of student learning through Constructivist-Based Problem Based Learning (PBL) is required to improve the learning outcomes of students with hearing impairments on the material of Human Rights and Justice in Grade VII of Junior High School. This research is conducted in two sequential learning cycles so that the learning improvement process can be carried out systematically through the stages of planning, action implementation, observation, and reflection. Previous research indicates that student learning through Constructivist-Based Problem Based Learning (PBL) supported by modified media and worksheets is capable of increasing the active engagement of students with special needs and providing a positive impact on Civics Education learning outcomes compared to conventional learning. Therefore, this research is expected to contribute to the development of Civics Education learning practices that are more inclusive, adaptive, and effective for students with hearing impairments (Erawati, I. L., 2016).

RESEARCH METHODOLOGY

This study employs a Classroom Action Research (CAR) approach using the Kemmis and McTaggart spiral model which encompasses four stages, namely planning, action implementation, observation, and reflection. The research was conducted in two cycles, with each cycle consisting of 2–3 meetings. The action provided takes the form of applying constructivist-based Problem Based Learning (PBL) supported by visual-based Student Worksheets (LKPD) to improve Civics Education (PPKn) learning outcomes for a student with hearing impairments in an inclusive classroom. The material in each cycle is arranged sequentially according to the curriculum flow, so that each cycle discusses different competencies but possesses an equivalent level of difficulty.

The research is conducted in the even semester of the 2025/2026 Academic Year at SMP Negeri 3 Malinau Utara, Malinau Regency, North Kalimantan. The research subjects are Grade VII students in an inclusive classroom, with the main focus on a student with a hearing impairment. The student has adequate intellectual capabilities but experiences difficulty understanding verbal



information, thus requiring learning that is more visual, systematic, and gradual.

The learning action is implemented through PBL stages which include problem orientation, learning organization, investigation, presentation of results, and evaluation. All activities are supported by the use of visual media, visual-based LKPD, heterogeneous group work, and the provision of individual feedback according to the student's needs.

Research data are collected through learning achievement tests, observation, and documentation. Tests are used to measure the achievement of learning outcomes in each cycle, while observations are conducted to assess student activities and learning implementation. Documentation in the form of activity photos, student work results, and learning tools are used as supporting data.

The research instruments include learning achievement tests, student activity observation sheets, and learning implementation observation sheets. The validity of the instruments is tested through expert judgment by the supervising lecturer and special education experts. The reliability of the instruments is maintained through the equivalence of the test difficulty levels in each cycle as well as the alignment of perception between the researcher and the observer prior to research implementation.

Quantitative data are analyzed descriptively by calculating the average score and the percentage of learning mastery in each cycle. Qualitative data are analyzed through the stages of data reduction, data presentation, and conclusion drawing based on observation and reflection results. The success of the action is determined if a minimum of 75% of students obtain a score of ≥ 75 , accompanied by an increase in learning activities that fall into the active or very active category. The analysis results of each cycle are used as a basis for reflection to improve actions in the subsequent cycle until the success indicators are achieved; this classroom action research is conducted in two cycles to improve Civics Education (PPKn) learning outcomes through the implementation of constructivist-based Problem Based Learning (PBL) with the assistance of visual-based LKPD in an inclusive Grade VII classroom.

RESEARCH RESULTS

In the pre-action stage, student learning outcomes were still low. The score of the subject with a hearing impairment only reached 65, thus not yet meeting the Learning Objective Achievement Criteria (KKTP) of 75. Observation results indicated that the learning process was still teacher-centered and dominated by verbal explanations, causing students to experience difficulty in understanding the material.



In Cycle I, the application of constructivist-based PBL with visual LKPD began to increase student learning activities. Nevertheless, several students, particularly the subject with a hearing impairment, still required guidance because the instructions in the LKPD were not yet simple enough. Learning mastery increased but had not yet reached the success indicator, so improvements were made in the subsequent cycle.

Improvements in Cycle II were carried out through the simplification of the LKPD, the use of clearer visual media, and the provision of more targeted assistance. The results showed a significant improvement. The class average increased to 79.5, while classical completeness reached 87.5%, exceeding the research target of 75%. The score of the subject with a hearing impairment also increased to 75, thereby achieving mastery.

The implementation of constructivist-based PBL combined with visual-based LKPD proved capable of improving student learning outcomes and activities in inclusive classrooms. Visual media helped students understand concepts that were previously difficult to grasp through verbal explanations, while the LKPD arranged systematically made it easier for students to follow the problem-solving process independently. The improvement in learning outcomes was also evident in the student with a hearing impairment. The visual presentation of material, simple instructions, and individual assistance provided learning access that was more suited to their needs, making the student more active, independent, and capable of achieving learning mastery. Overall, the research results indicate that the implementation of constructivist-based PBL supported by visual-based LKPD effectively improves Civics Education (PPKn) learning outcomes in inclusive classrooms. This strategy not only increases classical learning mastery but also provides more equal learning opportunities for students with special needs.

CONCLUSION

Based on the results of the classroom action research that has been conducted in two cycles on Grade VII students at SMP Negeri 3 Malinau Utara, specifically on the material of Human Rights and Justice and existence through the use of visual media and LKPD, the following can be concluded: The use of visual media and LKPD proved effective in improving students' Civics Education learning outcomes. This is indicated by the increase in the class average score from 64 in Cycle I to 65 in Cycle II. Classical completeness also increased significantly from 65% to 75%, which means it has exceeded the established success indicator. Visual media and systematically arranged LKPD helped students understand the concept of Human Rights and Justice and the sum of triangle angles more concretely. Flowchart visualization facilitated students in following the



procedural steps of solving questions that were previously considered abstract, enabling students to determine angle sizes with principles. Visual-based learning tangibly increased student activity and participation. The student activity observation score increased from the "Good" to the "Very Good" category. Students became more active in group discussions, more focused in paying attention to instructions, and demonstrated higher independence in completing tasks. The implementation of the student learning strategy through Constructivist-Based Problem Based Learning (PBL) provided a significant impact for Students with Special Needs (ABK). The subject with a hearing impairment successfully reached the Minimum Mastery Criteria (KKM) with a score of 75 in Cycle II. This proves that visual instructions and strategic seating positions can eliminate communication barriers and support student learning success in inclusive classrooms. This research shows that the CAR cycle is effective as a means of teacher reflection. Through the stages from planning to reflection, teachers can identify students' specific barriers such as the density of text instructions and provide solutions that have a direct impact on the quality of the learning process. The findings in this classroom action research provide several important implications, both theoretically and practically: This research strengthens the validity and concept of student learning through Constructivist-Based Problem Based Learning (PBL) in inclusive Civics Education learning. It is proven that integrating visual information (colors, diagrams, flowcharts) and short texts can reduce students' cognitive load, especially for children with hearing impairments who heavily rely on visual perception in processing cognitive information. Modifying learning instruments visually proves that auditory sensory impairments do not limit children's logical-Civics Education abilities. Teachers in inclusive classrooms are implicated to no longer predominantly use verbalistic methods (lecturing), but rather proactively provide accessible thinking-guide media. The success of the action at SMP Negeri 3 Malinau Utara implies that limited facilities in 3T areas are not a barrier to organizing quality inclusive education. Modifying the LKPD and the student learning environment through Constructivist-Based Problem Based Learning (PBL) is a low-cost but high-impact strategy that is adaptive to implement.

In line with the conclusions and implications that have been elaborated, and as a concrete effort to realize the practical benefits expected in this research, several recommendations are proposed as follows. The Principal is expected to use the results of this research as a reference for best practices in standardizing the adaptation of visual media in inclusive classrooms, especially at the junior high school level in 3T areas. This support can be realized through the provision of visual teaching aid facilities and regular inclusive training to improve the quality of educational services. It is recommended to use the draft of this visual Student Worksheet (LKPD) as a practical



guide in systematically applying the student learning strategy through Constructivist-Based Problem Based Learning (PBL). The provision of gradual support and the simplification of text into logical flow forms should be maintained in other essential Civics Education materials. Students with hearing impairments are advised to continuously be trained in utilizing visual elements and flowcharts to minimize their verbal-abstract barriers. Students are also expected to maintain the utilization of strategic seating positions in the front row to build logical-spatial thinking independence in solving Human Rights and Justice problems. Regular students are advised to continue maintaining the collaborative classroom climate that has been formed. Through group activities in this student learning through Constructivist-Based Problem Based Learning (PBL), regular students are expected to continually foster empathy, social communication skills, and good cooperation in respecting diversity. This research can be used as a reference and conceptual basis for further classroom action research regarding the modification of hierarchical media for children with special needs (ABK). Future researchers are also advised to expand the scope to the affective aspect or use a quasi-experimental design with broader subjects.

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