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Implementation of Traditional Engklek Game Based on Ethnopedagogy Model in Learning

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ABSTRAK

Penerapan permainan tradisional engklek berbasis model etnopedagogi dalam pembelajaran IPA mengintegrasikan kearifan local yang dikenal oleh peserta didik dalam kehidupan sehari-hari. Tujuan penelitian ini adalah meningkatkan hasil belajar siswa sekaligus melestarikan budaya local melalui permainan engklek. Penelitian dilakukan di SMPN 2 Ngetos pada kelas IXB dengan jumlah sampel sebesar 24 siswa. Teknik pengumpulan sampel menggunakan purposive sampling. Metode penelitian merupakan jenis Penelitian Tindakan Kelas (PTK). Data dikumpulkan melalui wawancara, observasi, dan tes hasil belajar. Analisis data menggunakan teknik deskriptif kualitatif. Hasil penelitian pada siklus I menunjukkan rata-rata nilai siswa sebesar 65,3,dengan 54% siswa mencapai KKM. Pada siklus II, terjadi peningkatan signifikan dengan rata-rata nilai siswa mencapai 78 dan 100% siswa mencapai KKM. Melalui model etnopedagogi, siswa diajarkan mengenali permainan berbasis kearifan local berupa Engklek. Selain itu model ini melatih siswa untuk berkompetisi, bekerjasama, hingga membuat pembelajaran menjadi lebih menyenangkan. Materi menjadi lebih menarik karena dilakukan sambil bermain.

ABSTRACT

The application of the traditional game engklek based on the ethnopedagogy model in science learning integrates local wisdom known by students in everyday life. The purpose of this study was to improve student learning outcomes while preserving local culture through the game of engklek. The research was conducted at SMPN 2 Ngetos in class IXB with a sample size of 24 students. The sample collection technique used purposive sampling. The research method is a type of Classroom Action Research (PTK). Data were collected through interviews, observations, and learning outcomes tests. Data analysis used qualitative descriptive techniques. The results of the research in cycle I showed that the average student score was 65.3, with 54% of students reaching the KKM. In cycle II, there was a significant increase with the average student score reaching 78 and 100% of students reached the KKM. Through the ethnopedagogy model, students are taught to recognize local wisdom-based games in the form of Engklek. In addition, this model trains students to compete, cooperate, to make learning more fun. The material becomes more interesting because it is done while playing.

1. INTRODUCTION

Education is one of the important aspects in human development that aims to maximize the potential of learners. Through the learning process, students not only acquire knowledge, but also develop skills and attitudes that support them to become creative and innovative individuals. Based on the National Education System Law Number 20 of 2003 Article 3, education aims to form Indonesian human beings who are faithful, pious, noble, intelligent, and responsible. An effective learning process not only provides information, but also helps students develop critical thinking, collaboration, and exploration of their potential (Elde Mølstad & Karseth, 2016).

However, in practice, learning in schools is often done conventionally, such as teacher-centered with the lecture method, the use of textbooks, and student worksheets (LKS). This causes the learning atmosphere to be monotonous, so students easily feel bored and inactive in learning (Yuanta, 2020). Based on a survey at SMPN 2 Ngetos, it was found that 62.5% of students had not reached the Minimum Completion Criteria (KKM), which indicates suboptimal learning outcomes. This situation indicates the need for learning innovations that actively involve students.

In overcoming this problem, an ethnopedagogy-based learning approach can be one of the relevant solutions. Ethnopedagogy is an approach that interacts local wisdom values into the learning process. This approach can increase student involvement in motivating learners to recognize (Putra, 2017). According to (Abdurrahman et al., 2020), the advantage of the ethnopedagogy approach is its relevance to the local context which can increase student learning motivation. However, the disadvantage is that it requires curriculum adjustment and teacher readiness in implementing this method.

One relevant implementation of ethnopedagogy is the use of traditional games as learning media. The traditional game of engklek, for example, not only involves fun physical activities, but also trains students' concentration, motor coordination, and cooperation (Qomariah & Hamidah, 2022). In addition, engklek can be modified to deliver science learning materials interactively. In the context of the Merdeka Curriculum, the use of this game supports the strengthening of the Pancasila learner profile, especially in the aspects of global diversity and preservation of local culture (Firmansyah et al., 2021).

This study aims to evaluate the application of the ethnopedagogy-based traditional game engklek as a science learning media to improve student learning outcomes. The author hopes that this research can make a significant contribution to the development of innovative learning methods that integrate local wisdom, thus creating a fun and interactive learning atmosphere.

2. RESEARCH METHOD

The research was conducted at SMPN 2 Ngetos in class IXB with a sample size of 24 students. The sample collection technique used purposive sampling. This study used a classroom action research (PTK) approach as described by (Suciani et al., 2023). The steps of this research are as shown in Figure 1, including planning, acting, observing, and reflecting. Planning consists of preparing lesson plans, research instruments, coordinating with collaborators, and briefing observers. Action (acting) is the implementation of learning using the ethnoscience model through the game engklek. The ethnoscience-based approach is applied by referring to the ethnoscience concept that bridges traditional and scientific knowledge to improve meaningful learning (Mukti et al., 2022). Observation (observing) is an activity to observe the overall activities of students and teachers in the learning process. The final stage is reflection, which is an evaluation activity obtained in the form of data from the designed data collection instruments. Furthermore, reflection also emphasizes finding the strengths and weaknesses of each action which is ultimately used as a basis for determining whether the next cycle needs to be applied.

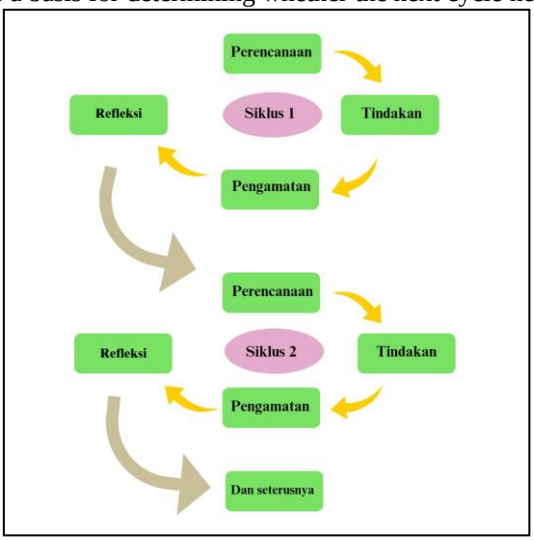

Figure 1. Classroom Action Research Design

The methods used in data collection are through preparation, interviews, observation, and tests. Preparation activities are used to design the implementation or procedures for application in learning activities. Observation is needed to recognize the situation of the application of learning with the use of cranklek games, while the interview itself is carried out structurally, which means that the questions given to the sources have been prepared in advance.

Data analysis was conducted using a qualitative descriptive approach to provide a comprehensive understanding of the implementation process and outcomes. According to (Puspasari et al., 2019), the use of descriptive analysis allows a qualitative evaluation of the application of ethnoscience in science learning, focusing on the achievement of student character, skills, and learning outcomes. The integration of local culture in science learning is done by designing learning media that is relevant to the cultural context of students.

Data analysis of the results of the study both quantitative data in the form of pre-test and post-test both must be analyzed. This study uses descriptive analysis, with the descriptive method used the following percentage:.

$$presentation = \frac{sum\ of\ answer\ scores}{maximum\ score} \times 100\% \qquad (1)$$

In its implementation, which is used in the form of group discussions, games, and tests that will be played by students by dividing students into four groups with members of each group totaling 6 children. The success criteria in this study are the achievement of the Minimum Completeness Criteria (KKM) 70 or at least 18 students. If students reach the predetermined KKM score then this research is considered successful. From the activities carried out, it is hoped that the cranklek game in learning can improve student learning outcomes.

3. RESULTS AND DISCUSSION

In this study, researchers used the traditional game of engklek as a medium in learning Natural Sciences (IPA) with the consideration that this game is considered an easy and interesting game. Considered easy because every child is certainly familiar with how to play it. In line with the independent curriculum which began to implement the profile of this traditional engklek game which cannot be separated from students' playing activities at home and is interesting because learning can be done while playing (Astuti & Thohir, 2025). Although in the current era it is rarely played, by using this cranklek game media, it is hoped that students will start playing again and preserve it.

A The steps for applying the traditional game of engklek in learning Natural Sciences (IPA) are as follows: (1) Students are formed into 4 groups with each group consisting of 6 children. (2) Each group will send representatives who will scramble or will carry out lottery activities to determine which group gets the first order and so on. (3) The game is continued by throwing the gancu at one of the cranklek boxes (4) In throwing the gancu, the gancu must not come out of the line and if the gancu comes out of the line it will be continued by the next order player (5) the box containing the gancu must not be stepped on, then the player who succeeds in throwing the gancu jumps with one foot to finish the game (6) When in the last box the player must take the gancu by squatting or bending down while still using one foot (7) After that the player returns to throw the gancu on the cranklek field to get the question (8) the player must answer the question for each question gets a value if he cannot answer then the game will be continued by the next player (9) each group is given 6 times the opportunity the game continues until the questions and players run out.

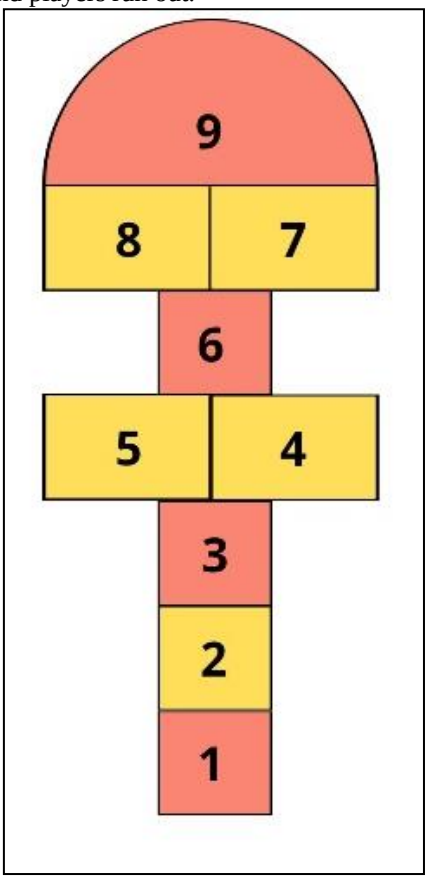

Figure 2. Traditional Game Engklek Design

The results of the research carried out aimed at improving student learning outcomes in class IX 9B SMPN 2 Ngetos by using pretest and posttest questions on reproductive material obtained the following learning outcomes:

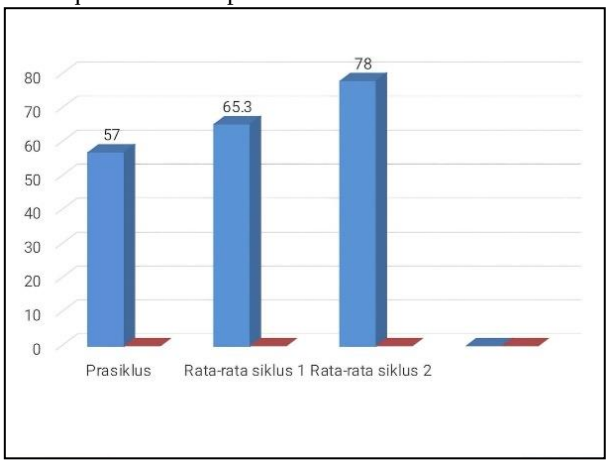

Figure 3. Hasil Belajar Siswa

The pre-cycle was carried out with an effort as an initial step from the researcher to understand the problems that occurred in learning activities. In this pre-cycle obtained from a total of 24 students in class IX B SMPN 2 Ngetos. The pre-cycle shows that there are 9 students complete with an average score of 57 and 15 students or 62.5% of students are not complete in meeting the minimum completeness criteria, therefore corrective action is needed to complete. From these data, further action is needed so that the results of student learning outcomes increase, so the authors use the traditional game engklek as an effort to improve student learning outcomes with the following details:

Table 1. Results of Post-Test and Pre-Test Scores Cycle 1

Interval score	Category	Pre-test frequency	Pre-test percentage	Post-Test frequency	Post-test percentage
86-100	Very good	0	0	0	0
71-85	Good	5	20,8%	17	70,8%
56-70	Medium	8	33,3%	6	25%
41-55	Deficient	7	29,1%	1	4,1%
<40	Very poor	4	16,6%	0	0
Total =		24	100	24	100%

Table 2. Results of Post-Test and Pre-Test Cycle 1

Learning outcome	Pre-test score	Post-test score
Average Value	56	74
Highest score	85	85
Lowest score	25	55
Number of students who scored ≤ 70	5	17
Jumplah siswa yang mendapat nilai ≥ 70	19	7
Percentage of students achieving mastery	20,8%	70,8%
Percentage of students who did not achieve mastery	79,1%	29,1%

In cycle 1, the first meeting of the teacher provides the facilities that will be used then proceed with the introduction, basic activities and closing activities. Where cranklek media is used in learning. The teacher starts learning by explaining the material, in the next stage in the form of a questioning session where if students do not understand the material presented or students ask questions about the material that has been delivered. In the next stage is the implementation of the application of traditional games with steps as previously described. In this cycle 1, several problems began to be encountered such as students still not focusing on learning so that students needed action in the form of reprimands. Furthermore, students are still hesitant in answering questions with this, the teacher provides motivation to these students besides giving appreciation in the form of applause or positive words such as thanks. In cycle I, it was also found that students who had difficulty understanding the learning material often gave up easily, so this was one of the factors for poor student learning outcomes. With things like this, the teacher always provides guidance and provides motivation during learning, so that children who previously gave

up little by little want to refocus on learning activities. Based on cycle I, it was found that student learning outcomes had not met the KKM by only obtaining an average of 65.3 with 13 students complete and 11 students not complete students were not complete. In other words, the success of the application of traditional games as a support in improving student learning outcomes is only 54% or not successful so that the next cycle is needed.

Table 1. Results of Post-Test and Pre-Test Scores Cycle 2

Interval score	Category	Pre-test frekuensi	Pre-test percentage	Post-Test frekuensi	Post-test percentage
86-100	Very good	6	25%	3	12,5%
7071-85	Good	12	50%	21	87,5%
56-70	Medium	6	25%	0	0
41-55	Deficient	0	0	0	0
<40	Very poor	0	0	0	0
Total =		24	100	24	100%

Table 2. Results of Post-Test and Pre-Test Cycle 2

Learning outcome	Pre-test score	Post-test score
Average Value	75	80
Nilai tertinggiHighest score	86	93
Nilai terendahLowest score	65	73
Number of students who scored ≤ 70	21	24
Number of students who scored ≥ 70	3	0
Percentage of students achieving mastery	87,5%	100%
Percentage of students who did not achieve mastery	12,5%	0%

In the implementation of cycle II, activities were carried out based on the plan that had been adjusted by the researcher, including providing motivation in the form of support and appreciation to students. In this cycle II, the teacher modified the learning by providing rewards for teams that were able to finish the game first. In addition, students have also understood how to play well compared to cycle I and students are also more confident in answering questions. In cycle II, the average learning outcomes were better than the previous cycle, with an average result of 78. The results of cycle 2 have improved quite a lot when compared to the pre-cycle and cycle 1, with 24 complete students. In other words, there was an increase in learning outcomes where the previous results were only 54%. The purpose of implementing this learning activity is to make students active in participating in the implementation of learning activities to improve student learning outcomes. It is known that in cycle I and cycle II, there was an increase in pre-cycle to cycle 2 in a row with an initial target of 18 students complete or with KKM ≥ 70. In each cycle the researcher will give questions to measure the ability of students to understand each material presented. With the actions applied to both observations and tests in the 2nd cycle experienced a fairly high increase ka this research is associated with research owned by (Febrianty et al., 2023) the efforts used in dealing with class problems are the same, namely in the form of using traditional games, namely engklek.

This study utilizes the traditional game of engklek as a learning medium in science subjects, especially on reproductive material, with an ethnopedagogical approach. This approach integrates local wisdom values to improve student learning outcomes. Based on the research results, this approach not only increases the average student learning outcomes but also provides a fun and in-depth learning experience. According to (Putra, 2017), ethnopedagogy emphasizes a learning approach based on local cultural values to motivate students in learning. This approach is effective in providing a learning context that is relevant to everyday life, thus helping them understand the material better. In the context of this research, the engklek game becomes a medium to connect science concepts with students' daily lives (Asra et al., 2021).

The results showed that the use of cricket games significantly improved student learning outcomes from cycle I to cycle II. This is in line with research (Zein & Rahayu, 2022), which found that traditional games such as cricket can increase student attention. This increase in motivation is reflected in the increase in the average value of student learning outcomes, which reached 78 in cycle II, compared to 65.3 in cycle I.

Another benefit of the engklek game in learning is the development of students' motor skills (Qomariah & Hamidah, 2022), mentioned that the traditional game of engklek trains students' balance, agility and coordination, which indirectly contributes to a more active and interactive learning process. In this study, the physical activities involved in the engklek game also helped students concentrate more on learning tasks (Kusumaningsih, n.d.).

From an ethnopedagogical perspective (Abdurrahman et al., 2020), it emphasizes the importance of integrating local values in learning to create meaningful learning experiences. The use of traditional games such as engklek

not only strengthens students' connection with their local culture but also improves the understanding of science concepts through an approach that is relevant to the context of students.

In its implementation, this study also found some challenges such as students' difficulty in understanding the rules of the game in the initial cycle. However, with the teacher's guidance and motivation, students can overcome this obstacle. This finding is supported by research (Lestari & Dia Indah Sari, 2024), which shows that the role of the teacher is very important in providing clear directions during game-based learning.

Based on the research results and literature support, it can be concluded that the ethnopedagogy-based traditional game of engklek is an effective method to improve student learning outcomes strengthen local cultural links, and create a more active and fun learning atmosphere. The results of the study showed that cranklek game-based emphasis with ethnoscience integration increased student engagement in the learning process(Gunardi et al., 2024). As a culture-based learning media, the game of cranklek provides learning experiences that are contextual and relevant to students' daily lives. According to (Mukti et al., 2022), science learning that integrates local cultures such as ethnoscience not only supports mastery of scientific concepts but also increases student learning motivation.

In science learning at SD Muhammadiyah Alam Surya Mentari, as described by (Puspasari et al., 2019), the implementation of ethnoscience is carried out by linking science material with local activities, such as tape making or batik, to provide meaningful learning experiences. This method is also applied in this study through integrating the game engklek as a learning medium that involves physical activity, cognitive strengthening, and understanding of local culture (Hariyono et al., 2023).

This approach is in line with(Mukti et al., 2022) which states that the integration of local culture in learning improves students' concept understanding and critical thinking skills. The traditional game of engklek, with a combination of science problems, provides a relevant cultural context and helps students connect theory with practice, as continued to be found in research (Puspasari et al., 2019).

In addition, this study also showed significant student learning outcomes in cycle II, with 100% of students reaching the Minimum Completion Criteria (KKM). This supports the findings (Mukti et al., 2022) which state that ethnoscience helps students understand science more easily through examples from the surrounding environment that are well known by students.

4. CONCLUSIONS AND SUGGESTIONS

From the actions taken by the author, it was found that there was an increase in the learning outcomes of students in class IX B SMPN 1 Ngetos which was carried out with two cycles, namely cycle I and cycle II on reproductive material. The results that have been obtained by researchers from this research activity obtained the results of an increase in the value of student learning outcomes which can be seen in the acquisition of the average value of student learning outcomes in cycles I and II with the amount obtained in cycle I of 74% with 12 complete students and in cycle II obtained a value of 85.2% with 20 complete students. Teachers can use the engklek game as a medium for learning science through the ethnopedagogy model repeatedly or consistently with the aim that learning will be more interesting, of course, with students' interest in learning can make the learning atmosphere fun and can increase the enthusiasm of students in the teaching and learning process.

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