

## **Improving Students' Learning Outcomes Through Guided Inquiry Combined With Kahoot at IX Grade Students**

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### **Abstrak**

Penelitian tindakan kelas ini mengkaji keefektifan model pembelajaran inkuiri terbimbing yang dikombinasikan dengan Kahoot dalam meningkatkan Hasil Belajar siswa kelas IX di SMPN 6 Denpasar. Subjek dalam penelitian ini adalah siswa kelas IX 3 di SMPN 6 Denpasar yang berjumlah 40 siswa. Penelitian ini menggunakan model penelitian tindakan kelas Kemmis dan McTaggart yang terdiri dari empat tahap yaitu perencanaan, tindakan, observasi, dan refleksi. Penelitian ini dilaksanakan dalam dua siklus yang setiap siklus terdiri dari dua kali pertemuan. Untuk siklus I materinya adalah iklan, sedangkan untuk siklus II materinya adalah tentang label. Peneliti menggunakan observasi, wawancara, pre-test, post-test, dan angket untuk mengumpulkan data yang diperlukan. Berdasarkan observasi awal, ditemukan bahwa hasil belajar siswa kelas masih di bawah harapan atau belum mencapai ketuntasan optimal; Hal ini dapat dilihat dari rendahnya tingkat partisipasi aktif siswa dan hasil pretest yang menunjukkan dari nilai rata-rata pretest sebesar 66,25 yang berada di bawah nilai ketuntasan minimal. Oleh karena itu, diterapkanlah model pembelajaran inkuiri terbimbing yang dipadukan dengan Kahoot. Temuan penelitian menunjukkan peningkatan hasil belajar siswa. Peneliti mencatat peningkatan skor rata-rata pada hasil post-test setiap siklus. Pada siklus I, nilai rata-rata mencapai 79,25; pada siklus II, meningkat menjadi 88,5. Selain itu, peneliti juga memberikan kuesioner kepada siswa yang menunjukkan respons positif dengan persentase 99,5%. Oleh karena itu, berdasarkan data yang ada, dapat disimpulkan bahwa inkuiri terbimbing yang dikombinasikan dengan Kahoot dapat meningkatkan hasil belajar siswa.

**Kata kunci:** Hasil belajar, Pembelajaran inkuiri, Kahoot

### **Abstract**

*This classroom action research examines the effectiveness of the guided inquiry learning model combined with Kahoot in improving the Learning Outcomes of class IX students at SMPN 6 Denpasar. The subjects in this study were students from class IX 3 at SMPN 6 Denpasar, consisting of 40 students. This study uses the Kemmis and McTaggart classroom action research model, which consists of four stages: planning, action, observation, and reflection. This study was conducted in two cycles, each cycle consisting of two meetings. For cycle I, the material was advertisements, while for cycle II, the material was about labels. The researcher used observations, interviews, pre-tests, post-tests, and questionnaires to collect the necessary data. Based on initial observations, it was found that the learning outcomes of class students are still below expectations or have not achieved optimal completion; This can be seen from the low level of active participation of students and the pretest results which show that from an average pre-test score of 66.25, which was below the minimum passing grade. Therefore, the guided inquiry learning model combined with Kahoot was implemented. The findings showed that students' learning outcomes were improved. There was an increase in the average score found by the researcher in the post-test results of each cycle. In cycle I, the average value showed 79.25; in cycle II, it increased to 88.5. In addition, during this study, the researcher also gave a questionnaire to students, who showed a positive response with a percentage of 99.5%. Therefore, based on the existing data, it can be concluded that guided inquiry combined with Kahoot can improve students' learning outcomes.*

**Keywords:** study outcome, Inquiry learning, Kahoot

## 1. INTRODUCTION

Learning outcomes play an important role in the educational process because they show the extent to which students understand the material that has been taught. According to Rafid (2021) Learning outcomes are changes in students' behavior, which can be observed and measured in the form of changes in knowledge, attitudes and skills. Rafid (2021) added that both internal and external factors influence Learning outcomes. Internal factors originate from the learner and include: Interest, Motivation, Attention to learning, Readiness to learn, Natural talent, Learning strategies, Intelligence, Perseverance, Attitude, Learning habits, and Physical health. External factors, on the other hand, arise from outside the learner and consist of: Teacher's instructional methods, Classroom facilities, Peers, School environment, School culture, Family context, Curriculum, and the overall teaching and learning process. Each of these factors can differently affect student learning outcomes. Moreover, According to Zaki et al. (2025) the learning outcomes obtained are considered lacking, usually due to learning activities which generally tend to be teacher-centered and are still conventional (storytelling) so that in the learning process in the classroom, students tend to be passive in the learning process. Therefore Prasetyo & Abduh (2021) add that in the learning process, an appropriate learning model must be used to improve student learning outcomes. Therefore when students are provided with the right learning environment, their motivation to learn increases, leading to better learning outcomes (Astuti et al., 2021 as cited in changeiywo et al., 2011).

However, based on the observation results, the researcher found that there was one class, especially class IX, where the majority of students tended to be passive in participating in the learning process. If this situation is allowed to continue, it will not only have an impact on students' low understanding of the material, but can also reduce overall learning outcomes. Thus, given the current situation, the researcher sought to implement the guided inquiry model as an intervention for students in their learning journey. Research by Tarkin & Louise, (2023) indicates that applying an inquiry-based learning model with a scientific framework can greatly enhance students' critical thinking abilities to learn. Laila & Lufri (2019) further noted that the guided inquiry model focuses on uncovering concepts and their interrelations, allowing students to create their own

experimental procedures, thereby increasing student engagement, while the teacher's role is to provide appropriate guidance and direction.

In addition, in this case the researcher also wants to utilize the existing digital platform to namely Kahoot to support the implementation of this learning model. The Kahoot application can make it easier for English teachers to evaluate student learning outcomes and also creates a fun and non-boring learning atmosphere for both students and teachers because the Kahoot application emphasizes a learning style that involves an active role relationship between student participation and their peers competitively what is being studied or learned (Kusumawati, 2023).

Therefore, this study aims to improve and enhance the learning process by implementing a guided inquiry model combined with Kahoot. This strategy is expected to increase active participation and student motivation, which ultimately impacts student understanding of the material and learning outcomes.

## **2. RESEARCH METHOD**

This research is a classroom action research. The subjects of this research are students in class IX 3 at SMPN 6 Denpasar, totaling 40 people. In this study, data collection was obtained through observation, interviews, testing (pre-test and post-test) and questionnaires. For the research procedure itself, the researcher used the classroom action research procedure model owned by Kemmis and McTaggart 1988 (as cited in Bernadetta Purba dkk, 2021). Data were analyzed using quantitative and qualitative descriptive approaches. Qualitative data were obtained through observation and interviews, then analyzed to describe class conditions and student responses to the learning strategies applied. Meanwhile, quantitative data were obtained from testing (pre-test and post-test) and Questionnaires.

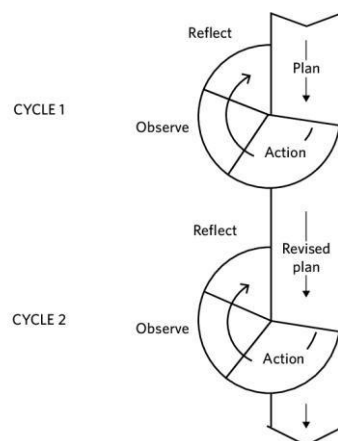


Figure 1 Kemmis and McTaggart 1988 Action Research Model

To find that guided inquiry and kahoot is successful in improving students' learning outcomes, the researchers used a formula to find the average value of the pretest and posttest results. Below is the formula for finding the average score in the data:

$$\bar{X} = \frac{\sum_{i=1}^n x_i}{n}$$

**Note:**

$\bar{X}$ : Average score

$\sum x_i$  = total score of all students

$n$ : number of students

Moreover, to find the percentage of students who have passed the minimum passing grade, the researcher used the following formula (Guskey, 2005):

$$P = \frac{\text{number of students who achieve the KKM}}{\text{total number of students}} \times 100\%$$

**Note:**

**P:** the class percentage

In this present study, the researcher also used questionnaire as supporting data in this research. This questionnaire was given to determine students' responses during the learning process. According to Ali (1993: 186 cited in Abidin & Purbawanto, 2020) the following formula used to calculate the questionnaire as follows:

$$P = \frac{\text{total an item}}{\text{total responses score}} \times 100\%$$

**Note:**

**P: the percentage**

Below is also a table of criteria from the results of the questionnaire that has been carried out according to Abidin & Purbawanto (2020)

Criteria	Percentage
Sangat Positif	84% < skor ≤ 100%
Positif	68% < skor ≤ 84%
Biasa	52% < skor ≤ 68%
Negatif	36% < skor ≤ 52%
Sangat Negatif	% < skor ≤ 36%

### 3. RESULT AND ANALYSIS

#### 3.1. Result and Analysis

This research aimed to improve students' learning outcomes in grade IX and was conducted in two learning cycles. Before starting the cycles, the researcher performed an initial observation to identify effective treatments for improving students' motivation. The results of the observations showed that the learning process took place in a passive atmosphere. When the researcher entered the class for the first time, the classroom atmosphere felt very quiet, but not because of high concentration in learning, but because of minimal interaction. Furthermore, Interviews conducted with English subject teachers also strengthened the observation results. The teacher said that this class was one of the classes that tended to be passive and needed an approach. Moreover, to support the fact from observation and interview, the researcher also did pre-test. Thus, based on the result showed that the average of pre-tests' results is still under the minimum passing grade

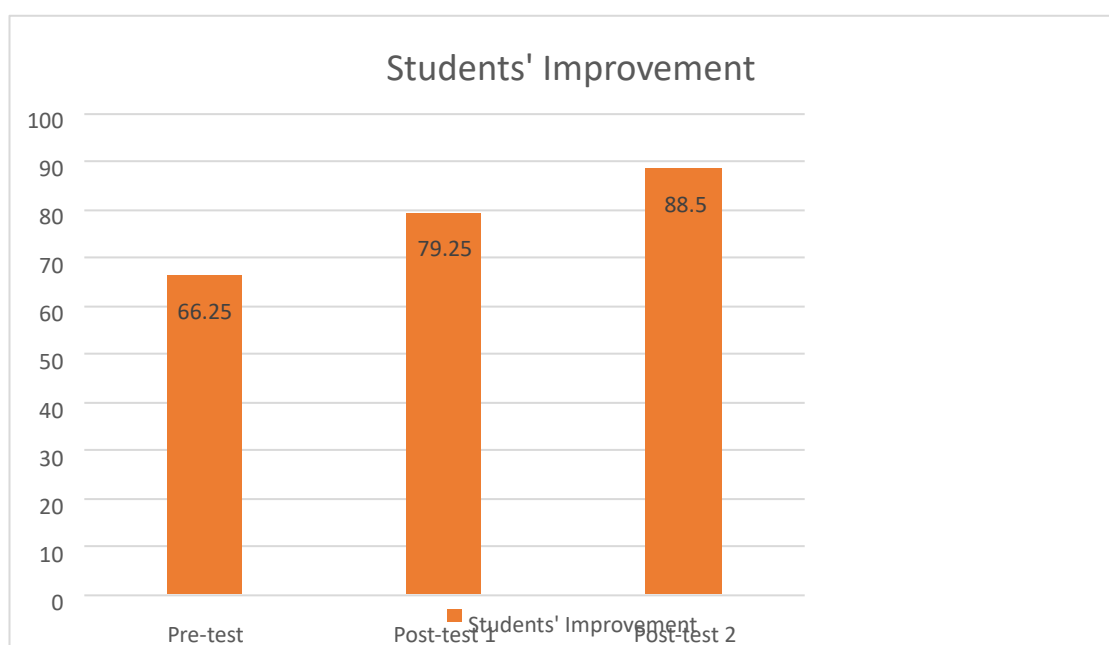
which is only 66.25 with the percentage showed only 35% from 40 students that passed the passing grade.

That classes need learning strategies that can improving their learning outcomes, self-confidence, and active participation in the learning process. These findings are the basis for researchers to design actions using the Guided Inquiry model combined with Kahoot to create meaningful learning experiences. The following are the findings in cycle 1. Based on the data obtained from the post-test results in cycle 1, there was a significant improving in the average score of students after the implementation of the guided inquiry learning model combined with the Kahoot. The average score of students in class IX-3 in cycle 1 was 79.25, which had exceeded the minimum passing grade limit of 75. Of the 40 students who took part in the learning, 24 students managed to get scores that exceeded the passing grade, with a percentage of 60%. Although there was an increase, this percentage still did not reach the desired target, which was a minimum of 80%. Therefore, the researcher decided to continue to cycle 2 using the same model and platform, but with several improvements to achieve maximum results.

Given these findings, the researcher decided to advance to cycle II while implementing the same treatment, which includes the guided inquiry model and combined with kahoot. This decision stems from the significant improvement observed in cycle I, leading to expectations that even more students will achieve the minimum passing grade in cycle II. After all stages in cycle II were carried out properly, the data obtained showed that most students had successfully achieved the Minimum Passing Grade that had been set. The results of the second posttest recorded that the average score of students was 88.5, with a percentage of learning completion reaching 87.50%. Of the total 40 students, only five had not achieved the minimum standard. This shows a significant increase compared to the pre-cycle and cycle I, both in terms of understanding the material and active participation of students during the learning process.

To support the results of this study, the researcher also distributed questionnaires to students to determine their responses to learning using the guided inquiry model combined with Kahoot. The questionnaire consisted of 10 statements, and students were asked to provide responses based on a Likert scale: strongly agree, agree, disagree, and strongly disagree. Students were asked to answer honestly without being influenced by other parties. Of the total 400 responses collected, 160 responses stated strongly agree

with a percentage of 40%, 238 responses stated agree with a percentage of 59.5%, no responses chose strongly disagree with a percentage of 0%, and 2 responses chose disagree with a percentage of 0.5 %. Based on the results of the questionnaire recapitulation, as many as 99.5 % of students gave a positive response to learning using the guided inquiry model combined with the Kahoot interactive quiz. Moreover, bellow is a graphic of the improvement stundents' learning outcomes through guided inquiry combined with Kahoot:



**Gambar 2 Students' Improvement on Motivation**

### 3.2. Discussion

This study is a classroom action research that aims to implement the guided inquiry model combined with Kahoot to improve the' learning outcomes of grade IX students at SMPN 6 Denpasar. The study was conducted in two cycles, where each cycle consisted of two meetings. Each cycle includes four main stages according to the Kemmis and McTaggart 1988 model, namely planning, action, observation, and reflection.

Students' initial abilities were identified through the implementation of a pretest which showed that students' participation and understanding of the material were still relatively low, with an average score of 66.25. In cycle I, the implementation of guided inquiry began by compiling teaching modules, presenting materials in a structured

manner, and providing LKPD based on collaborative activities. The results of posttest I showed an increase in the average student score to 79.25. This indicates initial progress in students' learning outcomes and involvement. In cycle II, the guided inquiry model was still applied but with a strengthening approach, and equipped with the implementation of a Kahoot quiz as a form of fun and challenging final evaluation. The results of posttest II showed a significant increase with an average score of 88.5, and most students had achieved the minimum passing grade. In addition, student enthusiasm in group discussions, courage in presentations, and responses to teacher questions experienced a fairly striking increase compared to before the action was taken. Furthermore, the improvement in learning outcomes is also reinforced by the results of the questionnaire distributed to students at the end of cycle II. The majority of students showed positive responses to guided inquiry and Kahoot-based learning, with a total percentage of 99.5% of students choosing the categories "strongly agree" and "agree".

Thus, Based on the findings in this class research action related to the use of guided inquiry model combined with kahoot in class 9, especially class IX 3 at SMPN 6 Denpasar through two implementation cycles, it has been successful. The findings of this study are in line with Prasetyo & Abduh (2021) argument which said in the learning process, an appropriate learning model must be used so that student learning outcomes can improve. The use of Kahoot in this study is also in line with the arguments from Kusumawati, (2023) which states the Kahoot application can make it easier for English teachers to evaluate student learning outcomes Moreover, based on result conducted by Bahri (2024) Kahoot can foster a fun learning environment, enhance students' active participation, and positively impact their motivation and learning outcomes.

#### **4. CONCLUSION AND SUGGESTION**

This classroom action research aims to determine the effectiveness of implementing the guided inquiry model combined with the Kahoot to improve students' learning motivation. The research was conducted in two cycles and follows four stages according to Kemmis & McTaggart: planning, action, observation, and reflection. The subjects of this study were 40 students from grade IX-3 at SMPN 6 Denpasar. The results of the study showed that the application of guided inquiry and Kahoot positively impacted students' learning outcomes. Based on initial data, the average student score was only 66.25. After



the intervention in cycle I, the average score increased to 79.25, and in cycle II, it rose again to 88.50. Additionally, students exhibited positive behavioral changes: they became more active during learning, enthusiastic in discussions and presentations, and more confident in answering questions. From the entire process and the data obtained, it can be concluded that using the guided inquiry model combined with Kahoot has proven effective in increasing student learning motivation. Learning activities became more enjoyable, participatory, and encouraged students to understand the material more deeply.

Through this classroom action research, it is recommended that teachers continue to develop and implement proven effective learning strategies throughout the action process. Students are expected to maintain their active participation in learning activities, as their involvement is key to the success of the action. Furthermore, other researchers can use this research as a starting point for conducting similar actions with different approaches or contexts, to enrich classroom learning practices.

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