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The Concept of IPAS with the LSQ Learning Method: Question Card Media for Primary School Students

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ABSTRACT

The background of this research is the low participation of students in the learning process, which has an impact on poor conceptual understanding. Therefore, this research aims to improve students' conceptual understanding through the application of the Learning Start with a Question (LSQ) strategy assisted by Question Card Media in the subject of IPAS. This type of research uses the Classroom Action Research model. This research took place in Class V State Elementary Madrasah 7 Bandar Lampung. The research took place in two cycles consisting of the planning stage, implementation of actions, observation, and reflection on the material of Knowing the Location and Nature of Indonesia. The findings of the study indicated that the application of the LSQ method assisted by question cards was effective in improving students' conceptual understanding in IPAS learning. There was a significant increase in students' conceptual understanding from cycle I to cycle II, with the level of activity reaching a peak of 92.5% in cycle II. Students' understanding also experienced a positive increase from cycle to cycle. The number of students who achieved the Learning Objectives Achievement Criteria increased in each cycle, with cycle 1 at 81% increasing to 92.5% in cycle II. The reflection and adjustment process in each cycle made a positive contribution to the success of the learning method. The implications of this study include the potential application of the Learning Starts With A Question method assisted by Question Card media to improve students' understanding, participation, and activeness in IPAS learning.

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1. INTRODUCTION

Education is the primary foundation for developing quality human resources, and basic education plays a central role in the early stages of developing children's potential (Sukawati et al., 2020). At the elementary school level, Natural and Social Sciences (IPAS) is a crucial instrument for instilling scientific thinking and the ability to understand the natural and social phenomena around them (Surul & Septiliana, 2023; Desstya et al., 2024). However, the process of learning IPAS in the field still faces several significant challenges (Jannah et al., 2025). Conceptual understanding is a

student's ability to fully master material, reflected through the skills of recognizing, explaining, comparing, classifying, and providing real-life examples (Indolia et al., 2018; Kong et al., 2022). According to Anderson and Krathwohl, there are seven main indicators of conceptual understanding: interpreting, exemplifying, classifying, summarizing, concluding, comparing, and explaining (Wilson, 2016). With a thorough conceptual understanding, students are not only able to answer questions but also connect new knowledge to everyday experiences (Deliany et al., 2019; Al-Mutawah et al., 2019; Abaniel, 2021).

A preliminary study by the authors indicated that one of the main obstacles encountered in fifth grade at State Elementary Madrasah 7 Bandar Lampung was students' poor conceptual understanding of the IPAS material. Many students are unable to re-explain the material in their own words, struggle to relate new concepts to previous experiences, and lack the confidence to ask questions when confused. This condition is exacerbated by the use of conventional learning methods with minimal interaction, as well as limited learning media that support active student engagement.

The integration of science and social studies learning in the Independent Curriculum presents challenges for teachers, such as the lack of success in utilizing learning media to integrate science learning that balances social studies and science (Duschl, 2008; Barak, 2017). Furthermore, science requires mastery of two opposing perspectives, requiring teachers, especially those with a background in science or social studies, to learn more in-depth. Despite the strategic role of science and social studies, in practice, many students struggle to understand the concepts taught. Pre-study results in class V, State Elementary Madrasah 7, Bandar Lampung, showed that only 33% of students met the Learning Objective Achievement Criteria, while the remaining 67% fell below the standard.

One of the obstacles in learning is low student engagement due to unattractive media and methods (Feng & Xiao, 2024). To address this, Question Cards were introduced as an interactive solution in the form of question cards that align with the learning material. This media encourages critical thinking, group discussions, and collaboration in understanding concepts (Ahmad, 2025). In addition, Question Cards also support the Learning Start With a Question (LSQ) method, enabling students to be more active in asking questions and seeking answers independently (Yelli et al., 2021). We expect this learning strategy to enhance students' comprehension of the material and their overall learning experience.

To address these challenges, a learning strategy is needed that not only emphasizes delivering material but also encourages students to think critically, actively ask questions, and understand concepts more deeply. One potential approach is the Learning Starts With a Question (LSQ) method, which begins with questions to spark curiosity and exploration (Nirmawati et al., 2025). The Question Card media in this method provides visual stimuli and educational games that can increase student enthusiasm and participation in the learning process.

Research conducted by Afandi and Nurjanah (2018) showed that implementing the Learning Start With a Question (LSQ) method significantly impacted fourth-grade

students' social studies learning outcomes. The results indicated a clear difference between the learning outcomes of students who participated in the LSQ method compared to those taught using the Information Search method. Therefore, we can conclude that the LSQ method effectively enhances student learning outcomes in social studies (Afandi & Nurjanah, 2018; Lamba et al., 2021; Malau & Sihombing, 2023).

This study aims to assess the effectiveness of the Learning Start With a Question method, using Question Cards, in improving the understanding of science concepts among fifth-grade students at State Elementary School 7, Bandar Lampung. Through a more interactive, creative, and enjoyable learning approach, it is hoped that the learning process will be more meaningful and have a positive impact on student learning outcomes (Fan et al., 2015; Hsbollah & Hassan, 2022). We anticipate that this innovative approach to learning will offer a concrete resolution to the obstacles faced by IPAS in the era of Independent Curriculum.

2. METHOD

This classroom action research was conducted in class V-A of state elementary madrasah 7 Bandar Lampung, with 26 students. The focus of this research was to improve students' conceptual understanding through the application of the Learning Start with a Question (LSQ) method assisted by Question Cards. Learning activities were conducted face-to-face and took place in two cycles, covering the topic "Understanding the Location and Nature of Indonesia." Classroom action research is a deliberate observation of activities that occur within a classroom. Broadly speaking, classroom action research is carried out through four stages: planning, implementation, observation, and reflection.

We conduct this research cyclically until we achieve the target using the same pattern. Each cycle of classroom action research is implemented through four main stages: planning, implementation, observation, and reflection. These four stages form a recurring cycle, where the reflection results from each cycle serve as the basis for improving and optimizing the learning process in the next cycle. Thus, the research process continues continuously until the learning objectives are optimally achieved. The classroom action research model is presented in Figure 1.

Figure 1. Classroom Action Research Design

Research planning was carried out by the researcher. This stage included preparing the IPAS lesson materials, compiling teaching modules, preparing research instruments, and preparing media question cards. The material studied by students focused on "Understanding the Location of Indonesia" and "Understanding the Location of Indonesia." In cycle I, meeting 1, students studied the material "Understanding the Location of Indonesia." Furthermore, in cycle I, meeting 2, students studied the material "The Influence of Indonesia's Location." In cycle II, students studied agrarian and maritime life in Indonesia.

The learning implementation refers to the lesson plan prepared in accordance with the Independent Curriculum. Learning activities use the Learning Start with a Question (LSQ) method applied to IPAS. The learning process is carried out in three stages: an introductory stage aimed at preparing students for the material to be learned; a core activity stage emphasizing conceptual understanding through the application of the LSQ method assisted by media question cards; and a closing stage used to deepen understanding and evaluate the learning that has occurred during the lesson. Every lesson was the subject of our observations. Following this stage, the researcher reflected and continued the cycle until they achieved the predetermined target.

The researchers used research instruments consisting of a learning instrument (a lesson implementation plan) and a research data disclosure instrument (a structured observation sheet, a test instrument, field notes, documentation, photos, and videos). Data collection in this study was conducted through tests, observations, interviews, and photo documentation. Data from observations, tests, and documentation were selected, sorted, and further analyzed, then presented in the form of descriptions, tables, and charts for easier understanding. Furthermore, the reduced data was verified to produce valid conclusions that could address the research focus.

The expected outcome of the action intervention in this study is an increase in students' conceptual understanding of the natural sciences. The Learning Objective Achievement Criteria, which refer to the Conceptual Understanding assessment indicators, demonstrate this improvement. These indicators include the ability to interpret, classify, provide examples, summarize, compare, explain, and conclude. Implementing action research requires an assessment of the success of the changes experienced by students. Data collected comes from observations of student conceptual understanding, student activities during learning, and test results given at the end of each cycle. Data analysis was conducted using a qualitative descriptive method, which aims to describe phenomena occurring both during the research and based on previous findings.

To determine the success of the action, specific achievement criteria were used. The action was considered successful if at least 75% of the total number of students demonstrated progress according to the creativity indicators. Conversely, if achievement did not meet these criteria, the action process needed to continue to the next cycle. If the completion rate was $\geq 75\%$, classical learning completion was achieved, as the school conditions were sufficient to achieve this completion. The learning completion criteria are presented in Table 1.

Table 1. Criteria for the Results of Student Learning Activity Analysis

No	Success Rate %	Information
1	75-100	Very Good
2	74-66	Good
3	65-55	Fair
4	0-54	Poor

3. RESULTS AND DISCUSSION

Results

Observations of students' conceptual understanding during IPAS learning using the Learning Star With A Question method with Question Cards revealed positive changes and improvements from cycle to cycle. Prior to the first cycle, researchers conducted initial observations to obtain a picture of the initial abilities of fifth-grade students at State Elementary Madrasah 7 Bandar Lampung. This phase included interviews with the class teacher, who taught science, observing the learning process, and administering a pretest to determine students' conceptual understanding. The initial observations indicated that students had difficulty understanding the concepts of the learning material. Of the 26 students, only 8 (42%) achieved initial mastery.

Table 2. Pre-Research Data Summary

Category	Number of Students	Percentage
Incomplete (<75)	15	58%
Completed (≥75)	11	42%
–	35	100%

Fifth-grade students at state elementary madrasah 7 Bandar Lampung had low initial learning outcomes in the IPAS subject. The initial data from the IPAS Concept Understanding Test can prove this. The first cycle of learning began with opening activities to increase student enthusiasm, such as prayer, greetings, attendance, and a question using Question Card media. Question Card media was used to implement the Learning Star With A Question learning model. Students were grouped to discuss material and complete tasks. The teacher provided feedback after each group representative presented the discussion results. At the end of the lesson, reflection was done to assess the students' learning experience. Thirteen students (50%) did not meet the Learning Objective Achievement Criteria in the first cycle test, meeting 1, despite an increase in completion to 13 students (50%). In meeting 2 of cycle 1, the number of students increased to 17, which represents 66%. An 11% improvement was achieved. Learning effectiveness still needs improvement. Further improvements were needed, especially in terms of group work and courage to express opinions during discussions, although participation was quite satisfactory. Some students showed less interest in the teacher's answers to questions that were not their own, leading to a lack of enthusiasm and focus in the learning process.

Cycle II implementation improved from Cycle I by focusing on increasing active participation and student understanding. Group discussions were intensified, and students received more complex assignments. Media question cards were still used for

an engaging learning environment. In the evaluation of cycle II meeting 1, 21 students (80.57%) achieved completeness. In cycle II meeting 2, 24 students (93%) reached the Learning Objectives Achievement Criteria, showing increased involvement and responsiveness to the learning material compared to the previous cycle. Improvement was seen in weak points from cycle I, but enthusiasm for the IPAS material with the LSQ method still needed improvement. The improvement in learning methods succeeded in increasing students' understanding of concepts, creating an interactive learning atmosphere, and motivating students to be more active. Overall, there was a 27% increase in activity and participation compared to cycle I.

Table 3. Recapitulation of initial data, cycle I, and cycle II of the IPAS Concept

Value Range	Completed Category	Initial Data	Cycle I	Cycle II
0-74	Not Completed	18 (69%)	9 (34%)	2 (7%)
75-100	Completed	8 (31%)	17 (66%)	24 (93%)
Total	-	26	26	26

Table 3 indicated a significant increase in each cycle. Student learning completion increased from 31% in the pre-cycle to 66% in cycle I and reached 93% in cycle II. Conversely, the number of students who had not completed the learning continued to decline, from 18 students (69%) in the pre-cycle to 9 students (34%) in cycle I and only 2 students (7%) in cycle II. These data prove that the implementation of the Learning Star With A Question (LSQ) Method assisted by Question Card media in improving student concept understanding. The LSQ model with the support of Question Card media encourages students to be more active in asking questions, discussing, and working together in groups. The integration of Question Card media is what differentiates this study, because it is able to provide a more enjoyable and intriguing learning context for students.

Discussion

This study aims to examine the effectiveness of the Learning Start With a Question method, assisted by Question Cards, in improving the understanding of science concepts among fifth-grade students at state elementary madrasah 7 Bandar Lampung. The initial condition of fifth-grade students' learning outcomes in IPAS subjects at State Elementary Madrasah 7 Bandar Lampung was still low. This hypothesis can be proven by the initial data from the results of the IPAS Concept Understanding Test. The implementation of learning in the first cycle began with opening activities such as prayer, greetings, attendance, and a question using Question Card media to focus and increase student learning enthusiasm. The Learning Starts With A Question learning model was implemented by utilizing Question Card Media as a learning medium. Students were divided into groups to discuss the material and complete the assigned tasks. Each group representative presented the results of the discussion, and then the teacher provided feedback. Reflection was carried out at the end of the learning process to evaluate the students' learning experiences. The results of the first cycle test, meeting 1, showed an increase in completion to 13 students (50%), although there were still 13 students (50%) who had not yet achieved the Learning Objective Achievement Criteria.

In cycle 1, meeting 2, the completion percentage increased to 17 students (66%). This decrease indicates an 11% improvement compared to the initial condition. However, learning effectiveness still needs to be improved. Although participation was quite satisfactory, further refinements were needed, especially in terms of group work and courage to express opinions during discussions. In addition, some students appeared to pay less attention to the teacher's answers when questions were not their own, resulting in a lack of enthusiasm and focus during the learning process.

The implementation of learning in cycle II was an improvement from cycle I, with a focus on increasing active participation and student understanding. Students were given more complex assignments, and the implementation of group discussions was more intensive. Question Card media was still used to provide an intriguing and enjoyable learning atmosphere. The results of the evaluation of cycle II meeting 1 showed a significant increase, with 21 students (80.57%) achieving completeness, while the results of the evaluation of cycle II meeting 2 showed an increase, with 24 students (93%) who had achieved the learning objectives. Achievement Criteria Students looked more involved and responsive to the learning material, indicating a positive change compared to the previous cycle. Points that were previously weak in the cycle experienced improvement, although enthusiasm for the IPAS material with the LSQ method still needed to be improved. Overall, there was an increase in activity and participation of 27% compared to cycle I. The data shows that the improvement in learning methods succeeded in increasing students' understanding of concepts, creating an interactive learning atmosphere, and motivating students to be more active.

There was a significant increase in each cycle, according to the study results. Student learning completion increased from 31% in the pre-cycle to 66% in the first cycle and reached 93% in the second cycle. The number of students who had not completed learning decreased from 18 students (69%) in the pre-cycle to 9 students (34%) in the first cycle and only 2 students (7%) in the second cycle. The implementation of the Learning Star With A Question (LSQ) method with Question Card media can improve students' conceptual understanding, as proven by the data. The LSQ model, supported by Question Card media, promotes student engagement through questioning, discussion, and group work. The use of Question Card media sets this study apart by providing a more enjoyable and interesting learning context for students. The results of this study are supported by previous studies which stated that the LSQ method effectively enhances student learning outcomes in social studies (Afandi & Nurjanah, 2018; Lamba et al., 2021; Saputra & Rindrayani, 2023; Malau & Sihombing, 2023).

The LSQ method fosters curiosity, encourages active participation, and directly involves students in the learning process by starting with questions (Wahyuningsih & Huda, 2021; Zakia et al., 2025). Students are guided by the teacher to think critically, discuss, and find answers through questions based on readings or teacher-provided materials. This method emphasizes students' active role in constructing knowledge, making learning more meaningful and interactive, and improving learning outcomes (Putri et al., 2024). It is in line with constructivist theory.

Encouraging students to actively participate in the learning process is the main focus of the Learning Starts With A Question method. Students are trained to learn independently, develop critical thinking skills, and confidently express opinions, ideas, and thoughts openly. They are encouraged to ask questions about material they don't understand. Question cards are used in the study to attract students' attention, stimulate participation, and aid understanding. Two-dimensional graphic mediums facilitate students' answering and problem-solving, creating a fun learning environment with playful elements. Question cards encourage students to think critically, collaborate, and communicate effectively, enhancing interactive and meaningful learning (Harsiwi & Arini, 2020; Lutfianasari et al., 2021). Implementing the LSQ model with question card media not only improves conceptual understanding but also increases motivation and active participation and creates a more interactive and enjoyable learning experience.

Three main domains of learning are cognitive, affective, and psychomotor. Bloom classified the cognitive domain into six levels in his research. Evaluation, synthesis, analysis, application, comprehension, and knowledge (Das et al., 2022). Understanding is the second level in Bloom's cognitive domain classification. Understanding indicators in the cognitive domain includes interpreting, exemplifying, classifying, summarizing, concluding, comparing, and explaining, according to Anderson and Krathwohl (Laksana et al., 2019). Understanding concepts is assessed primarily through these processes.

Conceptual understanding is at the heart of the learning process (Susiloningsih, 2019), as previously explained. Students are expected to understand, relate, and apply concepts in various contexts, not just memorize information. The implementation of the Learning Start With A Question (LSQ) method improves students' conceptual understanding and encourages their active participation and engagement in learning. The effectiveness of the improvement steps taken in this classroom action research is demonstrated by improvements in each cycle.

4. CONCLUSION

The findings of this study indicate a significant increase in both conceptual understanding and student engagement from cycle I to cycle II. Student engagement showed positive progress, rising from 66% in cycle I to 93% in cycle II. These results demonstrate that the implementation of the LSQ method is not only effective in improving student understanding but also in encouraging their active involvement in the learning process. Therefore, it can be concluded that the implementation of the Learning Start With A Question (LSQ) method in IPAS learning in grade V-A of state elementary madrasah 7 Bandar Lampung successfully improved conceptual understanding, engagement, and overall learning achievement criteria.

As a recommendation, teachers can apply the LSQ method using question cards to improve elementary school students' understanding of IPAS concepts. This research can serve as a reference for developing innovative and effective learning media to improve students' understanding of IPAS concepts. Teachers can participate in training to learn how to apply the LSQ method using question cards for IPAS learning. Further research can be

conducted to develop more innovative and effective learning media to improve students' understanding of IPAS concepts.

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