

LITERATURE REVIEW ON INQUIRY APPROACHES IN EDUCATION

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Abstract: Learning approaches play a crucial role in determining the success of the educational process. One approach frequently used in learning activities is the inquiry approach, which emphasizes investigative activities for students to independently acquire knowledge. This article aims to review various literature related to the concept, advantages, disadvantages, and application of the inquiry approach in learning. The method used in writing this article is a literature study, examining various sources such as books and scientific journals relevant to the research topic. The results of the study indicate that the inquiry approach can increase student activeness in the learning process, develop critical thinking skills, deepen conceptual understanding, and increase learning motivation. However, the implementation of this approach also has several limitations, including requiring relatively longer learning time, requiring teachers to be prepared in designing learning activities, and presenting difficulties for some students who are not accustomed to independent learning. Based on these results, it can be concluded that the inquiry approach is an effective learning approach for creating an active and meaningful learning process. Therefore, this approach can be used as an alternative in efforts to improve the quality of learning in schools.

Keywords: inquiry approach, active learning, critical thinking skills, learning outcomes.

INTRODUCTION

The learning approach is a crucial component in determining the success of the educational process. In teaching and learning activities, the approach used by teachers significantly influences the quality of interactions between teachers and students and the achievement of student learning outcomes. Selecting the right learning approach can create a more effective, active, and meaningful learning environment for students. Therefore, teachers are required to be able to select and implement learning approaches that not only focus on delivering material but also encourage active student involvement in the learning process. One learning approach widely used in education is the inquiry approach. This approach is known as an approach that provides opportunities for students to be directly involved in

the process of seeking and discovering knowledge. In this approach, students do not merely receive information passively from the teacher but also play an active role in the learning process through exploration, investigation, and concept discovery.

The inquiry approach is a learning approach that emphasizes investigative activities carried out by students to acquire knowledge independently. According to Sanjaya (2016), the inquiry approach is a series of learning activities that emphasize critical and analytical thinking processes in order to seek and find answers to a given problem. Through this approach, students are encouraged to engage in various activities such as observing, asking questions, gathering information, analyzing data, and drawing conclusions based on the results of the investigation. The inquiry approach is important to study because it aligns with the development of the modern educational paradigm that emphasizes student-centered learning. This learning paradigm positions students as the primary subjects in the learning process, while the teacher acts as a facilitator who guides and directs the learning process. Thus, learning is no longer dominated by lectures, but rather emphasizes the active involvement of students in constructing their own knowledge.

According to Trianto (2014), the inquiry approach is a learning approach that places students at the center of learning activities through an investigative process to discover a specific concept or principle. Through this approach, students are trained to develop critical and analytical thinking skills, as well as problem-solving skills related to the learning material. The inquiry approach is also closely related to constructivism theory in learning. Constructivism theory states that knowledge is not only acquired from teachers but is constructed by individuals through their learning experiences.

Bruner (1966) explained that the learning process will be more meaningful if students are directly involved in discovering the concepts being learned through exploration and investigation. In addition to being supported by learning theory, the inquiry approach has also been extensively studied in various educational research. Several studies have shown that this approach can improve the quality of classroom learning. Research conducted by Rahmawati and Nugroho (2022) showed that implementing an inquiry approach in learning can increase student engagement in teaching and learning activities.

Another study by Putri and Hidayat (2023) showed that using an inquiry-based approach in learning can improve elementary school students' critical thinking skills. Furthermore, research by Sari and Prasetyo (2024) also revealed that inquiry-based learning can significantly improve student learning outcomes.

Based on these various research findings, it can be concluded that the inquiry approach is a learning approach that has significant potential for improving the quality of learning processes and outcomes. Therefore, it is important to examine this approach in more depth through a literature review to understand its concept, characteristics, strengths, and weaknesses in learning practice.

DISCUSSION

A. Description of the Inquiry Approach

This approach is a learning strategy that emphasizes the inquiry process as a key component of teaching and learning activities. According to Trianto (2014), the inquiry approach is a learning approach that actively engages students in the process of seeking and discovering knowledge through investigative activities. In this approach, students are encouraged to develop critical and creative thinking skills, as well as problem-solving skills related to the learning material.

The inquiry approach developed from constructivist learning theory, which emphasizes the importance of experiential learning in the process of knowledge formation. According to Bruner (1966), students will more easily understand a concept if they discover it themselves through exploration, observation, and active investigation. In learning practice, the inquiry approach has several main components that become stages in the learning process. According to Sanjaya (2016), these components include asking questions, making observations, collecting data or information, analyzing the data obtained, and drawing conclusions based on the results of the investigation. This approach is often applied in various subjects, particularly those that emphasize in-depth conceptual understanding, such as science, social studies, and mathematics. This is because the inquiry approach allows students to learn a concept through direct experience, resulting in deeper and more meaningful understanding. According to Hidayat and Lestari (2021), implementing an inquiry approach in learning can help students better understand learning concepts because they are directly involved in the investigation process and problem-solving activities. This approach is also often used in problem-based learning, as both share a similarity in emphasizing the process of investigation and problem-solving as essential components of the learning process.

The primary users of the inquiry approach are teachers and students. Teachers act as facilitators, designing learning activities and guiding students through the inquiry process. Meanwhile, students act as active subjects, conducting exploration activities to discover learning concepts. Research by Sari and Prasetyo (2024) shows that the inquiry approach can improve students' conceptual understanding because they are actively involved in the learning process and have the opportunity to discover the concepts themselves.

Sanjaya (2006) also argues that 'the inquiry approach' has a systemised process that focuses on discovery of knowledge through the investigation and solving of problems by learners. The initial step is orientation to teaching and learning: teacher presents the teaching topic and prompts students to take interest in the subject. Bruner (1961) argued that learning is richer and more meaningful for students when actively engaged in the process of knowledge discovery. The second stage is

formulation of the problem and students identify and develop problems that are connected to a lesson and the content of the lesson. Trianto (2014) argues that creating a well-defined problem formulation is useful for students as they decide what to research. Third, as Sanjaya (2006) describes, hypotheses are temporary assumptions that lead students to determine what they can and cannot learn from the process. Then, through the observation, experiments, discussion, reading learning materials and other activities, students collect data. As Mulyasa (2009) discusses these are direct learning experiences that students experience. The data collected are later examined in the next stage, hypothesis testing to assess whether the hypotheses accepted or denied. Trianto (2014) argues that this leads to the formation of analytical thinking skills in students. After some time students come to some conclusions (from the investigation results), and this facilitates the ability of students to make meaning for themselves (Sanjaya, 2006). There are different benefits with the inquiry approach to increase the quality of the teaching and learning process. “One of the most useful benefits is in the enhancement of student learning activity as the students are engaged in an active, observed, and discussed and investigations experience (Trianto 2014). Rahmawati and Nugroho (2022) conducted research which revealed that students engaged during learning activities more in inquiry mode. Moreover, inquiry approach, facilitates students’ critical thinking because students are ready to consider problems and gather the relevant data and conclusions (Sanjaya, 2016). The researchers of Putri and Hidayat (2023) performed a study and indicated, that students’ critical thinking improved significantly under the inquiry approach. That can enhance their understanding as students learn based on exploration and learn by themselves instead of memorizing information. As Sari and Prasetyo (2024) explain, inquiry-based learning in all three classrooms leads to better conceptual understanding for learners than conventional methods. Another benefit is the enhanced students' learning motivation. Investigation and exploration activities trigger students’ curiosity and interest in learning, which positively impacts motivation (Rahmawati & Nugroho, 2022).

Disadvantages of the Inquiry Approach

However, the inquiry approach does not come cheap in all aspects of classroom learning. The inquiry approach is challenging since it requires a longer duration of learning than traditional teaching methods. According to Wina Sanjaya (2016), the investigation and exploration processes carried out by students demand considerable time, so teachers must manage classroom time effectively to ensure that learning objectives are achieved. The inquiry approach demands high teacher readiness and competence. According to Trianto (2014), teachers should be able to plan learning experiences in which students have analytical skills, generate problems, and explore them on their own. Teachers should give proper instruction throughout the experience so that the students remain directed toward the intended understanding. A further limitation is that not all students are familiar with independent and inquiry-based learning activities. Hidayat and Lestari (2021) found that some students have difficulty engaging with inquiry learning because they have more experience with teacher-centered instruction. And because of this, teachers

must have enough scaffolding, guidance, and motivation to move students to the inquiry learning process. The inquiry method has different attributes from other learning methods. Conventional lecture methodology, in Sanjaya (2016), tends to be teacher-centered, for which learners are reduced to passive receivers of information. While the inquiry approach places students at the center of learning and engages them in direct inquiry and construction of knowledge on their own. The inquiry approach is also consistent with the Discovery Learning framework developed by Jerome Bruner (1966); a focus on active student-driven discovery of what is being learned. But inquiry learning is more focused on systematic investigation and problem-solving processes. Moreover, Putri and Hidayat (2023) demonstrated in their research the effectiveness of the inquiry approach to enhancing students' critical thinking skills over traditional learning strategies.

CONCLUSION

Based on the results of the literature review, it can be concluded that the inquiry approach is a learning approach that emphasizes the process of seeking and discovering knowledge by students through investigative activities. This approach has various advantages, such as increasing student learning engagement, developing critical thinking skills, increasing learning motivation, and helping students understand learning concepts more deeply.

However, this approach also has several disadvantages, such as requiring longer learning times and requiring teachers to be prepared in designing learning activities. Overall, the inquiry approach is an effective learning approach for creating active, creative, and meaningful learning processes. Therefore, this approach is recommended for implementation in school learning activities to improve the quality of education.

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