

Implementation of Modern Learning Theory of John Dewey's Teaching Methods and Information Processing Theory in SD Negeri 1 Pesangkalan

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ABSTRACT

This study discusses the application of John Dewey's teaching methods and information processing theory in the context of education in SD Negeri 1 Pesangkalan. John Dewey emphasized the importance of experience in the learning process, where students gain understanding through direct involvement in learning activities. Meanwhile, information processing theory describes how students receive, process, and store information to improve learning effectiveness. This paper also examines the implementation of this method in the Independent Curriculum at SD Negeri 1 Pesangkalan, especially in project-based activities (P5) that involve experiential learning, such as robusta coffee processing. The results show that this approach increases students' enthusiasm and understanding of the teaching material.

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1. INTRODUCTION

Education is experiencing rapid development along with technological advances and the demands of the digital era. Innovation in education is essential for students to be able to develop future skills. Educators are required to use innovative learning methods so that students become more active in the learning process. One of the important approaches in modern education is the application of modern learning theory, one of which is through John Dewey's teaching methods and Information Processing Theory. Seeing this event, educators are required to further develop intelligence, skills and be able to create a classroom atmosphere that attracts more students' attention to actively participate in the implementation of learning (Mulyati, Mansyuruddin, Adrianus, Bahari, & Warneri, 2023).

Every time in the learning process, educators must be able to choose the right approach and method that is in accordance with the material and learning objectives, so that not only educators seem more active but students must be super active in learning. This means that in using learning methods, teachers must adjust to the teaching material so that the methods used can be effective and the goals of learning that have been set can be achieved more optimally, and more importantly there is creativity in teachers using learning methods so that learning attracts more attention and students' interest in learning is higher. (Mulyati, 2023)

Experience is the basis of education, or in Dewey's own terminology "experience" as "the means and purposes of education". (John Dewey, 2004)(Wasitohadi, 2014). According to Dewey, education is an effort to

help people to reflect on problems that arise in society and to equip them to produce real changes in their lives. If in the educational process there is no positive influence on nature and society, then it should not be called education, because education must have the influence of change and growth (Maiaweng, 2009).

Information processing learning theory is part of cybernetic learning theory. In simple terms, the definition of learning according to cybernetic learning theory is information processing. In this theory, like cognitive psychology, for cybernetics to examine the learning process is more important than learning outcomes, but what is more important than the study of the learning process itself is the information system, this information system will ultimately determine the learning process (Jahuri, 2021).

The author would like to discuss the application of modern learning theory with John Dewey's teaching method and Information Processing Theory in SD Negeri 1 Pesangkalan. The discussion begins with understanding John Dewey's Teaching Method, especially regarding the essential components. Next, we will discuss information processing theory, namely how to remember information, understand concepts and actively participate in class.

1.1 Problem Formulation

1. What is modern learning theory?
2. What are John Dewey's teaching methods and how is it implemented in SD Negeri 1 Pesangkalan?
3. What are the theories of information processing?

1.2 Purpose

1. Readers can understand about modern learning theories
2. Readers can understand John Dewey's teaching methods
3. Readers can understand information processing theory

2. RESEARCH METHODS

The writing of this study uses a **literature study method with a qualitative descriptive approach**. Literature study is carried out by collecting, reading, and analyzing various reference sources such as books, scientific journals, articles, and official documents related to John Dewey's teaching methods and information processing theory. A qualitative descriptive approach is used to describe the concepts, principles, and implementation of these theories in the context of learning at SD Negeri 1 Pesangkalan.

The author does not collect primary data through observation, interviews, or questionnaire dissemination, but bases the analysis on the analysis of relevant secondary sources. The results of this literature review are then associated with real implementation in educational practice, especially in the implementation of the Independent Curriculum through the Pancasila Student Profile Strengthening Project (P5) at SD Negeri 1 Pesangkalan.

3. RESULTS AND DISCUSSIONS

In the 2024/2025 Academic Year, SD Negeri 1 Pesangkalan implements the Independent Curriculum. Which, this curriculum provides flexibility to educational units to implement learning in accordance with the conditions and characteristics that exist in the SD Negeri 1 Pesangkalan area.

This is in accordance with the teaching method formulated by John Dewey, which is to provide experience to students as a form of education that will be used continuously as long as the student grows. The Independent Curriculum provides a real learning experience in accordance with the characteristics of the environment, and understands the existing conditions, so that students are able to adjust and develop their potential.

One of the programs to form a Pancasila Student Profile is the Pancasila Student Profile Strengthening Project (P5), which is in accordance with John Dewey's Theory, about experimentation or can be adjusted to the Based Learning (PBL) Project.

P5 at SD Negeri 1 Pesangkalan focuses on meeting the needs of students by developing competencies in the changes of 21st century life that contain the characteristics and local potential of the school. SD Negeri 1 Pesangkalan is located in a hilly area, which has excellent landscape potential in the fields of plantations and agriculture. Potential plantation products that have become commodities are robusta coffee beans, which are the hallmark of Pesangkalan Village. To maintain quality, coffee picked from the plantation is only ripe on a red tree, so it is famous for the term "Red Picked Robusta Coffee".

Based on a literature review and descriptive analysis, several key findings were obtained related to John Dewey's teaching methods and information processing theory and its implementation in SD Negeri 1 Pesangkalan:

1. John Dewey's Teaching Methods:
 - a. Education according to John Dewey must focus on the real experience of students.
 - b. Learning is a process of continuous experience processing to produce positive growth and change.
 - c. Dewey's key principles, such as learning by doing, growth, experimentation, and transaction, are a strong foundation for building active and contextual learning models.

2. Information Processing Theory:
 - a. This theory emphasizes the importance of cognitive processes in learning, starting from the reception of information, processing, storage, to the reuse of the information.
 - b. Effective learning occurs when students are able to manage information from the environment into a meaningful knowledge structure.
 - c. The learning process is greatly influenced by environmental stimuli and the individual's ability to process information internally.
3. Implementation at SD Negeri 1 Pesangkalan:
 - a. SD Negeri 1 Pesangkalan has implemented the principles of experiential teaching through the implementation of the Independent Curriculum and the P5 project.
 - b. Flagship programs such as the Red Picked Robusta Coffee Project demonstrate the real implementation of the concept of experiential learning. Students not only learn theory, but also experience firsthand the process of cultivation, processing, and marketing coffee.
 - c. The project-based learning model used is in accordance with John Dewey's concept of experimentation, as well as the theory of information processing through the stages of information collection, processing, and presentation.
4. Relevance and Impact:
 - a. Experiential learning increases students' active participation, makes them more enthusiastic, and forms life skills that are relevant to the real world.
 - b. The integration of John Dewey's theory and information processing theory in elementary education is considered very relevant to form students who are independent, creative, and able to think critically.

From a qualitative descriptive approach, it was found that experiential teaching methods and information processing theory made a positive contribution to improving the quality of learning at SD Negeri 1 Pesangkalan, with real implementation through local potential-based projects.

The stages taught in the P5 Activity "Red Picking Robusta Coffee", namely:

1. Introduction of coffee beans and plants
2. **History of Coffee:** Reviewing the origins of coffee.
3. **Coffee Varieties:** Introduces the two main types of coffee, namely Arabica and Robusta, as well as the differences in flavor characteristics and uses of each.
4. **The Spread of Coffee in the World:** How coffee has become an important part of culture in various countries, including Indonesia as the largest coffee-producing country.
5. **Coffee Plant Planting and Care:** Explain the process of growing coffee, starting from seed selection, planting, to coffee plant care.
6. **Coffee Harvesting:** Explains the exact time to harvest coffee beans and their harvesting techniques.
7. **Coffee Processing Process:** From freshly picked coffee beans to ready-to-roast coffee beans. The process includes washing, drying, baking, and grinding.
8. **Types of Coffee Processing:** Dig deeper into the processing of wet coffee, dry coffee, and its effect on the taste of coffee.
9. **Coffee as a Lifestyle:** Understand why coffee is a symbol of social status and way of life in various circles.
10. **Coffee Economy:** The impact of coffee economics on farmers, the processing industry, and the Indonesian coffee export market. Identify challenges facing coffee farmers, such as climate change, price fluctuations, and global markets.
11. **Innovation in Coffee Production:** Get to know innovations in the coffee industry that aim to reduce environmental impacts, such as the use of renewable energy in the coffee processing process.
12. **Sustainable Coffee Campaign Design:** Create a campaign or poster about the importance of consuming coffee responsibly and supporting sustainable coffee production.
13. **Coffee Making Experience:** Invite students to participate in traditional or modern coffee making workshops, from roasting to serving coffee.
14. **Self-Reflection:** Students are asked to write an essay or create a presentation explaining what they learned about coffee and its impact on society, the economy, and the environment.
15. **Project Evaluation:** Assess the results of students' research and projects on coffee, as well as how they integrate Pancasila values in the project.

4. CONCLUSIONS

Based on the results of literature review and qualitative descriptive analysis, it can be concluded that the application of John Dewey's teaching method and information processing theory is very relevant and effective in improving the quality of learning at SD Negeri 1 Pesangkalan. A lot of experience and information can be provided to students. Students are also more enthusiastic about learning, because activities are carried out in various places,

not only in the classroom, which often makes students feel bored studying in the same place every day. According to John Dewey, experience is the basis of education. Experience as a means and purpose of education. Education is essentially a process of continuous exploration and processing of experience.

The essence of education is business to continuously reconstruct and reorganize the life experience of the subject (Wasitohadi, 2014). John Dewey's teaching and Information Processing Theory provide real experience to students, as well as provide skills that are very useful in social life later. The implementation of this theory and method at SD Negeri 1 Pesangkalan through the Pancasila Student Profile Strengthening Project (P5) program, especially in the "**Red Picked Robusta Coffee**" project, shows that an experience-based approach and information processing can form independent, innovative, and competitive students. Thus, the combination of John Dewey's teaching methods and information processing theory has been proven to be able to make a significant contribution to efforts to improve the quality of basic education, especially in preparing a generation that is adaptive to changing times.

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