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Cognitive Learning Strategy Journal

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Abstract:*This journal delves into cognitive learning strategies, an approach that focuses on developing students' thinking abilities. This strategy goes beyond just information acquisition, encouraging students to understand how information can be applied in real-life situations. Cognitive learning strategies emphasize active learning processes, where students engage in organizing, interpreting, and connecting new information with their existing knowledge. This approach also promotes metacognition, the ability of students to be aware of and control their own thinking processes. The primary objective of cognitive learning strategies is to enhance the quality of education by focusing on developing students' thinking abilities. This strategy helps students in building a deeper understanding, developing higher-order thinking skills, increasing motivation and engagement in learning, and preparing them for future challenges. This journal comprehensively discusses various cognitive learning strategies, such as problem-based learning, project-based learning, concept mapping, cooperative learning, differentiated learning, technology-based learning, higher-order thinking questions, and reflection. Each strategy is explained in detail with examples of its application in various learning contexts. This journal also examines the benefits of implementing cognitive learning strategies, which include enhancing students' learning quality, increasing students' motivation and engagement, developing students' character, and preparing students for future challenges. By gaining a deeper understanding of cognitive learning strategies, educators can create more effective learning environments, encourage students to think critically and creatively, and prepare them for future challenges. Cognitive learning strategies are key to building a younger generation that is critical, creative, and innovative, ready to face the challenges of the future.*

Keywords:*Strategy, Learning, Cognitive.*

INTRODUCTION

Cognitive learning is an approach that focuses on how individuals process information, build knowledge, and develop higher-order thinking skills. In the ever-evolving world of education, cognitive learning strategies play an important role in helping students achieve their optimal learning potential.(Atika Setiawati & Suyadi, 2021)

Cognitive learning strategies are not just learning methods, but also a framework that helps students build deep understanding, develop critical thinking skills, and improve problem-solving abilities.(Mashudi, 2021)This approach encourages students to actively engage in the learning process, build connections between new concepts and their existing knowledge, and develop effective learning strategies.(Gusnidar et al., 2018)

This journal will discuss in detail about cognitive learning strategies, starting from the definition and basic principles to their application in various educational contexts. In addition, this journal will also examine the positive impact of cognitive learning strategies on student learning outcomes, as well as the challenges and solutions in their implementation.(Busyairi & Sinaga, 2015)By understanding cognitive learning strategies in depth, educators can create more effective learning environments, encourage students to think critically and creatively, and prepare them for future challenges.(Suparman, 2015).

METHODS

The research method used in the explanation of cognitive learning strategies that we have discussed is not an empirical research method involving data collection and statistical analysis. Instead, the approach used is a qualitative descriptive method. This method focuses on conceptual understanding and in-depth analysis of cognitive learning strategies based on literature and credible sources of information. The qualitative descriptive method used in this explanation allows for a comprehensive and in-depth understanding of cognitive learning strategies. This approach not only explains important concepts but also connects these concepts with real examples, making them easier to understand and apply in an educational context. Although it does not involve empirical data collection, this method still provides valuable and useful information for educators and education practitioners.

RESULTS & DISCUSSION

Understanding Cognitive Learning Strategies

Cognitive learning strategies are approaches that focus on developing students' thinking skills. Unlike traditional approaches that emphasize memorizing information, these strategies encourage students to actively engage in the learning process, build deep understanding, and develop higher-order thinking skills. In essence, cognitive learning strategies focus on how individuals process information, build knowledge, and apply it in various situations. This approach recognizes that learning is not a passive process of receiving information, but an active process in which students are involved in organizing, interpreting, and connecting new information with the knowledge they already have. Strategies are general teaching approaches that apply to various subject areas. These general

teaching approaches are used to meet various learning objectives. Learning strategies are specific actions taken by someone that can help them understand something.(Subkhi Mahmasani, 2020)

One important aspect of cognitive learning strategies is metacognition, which is the ability of students to be aware of and control their own thinking processes. Metacognition encourages students to reflect on their learning, identify strengths and weaknesses, and develop more effective learning strategies. For example, students can plan learning strategies before facing new material, monitor their understanding during the learning process, and evaluate their learning outcomes after completing a task.

Cognitive learning strategies also emphasize the development of problem-solving skills. Students are taught to identify problems, gather relevant information, analyze various solutions, and choose the best solution based on comprehensive analysis. This approach encourages students to think critically, creatively, and innovatively in facing various challenges. Thus, etymologically, "learning strategy" contains the meaning that educators function as "generals" in directing and managing the learning process, like a general who plans and organizes military operations. The goal is to achieve deep understanding, the values to be instilled, relevant skills, and expected learning outcomes.(Nurtaniawati, 2019)

In its application, cognitive learning strategies involve the use of various techniques and methods designed to stimulate students' thinking processes. For example, the use of open-ended questions, class discussions, group problem solving, simulations, and case studies.(Gusnidar et al., 2018)These techniques help students to actively engage in the learning process, build connections between concepts, and develop deeper understanding. Overall, cognitive learning strategies are a holistic, student-centered approach. This approach not only helps students achieve better learning outcomes but also prepares them for future challenges that require critical, creative, and innovative thinking skills. Cognitive learning strategies are approaches applied in the teaching and learning process by emphasizing how students obtain, organize, store, and utilize information effectively. This approach aims to improve understanding, stimulate critical thinking, and develop problem-solving skills through active thinking processes.

Cognitive Learning Strategy Objectives

Cognitive learning strategies have the main objective of improving the quality of education by focusing on developing students' thinking skills. This objective is described in several important aspects, namely:

The first: Enhancing Deep Understanding: Cognitive learning strategies encourage students to not only memorize information, but also understand the concepts and principles behind the information. Students are encouraged to connect new information to their existing knowledge, build strong connections, and develop a more comprehensive understanding. The second: Developing Higher-Order Thinking Skills: This strategy encourages students to think critically, creatively, and analytically. Students are taught to analyze information, evaluate arguments, solve problems, and generate innovative solutions. These higher-order thinking skills are essential to facing increasingly complex real-world challenges. The third: Enhancing Metacognitive Skills: Cognitive learning strategies encourage students to be aware of and control their own thinking processes. Students are

taught to plan effective learning strategies, monitor their understanding during the learning process, and evaluate their learning outcomes. These metacognitive skills help students become independent and effective learners. The fourth: Enhancing Student Motivation and Engagement: Cognitive learning strategies create a more interactive and engaging learning environment. Students are actively involved in the learning process, discussing, and collaborating with classmates. This helps to increase students' motivation and engagement in the learning process, so that they are more motivated to learn and achieve better learning outcomes. Fifth: Preparing Students for the Future: Cognitive learning strategies help students develop the skills needed to succeed in the workplace and life. Critical thinking, creative thinking, and problem-solving skills are essential to facing the increasingly complex and dynamic challenges of the future.

By achieving these goals, cognitive learning strategies not only help students to achieve better learning outcomes, but also prepare them to become successful individuals and contribute positively to society.(Rosari, 2019)

Function of Cognitive Learning Strategy

Cognitive learning strategies have a very important function in building students who not only have knowledge, but are also able to apply it in various situations. This function can be described as follows: First, cognitive learning strategies function as a bridge between knowledge and application. This approach not only focuses on mastering information, but also encourages students to understand how the information can be applied in real life. This is done through critical, analytical, and creative thinking processes that encourage students to connect knowledge with relevant contexts and situations.(Nurindah S, 2022)

Second, cognitive learning strategies increase the effectiveness of the learning process. By focusing on developing students' thinking skills, this strategy helps them learn more effectively and efficiently. Students are taught to identify relevant information, analyze it, and apply it in various situations. This encourages them to become active learners and take responsibility for their own learning process.

Third, cognitive learning strategies increase students' motivation and engagement in the learning process. This approach creates an interactive and engaging learning environment, where students are actively involved in discussions, problem solving, and other learning activities. This helps increase students' motivation and engagement, so that they are more motivated to learn and achieve better learning outcomes.(Dahlan & Rohayati, 2012)

Fourth, cognitive learning strategies help students develop the skills needed to succeed in the workplace and life. This approach encourages students to think critically, creatively, and innovatively. These skills are essential to face increasingly complex and dynamic future challenges. Early childhood cognitive development, not all children have adequate cognitive abilities and concentration skills so that children will feel frustrated. (Nurindah S, 2022: 146). Students who have high-level thinking skills are better prepared to face change, adapt to new situations, and contribute positively to society.

Fifth, cognitive learning strategies support the development of student character. This approach encourages students to think critically, honestly, and responsibly. Students are taught to evaluate information carefully, think objectively, and make decisions based on comprehensive analysis. This helps them

to develop strong characters and become individuals with integrity. Overall, cognitive learning strategies have a very important function in improving the quality of education and preparing students to face future challenges. This approach helps students to build deep understanding, develop high-level thinking skills, and become successful individuals who contribute positively to society.(Fitriyani & Duran Corebima, 2015)

Benefits of Cognitive Learning Strategies

Cognitive learning strategies provide extensive benefits and have a positive impact, not only on students' learning outcomes, but also on their character development and readiness to face future challenges. The main benefit of cognitive learning strategies is to improve the quality of student learning. By focusing on developing thinking skills, this strategy helps students to build deeper understanding, develop higher-order thinking skills, and improve problem-solving abilities. Students who are able to think critically, creatively, and analytically find it easier to understand complex concepts, find innovative solutions, and apply their knowledge in various situations.

In addition, cognitive learning strategies increase students' motivation and engagement in the learning process. This approach encourages students to become active learners, engage in discussions, and collaborate with classmates. This creates a more engaging and challenging learning environment, so that students are more motivated to learn and achieve better learning outcomes. Another benefit of cognitive learning strategies is that they prepare students for future challenges. Today's world of work and life demands individuals who have critical thinking, creativity, and problem-solving skills. Cognitive learning strategies help students develop these skills, so that they are better prepared to face change, adapt to new situations, and contribute positively to society.(Dahlan & Rohayati, 2012)

In addition, cognitive learning strategies support the development of students' character. This approach encourages students to think critically, honestly, and responsibly. Students are taught to evaluate information carefully, think objectively, and make decisions based on comprehensive analysis. This helps them to develop strong characters and become individuals with integrity. Overall, the benefits of cognitive learning strategies are enormous. This approach not only helps students to achieve better learning outcomes, but also prepares them to become successful individuals and contribute positively to society. By implementing cognitive learning strategies, we can create a young generation that thinks critically, creatively, and innovatively, ready to face future challenges.

Cognitive Learning Strategies

Cognitive learning strategies offer a variety of techniques and methods designed to stimulate students' thinking processes, help them build deep understanding, and develop higher-order thinking skills. Here are some commonly used cognitive learning strategies:

The first: Problem-Based Learning: This strategy places students as problem solvers. They are invited to face real problems, gather information, analyze, and find solutions. This process encourages students to think critically, creatively, and collaboratively, and to apply their knowledge in relevant contexts.

The second: Project-Based Learning: This strategy engages students in

long-term projects that challenge them to apply their knowledge and skills to solve real-world problems. Students learn through the process of planning, implementing, and evaluating projects, developing critical, creative, and collaborative thinking skills.

The third: Concept Map: This technique helps students to visualize the relationship between concepts, build structured understanding, and improve systematic thinking skills. Students can create concept maps individually or in groups, using symbols, keywords, and lines to connect related concepts.

Fourth: Cooperative Learning: This strategy encourages students to learn together in small groups, support each other, and share knowledge. They learn from each other's experiences and perspectives, improving communication, collaboration, and teamwork skills.(Seknum, 2013)

Fifth: Differentiated Learning: This strategy recognizes that each student has different needs and learning styles. Educators provide a variety of learning options, activities, and assessments to meet the individual needs of students, so they can learn more effectively and achieve optimal learning outcomes.

Sixth: Technology-Based Learning: This strategy uses technology to create an interactive and engaging learning environment. Students can access information, use simulations, and collaborate online, expanding learning opportunities and increasing motivation.

Seventh: Higher-Order Thinking Questions: This strategy uses questions that encourage students to think critically, analytically, and creatively. These questions challenge students to analyze information, evaluate arguments, and generate innovative solutions. Overall, understanding the basic concepts of learning will not be perfect if it stops at the definition or process level.(Hasanah et al., 2023)

Eighth: Reflection: This strategy encourages students to reflect on their learning process, identify strengths and weaknesses, and develop more effective learning strategies. Students are encouraged to reflect on their learning experiences, analyze their thinking processes, and set goals to improve their learning abilities in the future.(Sudarti, 2019)

The choice of the right cognitive learning strategy will depend on the learning objectives, student characteristics, and learning context. Educators need to choose strategies that suit the needs and interests of students, and ensure that the strategy supports the development of students' thinking skills optimally. Scientifically, children's cognitive development varies and cannot develop on its own in children. In developing cognitive, teachers must be able to increase children's broad thinking insights. Carrying out various learning approaches is very beneficial for teachers in developing children's cognitive skills, teachers can provide learning that suits children's needs.(Learning et al., 2023)

Cognitive Learning Strategy Steps

Cognitive learning strategies focus not only on what students learn, but also how they learn. The steps in implementing cognitive learning strategies are designed to activate students' thinking processes, encourage them to build deep understanding, and develop higher-order thinking skills.

First, Determine Learning Objectives: The first step is to determine clear and measurable learning objectives. What do students want to achieve through the learning process? Learning objectives should be specific, measurable, achievable,

relevant, and time-bound (SMART). Clear objectives provide direction and focus to the learning process, helping students understand what is expected of them.

The second is Designing Learning Activities: After the learning objectives are determined, the next step is to design appropriate learning activities. These activities should be designed to stimulate students' thinking processes, encourage them to be actively involved in the learning process, and build deep understanding. For example, teachers can use problem-based learning methods, project-based learning, or cooperative learning.

The third is Providing Relevant Learning Materials: The learning materials used in cognitive learning strategies must be relevant to the learning objectives and interesting to students. The learning materials must be presented in a way that is easy to understand and access, and can be in the form of text, images, videos, or simulations. Teachers can use various learning resources, such as textbooks, scientific articles, websites, or educational videos.

Fourth, Guiding and Facilitating the Learning Process: Teachers play an important role in guiding and facilitating students' learning process. They must create a positive and supportive learning environment, encouraging students to ask questions, discuss, and share ideas. Teachers must also provide constructive feedback and help students overcome learning difficulties.

Fifth Evaluating the Learning Process and Outcomes: Evaluation is an important part of cognitive learning strategies. Teachers must evaluate students' learning processes to ensure that they understand the material and develop high-level thinking skills. Evaluation can be done through various methods, such as written tests, presentations, portfolios, or observations.

Sixth Adapting Strategies: Cognitive learning strategies must be flexible and adaptable to students' needs. Teachers must monitor students' progress and adjust learning strategies if necessary. They must pay attention to students' learning styles, learning speeds, and the level of difficulty of the material.

These steps are general guidelines for implementing cognitive learning strategies. Educators can adapt these steps to their needs and learning contexts. The most important thing is to ensure that the learning strategies used encourage students to think critically, creatively, and analytically, and help them build deep understanding and develop higher-order thinking skills. In general, the word strategy means a careful plan of activities to achieve specific goals. In the field of teaching and learning, strategies and techniques are often used interchangeably, both are synonymous, so their explanations are usually associated with the terms approach and method.(Ardiana, 2022)

Implementation of Cognitive Learning Strategies

Imagine a class where students not only learn about forest ecosystems from a textbook, but also get directly involved in solving real problems facing forests. Here is an example of the application of cognitive learning strategies in learning about forest ecosystems:

The first: Determining Learning Objectives: The learning objectives are for students to understand the concept of forest ecosystems, the interactions between their components, and the impact of humans on forest sustainability. They are also expected to develop critical thinking skills, problem solving skills, and effective communication skills. The second: Designing Problem-Based Learning Activities: The teacher provides a scenario about forest damage due to illegal logging and

forest fires. Students are divided into groups and asked to analyze the causes of forest damage, its impact on the environment, and solutions that can be applied. The third: Providing Relevant Teaching Materials: The teacher provides various teaching materials such as forest maps, statistical data on forest damage, videos on the impact of forest fires, and scientific articles on forest conservation efforts. Students can access this information online or through textbooks. The fourth: Guiding and Facilitating the Learning Process: The teacher acts as a facilitator, helping students identify problems, collect information, analyze data, and formulate solutions. They encourage students to think critically, discuss, and share ideas. The fifth: Evaluating the Learning Process and Outcomes: The teacher evaluates the students' learning process through observation, class discussions, and presentations. They assess students' ability to analyze problems, formulate solutions, and present research results. Sixth: Adapting Strategies: Teachers can adapt learning strategies based on students' needs. For example, if students have difficulty analyzing data, teachers can provide additional tutorials or provide simpler case examples.

The application of cognitive learning strategies in forest ecosystem learning helps students to understand complex concepts, develop important skills, and become agents of change for environmental conservation. This strategy opens the door to meaningful learning that has a positive impact on students and the environment.

CONCLUSION

Cognitive learning strategies, an approach that focuses on developing students' thinking skills. This strategy not only focuses on mastering information, but also encourages students to understand how the information can be applied in real life. Cognitive learning strategies emphasize the active process of learning, where students are involved in organizing, interpreting, and connecting new information with the knowledge they already have. This approach also encourages metacognition, which is the ability of students to be aware of and control their own thinking processes.

The main purpose of cognitive learning strategies is to improve the quality of education by focusing on developing students' thinking skills. These strategies help students to build deep understanding, develop higher-order thinking skills, increase motivation and engagement in learning, and prepare them to face future challenges.1 This paper discusses in detail about various cognitive learning strategies, such as problem-based learning, project-based learning, concept maps, cooperative learning, differentiated learning, technology-based learning, higher-order thinking questions, and reflection. Each strategy is explained in detail with examples of its application in various learning contexts.

This journal also discusses the benefits of implementing cognitive learning strategies, including improving the quality of student learning, increasing student motivation and engagement, developing student character, and preparing students to face future challenges. By understanding cognitive learning strategies in depth, educators can create a more effective learning environment, encourage students to think critically and creatively, and prepare them to face future challenges. Cognitive learning strategies are the key to building a young generation that thinks critically, creatively, and innovatively, ready to face future challenges.

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