



Jurnal Profesionalisme Guru

Volume (3) No. 2. June 2026 p. 189-198 ISSN: In Progress

The article is published with Open Access at: <https://journal.maalahiyah.sch.id/index.php/jpg>

Cognitive Learning Strategy

Elwisa Rosinta Simamora, elwisarosintasimamora@gmail.com. UIN Syahada

Padangsidempuan, Indonesia

Romadoni Siregar, romadonisiregarzd@gmail.com. UIN Syahada Padangsidempuan, Indonesia

Abstract: *Processing, storing, and utilizing information effectively. Cognitive learning strategies are learning approaches oriented toward developing students' thinking abilities in understanding information. The implementation of cognitive learning strategies is important in education because it not only focuses on learning outcomes but also on the development of critical, analytical, and creative thinking skills. This study aims to examine the concept, objectives, various forms of learning strategies, and the role of cognitive learning strategies in improving students' thinking abilities and learning outcomes. Cognitive learning strategies are learning approaches oriented toward developing students' thinking abilities in understanding information. This research employs a qualitative approach through a library research method. Data were collected from various sources, including books, scientific journals, articles, and previous studies relevant to the research topic. The data collection technique used documentation, while data analysis was conducted through content analysis. The findings indicate that cognitive learning strategies play a significant role in helping students understand learning materials more deeply, increasing engagement in the learning process, developing higher-order thinking skills, and improving learning outcomes. The appropriate implementation of learning strategies can create a more effective, meaningful, and student-centered learning process that meets the demands of modern education. Therefore, cognitive learning strategies should be optimally applied to support the achievement of quality educational goals.*

Keywords: *Cognitive Learning Strategies; Thinking Skills; Learning Outcomes; Students; Education.*

INTRODUCTION

Education is one of the most important aspects of human life because through education individuals can develop their potential optimally (Fadhilah, 2022). Education does not only function as a means of transferring knowledge from teachers to students, but also plays a role in shaping character, developing skills, and enhancing thinking abilities needed to face various life challenges. In the era of globalization and rapid technological development, education is required to produce human resources who not only possess broad knowledge but also have critical, creative, innovative thinking skills and the ability to solve various problems encountered in everyday life (Hasibuan, 2024).

The learning process is the core of educational activities. The success of education is largely determined by how the learning process takes place both inside and outside the classroom (Ibrahim, 2023). Effective learning is not only oriented toward delivering subject matter but must also actively involve students in the process of acquiring knowledge. Therefore, appropriate learning strategies are needed so that learning objectives can be achieved optimally. Learning strategies are one of the important factors influencing students' success in understanding material, developing thinking skills, and achieving maximum learning outcomes.

One of the strategies that plays an important role in education is cognitive learning strategies. Cognitive learning strategies are approaches that focus on the mental processes that occur within students when receiving, processing, storing, and using information obtained during the learning process. This strategy emphasizes the importance of thinking activities as the basis for acquiring knowledge. From a cognitive perspective, learning is seen as an active process involving the ability to understand, remember, analyze, connect, and use information to solve problems.

Cognitive learning strategies are developed based on cognitive learning theory, which views students not as passive recipients of information but as active individuals who construct their own understanding of the material being studied (Jannah, 2023). Knowledge is not simply transferred from teacher to student but is constructed through thinking processes involving experience, observation, understanding, and reflection. Therefore, cognitive learning strategies position students as the main subjects in the learning process, allowing them to develop their thinking abilities more optimally (Nugroho, 2024).

In current educational practice, various problems related to the learning process are still found. Many students tend to memorize material without deeply understanding its meaning. Learning often emphasizes academic achievement rather than the development of students' thinking abilities. This condition causes students to experience difficulties when faced with problems requiring analysis, evaluation, and problem-solving skills. They are able to recall information provided by the teacher but are less capable of connecting it to real-life situations (Prasetyo, 2023).

These issues indicate that the learning process has not yet fully optimized students' cognitive abilities (Rahmawati, 2024). In fact, cognitive abilities play a very important role in determining learning success. Cognitive abilities include

various aspects such as remembering, understanding, applying, analyzing, evaluating, and creating something new based on existing knowledge. These abilities are essential in facing the rapidly changing development of science and technology.

The development of information and communication technology in the digital era also presents new challenges in education. Students now have broad access to various sources of information through the internet and digital media. Information can be obtained easily and quickly through electronic devices. However, the abundance of information is not always accompanied by the ability to understand, analyze, and use it appropriately. Therefore, students need to be equipped with strong thinking skills to effectively select, process, and utilize information. In this context, cognitive learning strategies are highly relevant because they help students develop the thinking abilities needed in the digital era (Saoutra, 2022).

The implementation of cognitive learning strategies can be carried out through various learning activities that encourage active thinking. Teachers can provide opportunities for students to observe, ask questions, discuss, solve problems, analyze information, and draw conclusions based on their own reasoning. In this way, students do not only receive knowledge passively but also learn how to obtain and use knowledge effectively. Such learning becomes more meaningful because students are directly involved in the knowledge construction process.

In addition, cognitive learning strategies can also increase students' learning motivation. When students are given opportunities to think, discover, and understand concepts independently, they tend to feel more challenged and motivated to learn. Learning is no longer seen as a boring activity but as an engaging process that provides valuable learning experiences. This ultimately improves the quality of learning as well as students' learning outcomes (Siregar, 2023).

In the context of 21st-century education, critical thinking, creativity, collaboration, and communication skills are essential competencies that must be mastered by every student. These competencies cannot develop optimally if the learning process is still dominated by teacher-centered lecture methods (Zulfikar, 2023). Therefore, learning strategies that encourage students to actively think, develop ideas, and solve problems independently or collaboratively are needed. Cognitive learning strategies serve as one alternative to achieve these goals because they are oriented toward the holistic development of students' thinking abilities (Yuliana, 2024).

Based on the explanation above, cognitive learning strategies play a very important role in improving the quality of both learning processes and learning outcomes. These strategies not only help students acquire knowledge but also develop the thinking abilities required to face various life challenges. Therefore, the study of cognitive learning strategies is important to understand their concepts, characteristics, and implementation in education, so that they can contribute to improving educational quality and optimizing students' potential.

METHODS

This study employs a qualitative approach using library research as its research design.

Library research is conducted by collecting, reviewing, and analyzing various literature sources relevant to the research topic. The qualitative approach is used because this study aims to gain an in-depth understanding of cognitive learning strategies, their characteristics, and their implementation in the learning process based on existing theories and previous research findings. Through this approach, the researcher can obtain a comprehensive understanding of cognitive learning strategies as an effort to improve the quality of learning and students' thinking abilities.

The data sources in this study consist of primary and secondary data. Primary data are obtained from various books discussing cognitive learning theory, cognitive learning strategies, educational psychology, and other educational theories relevant to the research focus. Meanwhile, secondary data are obtained from scientific journal articles, previous research studies, conference proceedings, theses, dissertations, and other academic documents related to cognitive learning strategies. The use of various sources aims to strengthen the analysis and obtain broader and deeper information about the research object.

The data collection technique used in this study is documentation. Documentation involves collecting written materials related to the research topic. These documents are then read, understood, recorded, and classified according to the research needs. Through this technique, the researcher obtains data from credible and relevant literature that can serve as the basis for analysis.

After the data are collected, the next step is data processing. The obtained data from various literature sources are first selected based on their relevance to the research focus. The data are then categorized into specific themes such as the concept of cognitive learning strategies, principles of cognitive learning, characteristics of cognitive learning strategies, and their implementation in the learning process. This process is conducted to facilitate the organization and understanding of the collected data.

Data analysis in this study uses content analysis techniques. Content analysis is a method used to systematically and objectively examine and interpret the content of written sources. In the analysis process, the researcher reads and comprehends the collected literature, identifies key concepts, examines relationships among concepts, and draws meanings related to the research focus. The analysis is conducted continuously until a deep understanding of cognitive learning strategies and their application in education is achieved.

To ensure the validity of the data, this study employs source triangulation. Source triangulation is carried out by comparing information obtained from different literature sources, including books and scientific journals. Through this process, the researcher is able to verify the accuracy of the information obtained, thereby improving the validity of the research findings. In addition, the use of credible academic references also enhances the reliability of the study.

Through this research method, it is expected that a clear and comprehensive understanding of cognitive learning strategies can be obtained, ranging from their basic concepts, characteristics, and principles to their implementation in the learning process. Thus, the findings of this study are expected to contribute both theoretically and practically to the development of effective learning strategies that enhance students' thinking abilities and learning outcomes.

RESULTS & DISCUSSION

The Concept of Cognitive Learning Strategies

Etymologically, the word *strategy* originates from the Greek term *strategos*, which means the art or method of a leader in organizing and directing troops to achieve specific goals. In the field of education, strategy is defined as a set of plans, methods, and systematically designed steps used to achieve predetermined learning objectives.

Meanwhile, the term *learning* is derived from the root word “learn,” which is modified into a process designed to assist learners in acquiring knowledge, skills, attitudes, and values. Learning does not only emphasize the delivery of material by teachers but also focuses on students’ active involvement in understanding and developing their knowledge.

The term *cognitive* comes from the Latin word *cognoscere*, which means to know, recognize, or understand. In educational psychology, cognition refers to mental activities that include thinking, remembering, understanding, analyzing, evaluating, problem-solving, and decision-making. The cognitive domain is an essential aspect of education because it is directly related to students’ intellectual abilities.

Based on these etymological meanings, cognitive learning strategies can be defined as systematically designed methods or sets of steps used by educators to help students develop their thinking abilities in acquiring, processing, storing, and applying information so that learning objectives can be achieved optimally (Ananda, 2021).

Cognitive learning strategies emphasize the mental processes that occur within learners. In this approach, students are not only required to memorize information but also to understand the meaning of the material, connect new knowledge with prior experiences, analyze various information, and solve problems. Therefore, cognitive learning is oriented toward developing both lower-order and higher-order thinking skills, such as understanding, applying, analyzing, evaluating, and creating.

According to cognitive learning theory, learning is an active process involving students’ thinking abilities. Knowledge is not simply transferred from teachers to students but is constructed through information processing that occurs within the learners’ minds. Therefore, teachers are expected to implement learning strategies that stimulate students’ thinking activities, such as discussion, problem solving, discovery learning, project-based learning, and problem-based learning (Arifin, 2020).

Thus, cognitive learning strategies are an instructional approach that focuses on developing students’ intellectual abilities through various thinking activities so that they are able to understand, remember, process, and apply knowledge effectively in daily life. This strategy not only aims to improve learning outcomes but also to shape students who are critical, creative, logical, and capable of solving various problems they encounter.

Objectives of Cognitive Learning Strategies

Cognitive learning strategies primarily aim to develop students’ thinking abilities so that they are able to acquire, understand, process, store, and apply knowledge effectively in various situations. These strategies are not only oriented toward mastery of subject matter but also toward the development of intellectual capacities that enable learners to face diverse challenges in everyday life. Through cognitive learning strategies, students are expected to become active, critical, creative, and independent learners.

One of the main objectives of cognitive learning strategies is to optimize

students' thinking skills. In the learning process, students are not passive recipients of information; instead, they are trained to understand, process, and interpret the information they receive. Through various learning activities, students are guided to use their thinking skills to analyze problems, identify relationships between concepts, and draw conclusions based on available facts and data. In this way, logical, systematic, and rational thinking abilities can be maximally developed.

Cognitive learning strategies also aim to help students gain a deep understanding of learning materials rather than merely memorizing them. A strong conceptual understanding enables students to comprehend the meaning of concepts, principles, and theories being studied. When students understand material deeply, they are more likely to retain information for a longer period and apply it in different contexts. In addition, these strategies enhance students' ability to remember and retain information by teaching them how to organize knowledge in ways that make it easier to understand and recall. Well-structured knowledge stored in cognitive schemas is more easily retrieved when needed, resulting in more effective and long-term learning outcomes.

Another important objective of cognitive learning strategies is to develop problem-solving skills. Students are trained to identify problems, gather relevant information, analyze possible solutions, and select the most appropriate decisions. This ability is essential for dealing with challenges in both academic contexts and real-life situations. Alongside this, cognitive learning strategies also aim to enhance critical thinking skills by encouraging students not to accept information passively. Instead, they are guided to evaluate evidence, analyze arguments, identify weaknesses in opinions, and make decisions based on rational and objective considerations. In the same way, creative thinking skills are also developed by encouraging students to generate new ideas, explore innovative approaches, and produce meaningful solutions to various problems.

Cognitive learning strategies further emphasize the importance of connecting prior knowledge with new information. By linking existing experiences and concepts with new learning material, students can build deeper and more meaningful understanding. This process also supports better retention and comprehension of knowledge. In addition, these strategies foster independent learning by encouraging students to plan their study activities, choose appropriate learning strategies, monitor their progress, and evaluate their achievements. This independence helps students become lifelong learners who are capable of continuously developing their knowledge without relying entirely on others.

Moreover, students are trained to improve their decision-making skills by evaluating various alternatives before choosing the most appropriate action. They learn to consider advantages and disadvantages of each option, which is essential in both academic and social life. Cognitive learning strategies also develop analytical and synthetic thinking skills, where students are trained to break down complex problems into simpler parts and then combine various information to form new and meaningful understandings. At the same time, evaluation skills are strengthened by guiding students to assess information, opinions, and outcomes based on specific criteria such as validity, effectiveness, and relevance.

Another important objective is to optimize students' intellectual potential.

Every learner has different cognitive abilities, and cognitive learning strategies aim to stimulate these abilities through meaningful learning experiences. Teachers play a crucial role in facilitating learning activities that encourage intellectual development so that students can achieve their best academic performance according to their individual potential. These strategies also help students build effective learning habits, such as managing study time, organizing notes systematically, summarizing learning materials, and applying suitable learning techniques. Such habits contribute significantly to improving the quality of learning outcomes.

Finally, cognitive learning strategies are designed to prepare students for future challenges in the era of globalization and rapid technological development. Students are expected to develop flexible, critical, and adaptive thinking skills so they can respond to changes, filter information wisely, and apply knowledge effectively in solving real-world problems. Ultimately, all of these objectives contribute to improving students' learning outcomes. Learning that involves active cognitive processes results in deeper understanding, better application of knowledge, and higher academic achievement. Thus, students are not only able to achieve good academic results but also develop intellectual competencies that are essential for their everyday lives.

Characteristics of Cognitive Learning Strategies

The characteristics of cognitive learning strategies fundamentally focus on the mental processes that occur within learners during learning activities, rather than merely emphasizing observable outcomes or external behaviors (Sanjaya, 2022). In this approach, learning is understood as an active process in which students process information, connect new knowledge with prior understanding, and construct meaning gradually through meaningful learning experiences. Therefore, cognitive learning places students as the central subjects who actively construct their own knowledge.

One important characteristic of cognitive learning is its strong emphasis on students' thinking processes. Teachers do not merely focus on correct answers, but also on how students arrive at those answers. Cognitive activities such as observing, understanding, analyzing, comparing, classifying, and drawing conclusions are essential components of the learning process. As a result, learning is not limited to memorization but prioritizes deep conceptual understanding.

In addition, cognitive learning is characterized by the process of information processing within students' cognitive structures. Information is not directly accepted as it is, but is instead selected, organized, and connected with previously acquired knowledge. This process makes learning more meaningful and enhances long-term retention. The better students organize information, the stronger their conceptual understanding becomes.

Another characteristic is the active involvement of students in the learning process. Students are not positioned as passive recipients of information but as active participants who seek, discover, and process knowledge. In this context, teachers act as facilitators who guide and support students' thinking processes rather than serving as the sole source of knowledge.

Cognitive learning is also constructivist in nature, meaning that knowledge is constructed by learners themselves through learning experiences. Each individual may develop different understandings even when learning the same material, as each learner brings different prior knowledge and experiences. This makes learning more personalized and meaningful (Aisyah, 2023).

Furthermore, cognitive learning strongly emphasizes higher-order thinking skills such as analysis, synthesis, evaluation, and problem-solving. Students are encouraged not only to understand facts but also to connect concepts and apply them in real-life situations. In this way, learning becomes more relevant to everyday life and real-world contexts.

Another characteristic is the use of various learning strategies that support cognitive development, such as discussion, problem-solving, discovery learning, and project-based learning. These strategies are designed to stimulate students' mental activities so that they become more active, critical, and creative in understanding learning materials.

Thus, cognitive learning strategies can be understood as a learning process that emphasizes students' mental activities in processing information, constructing knowledge, and developing deep, active, and meaningful thinking skills in order to achieve higher levels of understanding.

CONCLUSION

Cognitive learning strategies are an instructional approach that emphasizes students' thinking processes in understanding, processing, and using information. This learning approach does not only focus on final outcomes such as grades or correct answers, but rather prioritizes how students construct their knowledge through active and meaningful mental engagement.

In terms of its objectives, cognitive learning strategies are directed toward the holistic development of students' thinking abilities, ranging from understanding, remembering, analyzing, evaluating, to problem-solving skills. In addition, these strategies aim to enhance critical and creative thinking, foster independent learning, and help students connect prior knowledge with new information so that learning becomes more meaningful and long-lasting.

In terms of characteristics, cognitive learning is marked by active student involvement in the learning process, a strong emphasis on thinking processes, and a constructivist approach in which knowledge is built by learners themselves. Teachers function as facilitators who guide students' thinking processes rather than acting as the sole source of information. This approach also emphasizes the use of higher-order thinking skills as well as various learning strategies such as problem-solving, discussion, and discovery learning.

Thus, it can be concluded that cognitive learning strategies play an essential role in education because they are capable of shaping students who are not only academically competent but also critical, creative, independent, and able to systematically and effectively address real-life problems.

REFERENCES

Aisyah, Siti dan Ahmad Fauzi. (2023). "Penerapan Strategi Pembelajaran

Kognitif dalam Meningkatkan Hasil Belajar Siswa." *Jurnal Pendidikan Dasar*, Volume 8, Nomor 2, hlm. 115–126.

Ananda, Rusydi. (2021). *Perencanaan Pembelajaran*. Medan: Perdana Publishing.

Arifin, Zainal. (2020). *Evaluasi Pembelajaran*. Bandung: PT Remaja Rosdakarya.

Fadilah, Nur dan Rudi Hartono. (2022). "Efektivitas Strategi Pembelajaran Inkuiri dalam Meningkatkan Kemampuan Berpikir Kritis." *Jurnal Ilmu Pendidikan*, Volume 14, Nomor 1, hlm. 45–57.

Hamalik, Oemar. (2019). *Proses Belajar Mengajar*. Jakarta: Bumi Aksara.

Hasibuan, Murniati dan Syarifuddin Lubis. (2024). "Strategi Pembelajaran Kooperatif dan Pengaruhnya terhadap Prestasi Belajar." *Jurnal Pendidikan Indonesia*, Volume 10, Nomor 1, hlm. 66–79.

Ibrahim, Muhammad dan Nila Sari. (2023). "Implementasi Pembelajaran Berbasis Proyek pada Pendidikan Abad 21." *Jurnal Inovasi Pendidikan*, Volume 7, Nomor 2, hlm. 88–101.

Jannah, Fitri dan Abdul Rahman. (2022). "Peran Strategi Pembelajaran dalam Meningkatkan Motivasi Belajar Peserta Didik." *Jurnal Pendidikan Humaniora*, Volume 9, Nomor 2, hlm. 130–142.

Majid, Abdul. (2021). *Strategi Pembelajaran*. Bandung: PT Remaja Rosdakarya.

Mulyasa, E. (2020). *Menjadi Guru Profesional*. Bandung: PT Remaja Rosdakarya.

Nugroho, Aris dan Dian Pratiwi. (2024). "Pengaruh Strategi Pembelajaran Kontekstual terhadap Pemahaman Konsep Siswa." *Jurnal Kajian Pendidikan*, Volume 12, Nomor 1, hlm. 54–68.

Prasetyo, Bambang dan Rizki Amelia. (2023). "Strategi Pembelajaran Digital dalam Meningkatkan Kualitas Pembelajaran." *Jurnal Teknologi Pendidikan*, Volume 11, Nomor 2, hlm. 144–156.

Rahmawati, Siti dan Dedi Kurniawan. (2024). "Pendekatan Kognitif dalam Pembelajaran untuk Mengembangkan Higher Order Thinking Skills." *Jurnal Pendidikan Modern*, Volume 6, Nomor 1, hlm. 23–37.

Sanjaya, Wina. (2022). *Strategi Pembelajaran Berorientasi Standar Proses Pendidikan*. Jakarta: Kencana.

Saputra, Andi dan Rina Marlina. (2022). "Analisis Strategi Pembelajaran Aktif

dalam Meningkatkan Partisipasi Siswa.” *Jurnal Edukasi*, Volume 8, Nomor 3, hlm. 201–214.

Siregar, Taufik dan Nur Azizah. (2023). “Penerapan Strategi Pembelajaran Berbasis Masalah pada Mata Pelajaran Pendidikan Agama Islam.” *Jurnal Tarbiyah*, Volume 15, Nomor 2, hlm. 97–110.

Yuliana, Desi dan Ahmad Syukri. (2024). “Strategi Pembelajaran dan Tantangan Pendidikan di Era Digital.” *Jurnal Pendidikan dan Kebudayaan*, Volume 13, Nomor 1, hlm. 72–85.

Zulfikar, M. dan Rahayu Fitri. (2023). “Efektivitas Strategi Pembelajaran Kolaboratif terhadap Kemampuan Pemecahan Masalah Siswa.” *Jurnal Penelitian Pendidikan*, Volume 9, Nomor 2, hlm. 118–131.