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THEORETICAL REVIEW OF THE INTEGRATIVE MODEL: DEVELOPMENT OF A LITERACY LEARNING MODEL BASED ON COGNITIVE STRATEGY MAPPING

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Abstrak

This study is motivated by the importance of literacy as a fundamental skill in learning and the role of effective cognitive strategies in enhancing students' reading abilities and comprehension. Literacy is not merely the ability to read, but also involves complex cognitive processes that can be supported through the application of appropriate cognitive strategies. Therefore, this study aims to examine integrative theories in order to develop a literacy learning model based on Cognitive Strategy Mapping, which is expected to provide a systematic and structured approach to literacy instruction. The research method employed is a theoretical study using a critical literature review of various theories and models of literacy learning, along with a comprehensive analysis of the concept of Cognitive Strategy Mapping. The main findings of this study identify key components of an integrative literacy learning model that incorporates cognitive strategy mapping as a tool to facilitate students' processes of understanding and organizing information. The implications of this study recommend the model as a conceptual framework that can be used in curriculum development and in designing more effective and targeted literacy learning strategies across different educational levels.

INTRODUCTION

Reading literacy is a fundamental skill that plays a crucial role in the context of modern education (Rejeki & Pangesti, 2024). In today's information age, students' ability to comprehend, interpret, and evaluate texts is key to achieving both academic success and social competence. Modern education requires learners not only to be able to read mechanically but also to read critically and reflectively. Strong reading literacy enables students to access and manage information effectively across various fields of

knowledge. Therefore, reading literacy must be developed through systematic approaches that align with students' cognitive development.

However, field observations indicate that students' use of cognitive strategies in reading literacy instruction remains relatively low (Pambudi, 2022). Many students rely solely on surface-level reading skills without applying higher-order thinking strategies such as summarizing, connecting new information to prior knowledge, or visualizing the content of texts. This inability results in poor comprehension and low student engagement in the reading process. Such conditions highlight a gap between the cognitive skills that should be fostered and the learning practices that take place in the classroom. Thus, greater attention must be given to strengthening cognitive strategies in literacy instruction.

Furthermore, the limited availability of literacy learning models (Arrosyad & Nugroho, 2021) that explicitly integrate cognitive strategies has become an inhibiting factor in optimizing students' literacy skills. Most existing models tend to be procedural in nature and do not provide sufficient space for students to develop higher-order thinking skills during reading. Teachers also often lack concrete guidance on how to systematically and practically teach cognitive strategies. As a result, literacy learning processes in schools have not fully supported the development of independent and strategic readers. This condition reinforces the need for the development of literacy learning models based on cognitive strategy mapping.

A literacy learning model based on cognitive strategy mapping can serve as an innovative solution to address these challenges. Cognitive strategy mapping is an approach that emphasizes the identification, visualization, and application of thinking strategies during the reading process. This approach helps students become aware of their own thinking processes (metacognition) (Lestari et al., 2019) and select appropriate strategies to achieve deep text comprehension (Faridah et al., 2023). Through an integrative model designed both theoretically and empirically, students are guided to organize information, build connections between ideas, and strengthen understanding through visualization techniques. Thus, this model is expected to optimize the reading learning process, making it not only mechanistic, but also reflective and strategic.

This study aims to examine and develop an integrative model of literacy instruction based on cognitive strategy mapping that can be effectively implemented in Indonesian language learning at the junior high school level. A theoretical review is conducted to formulate the main components of the model, such as the stages of strategy application, mapping techniques, and the teacher's role in facilitating cognitive strategies. Furthermore, this model will be developed by considering students' needs and characteristics, and its effectiveness will be tested in improving reading literacy skills. The results of this study are expected to contribute to the innovation of more effective and applicable literacy learning models. Therefore, this research is essential in addressing literacy challenges in modern education, which demands that students think critically and strategically.

The research problem in this study focuses on investigating the characteristics of the integrative model in literacy instruction based on cognitive strategy mapping. This model is developed to respond to the challenges in literacy learning that require the systematic integration of cognitive strategies. A thorough understanding of the model's characteristics is necessary to ensure that its implementation can be adapted to the needs

of students at various levels of reading proficiency. In addition, examining the model's characteristics can reveal the strengths and weaknesses of the integrative approach compared to conventional literacy teaching approaches. Therefore, it is important to analyze in depth the structure, distinctive features, and core principles of the integrative model.

The subsequent research questions concern the identification of the main components and the relationships among elements within the literacy instruction model based on cognitive strategy mapping. The investigation of these components includes elements such as the cognitive strategies employed by students, the instructional tools that support them, and the teacher's role as a facilitator in the strategy mapping process. The relationships among these elements need to be comprehensively understood in order to determine how the flow of interaction and synergy among the parts can form an effective instructional system. By understanding these inter-element relationships, model development can be carried out in a structured manner and grounded in actual classroom needs. This study will explore how each component is interconnected to create meaningful, student-centered literacy instruction.

Based on these research problems, this study seeks to build a strong theoretical foundation for the development of a literacy instruction model based on cognitive strategy mapping. The focus on the model's characteristics, as well as its components and their relationships, serves as the basis for designing adaptive and contextual learning strategies. These research problems also serve as a reference for determining research methods and data analysis techniques relevant to the study's objectives. The findings of this investigation are expected to provide conceptual contributions to the development of more innovative literacy instruction models. In addition, these research problems open avenues for further studies to empirically test the effectiveness of the model in real educational settings.

The objective of this study is to describe and examine relevant theories in constructing a literacy learning model based on cognitive strategy mapping. This research aims to explore the conceptual foundations that support the integration of literacy theories and cognitive strategies within the context of language learning. The theoretical review includes an analysis of literacy learning approaches, cognitive theories, and previously developed integrative learning models. The researcher also identifies the connections between cognitive strategies such as chunking, elaboration, and information organization, and the enhancement of text comprehension in literacy learning. The findings from this theoretical review will provide a strong foundation for designing a systematic and contextual literacy learning model through a cognitive strategy mapping approach.

This study offers significant theoretical contributions to enriching the body of knowledge on the development of learning models based on cognitive strategies. Through an in-depth review of integrative models and the application of cognitive strategy mapping, this research proposes a new conceptual framework that bridges cognitive theory and literacy learning practice. The model developed not only refers to general strategies but also identifies students' underlying patterns of thinking in the process of text comprehension. This expands our understanding of how students mentally manage information during reading activities. The study strengthens the theoretical basis for developing literacy learning approaches that focus on students' cognitive processes.

Practically, this research contributes as a foundation for the development of literacy learning tools that are adaptive to students' needs. The findings can be utilized to design learning modules that accommodate variations in students' cognitive strategies in understanding texts. The cognitive strategy mapping approach enables teachers to identify the specific strengths and weaknesses of the strategies employed by students. Through adaptive learning tools (Birriy et al., 2020), the learning process can become more responsive and personalized, thereby enhancing the effectiveness of literacy instruction in the classroom. Therefore, the findings of this study are crucial in supporting student-centered innovations in literacy learning.

RESEARCH METHODOLOGY

This study is a qualitative research employing a *library research* approach (Safarudin et al., 2023) combined with theoretical model analysis. This approach is used to review various relevant literature sources in order to build the conceptual foundation for a literacy learning model based on cognitive strategy mapping. The literature review focuses on theories related to cognitive strategies, reading literacy, and instructional models that support the integration of both. This research is exploratory and conceptual in nature, enabling the researcher to construct a robust theoretical framework as the basis for model development. Through this approach, the study is centered on an in-depth analysis of existing scientific concepts, which are then synthesized to produce an innovative and applicable model.

In its development process, this study adopts an initial stage of the *design and development model* technique (Hidayat & Muhamad, 2021), which includes needs analysis and conceptual model design. The needs analysis phase is conducted by examining the requirements for effective literacy learning that are relevant to students' cognitive strategies. These needs data are obtained through critical interpretation of previous research findings and current curriculum documents. Subsequently, the conceptual design phase involves drafting the initial model design that integrates cognitive strategy mapping into literacy learning. This draft is then evaluated theoretically to ensure coherence among components and alignment with the principles of cognitive strategy-based instruction.

The data sources for this study are drawn from various scholarly literature relevant to cognitive strategies and literacy. The literature used includes scientific articles published in reputable national and international journals, reference books discussing learning theories, as well as documents from meta-analysis and systematic review studies. Secondary data sources are selected carefully based on their relevance, currency, and the credibility of their publishers to ensure the reliability of the information. These secondary data are utilized to identify, classify, and synthesize various models and approaches to cognitive strategies in the context of reading literacy. Thus, the secondary data sources serve as a strong theoretical foundation for formulating and developing an integrative literacy learning model based on cognitive strategy mapping.

The data analysis technique in this study is conducted through a *content analysis* approach of various literature related to cognitive strategies and literacy learning models. This analysis involves an in-depth examination of reference books, journal articles, previous research findings, and curriculum documents containing principles of literacy instruction and cognitive strategies. The objective of the content analysis is to

identify key elements related to the application of cognitive strategies in literacy learning. The analysis process is carried out by classifying and interpreting themes, concepts, and significant findings emerging from the various sources. The results of this analysis serve as the basis for designing the theoretical synthesis and the initial learning model.

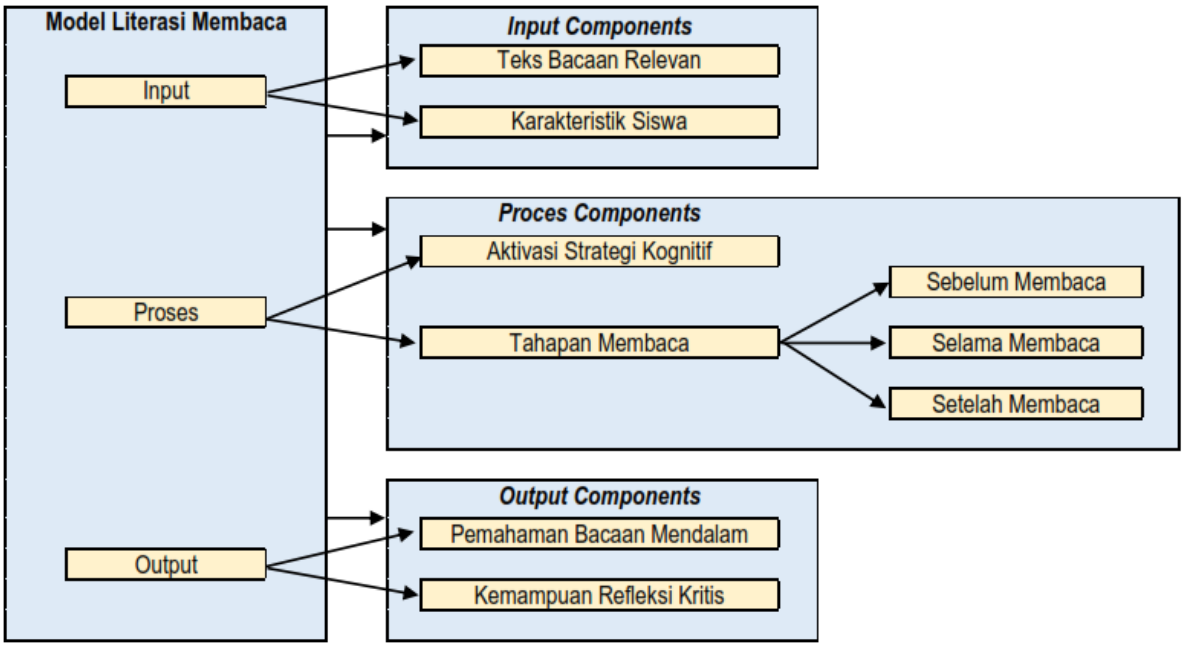
Furthermore, a theoretical synthesis analysis is conducted to integrate the principles of cognitive strategies into the design of the integrative learning model. The synthesis aims to combine various theories and approaches of cognitive strategies, such as chunking, bridging, spatial, and multipurpose strategies, into a systematic and applicable literacy learning model structure. The synthesis process is performed by comparing the alignment of concepts derived from the analyzed literature and identifying aspects that can complement each other. In this way, the theoretical synthesis facilitates the formation of a model framework that is not only theory-based but also considers learner needs and the context of literacy learning. The results of this synthesis form the conceptual basis for developing the integrative literacy learning model based on cognitive strategy mapping.

The final step in the data analysis technique involves the use of a *deductive modeling* approach to construct the initial framework of the learning model. This approach is undertaken by formulating the model framework based on the theoretical principles that have been synthesized previously, followed by systematically composing the model components in a deductive manner. The initial model is designed through the formulation of learning objectives, the cognitive strategies to be used, learning scenarios, and success indicators. Each component of the model is developed logically from the synthesis results and its structural validity is analyzed based on the principles of effective literacy instruction. This initial model framework will serve as the foundation for further testing through empirical studies in the subsequent development stages.

RESULTS AND DISCUSSION

Conceptual Framework of the Model

The literacy learning model based on *Cognitive Strategy Mapping* was developed as a conceptual framework that systematically integrates cognitive strategies into the reading instruction process. This model is visualized in the form of a diagram consisting of three main components: input, process, and output, which are interconnected within an integrated learning sequence. The input consists of relevant reading texts as well as the characteristics of students as learning subjects who possess diverse backgrounds and cognitive abilities. The process involves the activation of cognitive strategies that are adapted to the stages of reading—before, during, and after reading. The output of this model is the achievement of deep reading comprehension and the development of critical reflection skills regarding the content of the text.



The input component in this model plays a crucial role in determining the success of the cognitive processes that occur during reading. The texts used are selected based on structural complexity, type of information, and context that align with students' cognitive developmental level. Students as input are also considered based on their learning styles, prior reading experiences, as well as their levels of motivation and metacognitive awareness. The alignment between the text and student characteristics forms the basis for activating effective and targeted cognitive strategies. Accordingly, appropriate input facilitates the cognitive processes that take place in learning.

The process component of this model emphasizes the importance of consciously and purposefully activating cognitive strategies by students. This process involves the use of strategies such as chunking, bridging, spatial organizing, and multipurpose strategies, which are applied flexibly according to the stages of reading. Strategy activation is facilitated through teacher guidance as well as habituation in reading tasks that require students to engage in active thinking. The use of graphic organizers, concept maps, and linking new information with prior knowledge are distinctive features of this process. This process is dynamic and reflective, adapting to the emerging cognitive needs throughout learning.

The output component represents the expected result of cognitive strategy activation in this model. The output encompasses two main aspects: deep reading comprehension and reflective ability regarding the content of the text. Reading comprehension is reflected in students' ability to identify main ideas, draw conclusions, and critically evaluate the content of the reading. Reflective ability is demonstrated through students' responses to the text, both oral and written, which connect the text with personal, social, or academic contexts. This output serves as an indicator of the success of cognitive strategy application in reading literacy instruction.

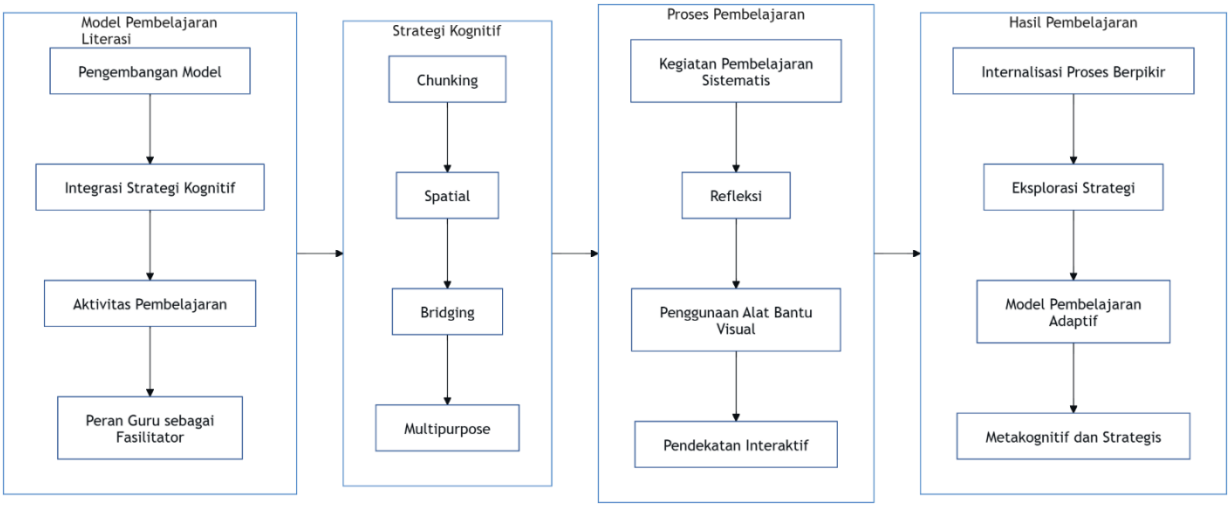
This model consists of three main stages: pre-reading, during reading, and post-reading, each of which is characterized by dominant cognitive strategies. The pre-reading stage activates bridging strategies, such as making predictions, linking the topic

with prior knowledge, and formulating reading goals. The during reading stage emphasizes chunking and spatial strategies, such as creating partial summaries, noting main ideas, and using diagrams or tables to organize information. The post-reading stage relies more on multipurpose strategies, such as developing reflective questions, composing syntheses, and writing critical responses to the text. Each stage supports the others and forms a comprehensive cycle of reading comprehension.

Thus, the conceptual framework of this model offers an integrative approach to literacy instruction that focuses on empowering students' cognitive abilities. Through the appropriate activation of strategies at each reading stage, students not only comprehend the text but also develop critical and reflective thinking skills. This model is also flexible for application across various types of texts and levels of student ability. The presence of this model is expected to serve as a guide for teachers in designing more effective and meaningful reading instruction. Further development can be undertaken by adapting this model to cross-disciplinary or project-based learning contexts.

Construction of Interrelationships Between Components

The research findings indicate that the integration between cognitive strategies as internal processes and learning activities as external processes serves as the key element in the development of a literacy learning model based on cognitive strategy mapping. Cognitive strategies such as chunking information, using concept maps (spatial), bridging new information with prior knowledge, and employing various cognitive tactics (multipurpose) have been shown to be effectively fostered through systematically designed learning activities. Learning activities that include text discussions, analytical assignments, and critical reading practices are capable of meaningfully activating students' internal thinking processes. This integration is also evident in students' engagement in selecting cognitive strategies that align with their reading purposes and the types of texts they encounter. Thus, the reciprocal relationship between students' internal processes and external stimuli (learning activities) shapes a more adaptive literacy learning pathway. This integrative learning model reinforces the position of cognitive strategies not as hidden processes, but as active components of learning interactions that can be mapped and developed.



Furthermore, the construction of this relationship indicates that cognitive strategies do not operate in isolation but are influenced by the learning context shaped by the teacher and the learning environment. Teachers who design activities by mapping cognitive strategies enable students not only to consciously apply specific strategies but also to understand the rationale behind choosing those strategies. With the aid of visual tools such as charts, concept maps, and strategy reflection tables, students are able to systematically organize their learning experiences. In this process, the interaction between cognitive strategies and learning activities becomes stronger, as students not only read and comprehend texts but also internalize the thinking processes employed during reading. This demonstrates a continuity between thinking processes and learning actions facilitated by clear and structured strategies. These findings reinforce the assumption that mapping cognitive strategies can serve as a foundation for literacy learning models oriented towards the development of students' metacognition.

The role of the teacher as a facilitator is a critical element in ensuring that cognitive strategy mapping can be implemented effectively and contextually. Teachers do not merely act as transmitters of content but as guides who direct students to recognize, select, and apply cognitive strategies that suit their reading needs. In practice, teachers use guiding questions, reflective tasks, and class discussions to explore students' thinking processes. This approach helps students develop metacognitive awareness of how they comprehend texts and overcome reading difficulties. Through teacher guidance, students are encouraged to connect prior learning experiences with new strategies introduced, thereby creating continuity in their thinking processes. Thus, the teacher plays a central role in building a bridge between students' internal strategies and the learning activities they encounter in class.

These findings also emphasize that the success of an integrative model relies heavily on the consistency of the teacher in facilitating students' thinking processes through systematic and reflective approaches. Teachers need to understand students' cognitive profiles in order to provide appropriate strategic support, for example, by identifying students who require practice in constructing concept maps or those who need assistance in formulating critical questions. In addition, teachers are expected to create a learning space that supports the open exploration of strategies, whether through group work, individual practice, or presentations of strategy mapping outcomes. This process positions cognitive strategies not merely as learning aids but as an integral part of students' evolving learning identities. The integrative model shows that literacy learning can become more personal, reflective, and strategic when teachers and students collaboratively map and manage cognitive strategies in a planned manner. Therefore, the implementation of literacy learning models based on cognitive strategy mapping requires the active role of teachers in guiding students' cognitive processes towards achieving higher levels of literacy.

Relevance of the Model to Literacy Theories

The Integrative Model developed in this study demonstrates strong relevance to contemporary literacy theories that emphasize the integration of cognitive, metacognitive, and contextual aspects in the reading process. Literacy theories such as *New Literacy Studies* and *Multiliteracies* highlight the importance of understanding texts as a socio-cognitive process involving complex thinking strategies (Papen, 2023). The transactional literacy model proposed by Rosenblatt, for example, stresses the

interaction between reader and text—an element also accommodated in the Integrative Model through cognitive strategy mapping that guides students in actively mapping their thought processes (Marhaeni, 2016). In addition, Freire's critical literacy theory contributes by positioning the reader as an active and reflective subject in relation to the text's content (Chalaune, 2021). The Integrative Model aligns with this perspective by providing space for students to construct both personal and social meanings through explicit strategies (Li & Lajoie, 2022). Thus, the model does not stand apart from established literacy theories but rather extends and deepens their application within classroom learning contexts.

Compared to traditional literacy models such as the bottom-up or top-down approaches (Baha, 2017), the Integrative Model offers a more comprehensive approach by combining various levels of information processing. The bottom-up model focuses solely on symbol recognition and word decoding, while the top-down model relies more heavily on the reader's background knowledge; however, both have yet to give sufficient attention to making thinking processes explicit (Suraprajit, 2019). Through cognitive strategy mapping, the Integrative Model incorporates the strengths of both models by providing an explicit framework on how readers process information progressively and consciously. For instance, the use of chunking, bridging, and imagery strategies within this model not only facilitates text comprehension but also stimulates the development of higher-order thinking skills. The model also encourages students to evaluate and reflect on the strategies they employ—a practice often overlooked in conventional models. Therefore, the Integrative Model is not only theoretically relevant but also offers innovation in literacy teaching practices that are more adaptive to the needs of 21st-century learners (Eslit, 2023).

The primary strength of the Integrative Model lies in its ability to explicitly accommodate students' thinking needs through structured stages of strategy use. In this model, students do not merely read texts; they are guided to understand how they read, what they think while reading, and how particular strategies assist them in comprehending information (Banditvilai, 2020). This process reinforces metacognitive awareness, which is essential for deep literacy learning. By presenting strategies in the form of cognitive maps, students can more easily perceive connections between ideas, link new information with prior knowledge, and visually organize their understanding (Muhidin & Doriza, 2024). This aligns with the *visible thinking* approach, which is believed to enhance the quality of thinking and learning engagement (Ritchhart & Church, 2020). Therefore, this model excels in bridging the gap between conceptual understanding and actual reading practices in the classroom.

Moreover, the Integrative Model is responsive to students' individual needs by offering flexibility in the selection and application of reading strategies. Each student has different learning strategy preferences, and this model allows them to choose strategies that best suit their cognitive styles and the characteristics of the texts they encounter. In practice, students can be guided to recognize their own reading difficulties and select appropriate strategies to address them, such as creating concept maps for expository texts or using analogies to understand fiction. This demonstrates that the Integrative Model is not rigid but provides room for adjustments based on classroom dynamics and student characteristics. The integration of this aspect makes the model more adaptive compared to other literacy models, which tend to be uniform and less contextualized. Thus, this strength indicates that the Integrative Model excels not only

in theoretical terms but also in its applicability within heterogeneous classroom contexts.

Implications of Model Implementation

The integrative model based on *cognitive strategy mapping* holds significant potential for application in the teaching of Indonesian language, English, and other text-based subjects. This model enables students to develop deeper abilities in understanding, organizing, and representing information within texts. In Indonesian language instruction, this strategy can be utilized to strengthen reading comprehension skills, analyze text structures, and develop logical arguments. In English language learning, the model can also support mastery of strategies for reading narrative and expository texts through the visualization of concepts and inter-idea relationships. Even in other subjects such as Social Studies or Science, cognitive strategy mapping assists students in systematically organizing complex concepts and facts. Thus, this model is interdisciplinary in nature and relevant for enhancing literacy competencies across various subjects.

This integrative model is also highly aligned with the spirit of the *Merdeka Curriculum*, which emphasizes competency strengthening, differentiated instruction, and formative assessment. The *Merdeka Curriculum* encourages teachers to provide space for students to choose learning methods that suit their styles and needs, while emphasizing meaningful learning. The model aligns with this approach by offering flexibility in cognitive strategies according to individual student preferences. The application of cognitive strategy mapping further strengthens formative assessment, as teachers can monitor students' thinking processes through the visual products of their strategies. Through cognitive strategy mapping, teachers can gain richer insights into how students comprehend texts and address reading difficulties. Therefore, this model can serve both as a diagnostic tool and as a means of enhancing learning that is in harmony with the principles of the *Merdeka Curriculum*.

In project-based learning contexts, this model can be used to support students' critical and creative thinking processes in constructing text-based projects. Students can apply chunking strategies to organize project information, bridging strategies to connect ideas across topics, and visual strategies to design concept-based outputs. This mapping process can be integrated into project tasks such as writing research reports, preparing scientific presentations, or composing argumentative papers. Teachers can facilitate the use of this model during the exploration and data synthesis phases of projects. In addition to strengthening content comprehension, this model also aids students in planning and reflecting on their own learning processes. Accordingly, this model supports the implementation of comprehensive and structured project-based learning.

In differentiated instruction, this model provides alternative learning strategies that can be adapted to students' needs based on their learning profiles, interests, and academic readiness. Teachers can design cognitive strategy mapping activities with a variety of approaches—visual, verbal, or kinesthetic—according to students' characteristics. Students with a visual learning style may benefit from concept maps, while verbal learners can produce reflective narratives about their thinking processes. The model enables teachers to offer more flexible strategy choices and provide more targeted feedback. The application of this model also promotes learner autonomy, as students are trained to recognize the best ways for them to understand texts. Thus, the model supports the implementation of inclusive and adaptive differentiated learning.

Practically, implementing this model requires accompanying teacher training on various cognitive strategies and ways to facilitate strategy mapping in the learning process. Teachers need to be equipped with an understanding of how to introduce and train students in the use of strategies such as elaboration, chunking, visualization, and concept linking. The initial stages of implementation can begin with integration into reading or writing tasks, then be expanded to

cross-subject projects. In addition, the use of learning media such as cognitive strategy worksheets, digital tools, or interactive mapping templates is necessary. Reflection activities and classroom discussions about the strategies used are also important to enhance students' metacognitive awareness. With proper planning and support, this model can become an integral part of daily teaching practice.

The application of this integrative model also opens up opportunities for further research on the effectiveness of cognitive strategies in improving student learning outcomes and literacy. Quantitative studies could be conducted to measure the model's impact on text comprehension, critical thinking skills, or overall academic performance. On the other hand, qualitative research could explore students' and teachers' experiences in applying these strategies, as well as challenges that may arise in real classroom contexts. The findings of such research can strengthen both the theoretical and practical foundations of model development and serve as a reference for designing literacy-based learning policies. With strong empirical evidence, this model could be more widely recommended for curriculum development and teacher training initiatives. Therefore, the development and implementation of this model is not only pedagogically relevant but also strategic in supporting literacy- and critical-thinking-based educational transformation.

CONCLUSION

The literacy learning model based on cognitive strategy mapping developed in this study integrates various key cognitive strategies systematically within each stage of the reading process. These strategies include information grouping (chunking), visual mapping (spatial mapping), linking information (bridging), and the use of multi-purpose strategies such as elaboration and mnemonics. Each strategy is appropriately positioned in the pre-reading, while-reading, and post-reading stages, thereby forming a coherent and mutually supportive learning sequence. This integration aims to strengthen students' thinking processes in actively understanding, processing, and reflecting on the content of the reading materials. Thus, the model is not only theoretical but also applicable in supporting students' literacy skills in a holistic manner. The findings of this development indicate that cognitive strategy mapping can enhance the effectiveness of literacy learning through a structured approach that is oriented toward students' thinking processes.

This model is designed to be flexible, adaptive, and responsive to the diverse cognitive needs of students. Its flexibility allows teachers to adjust the application of strategies according to the characteristics of the text and the students' proficiency levels. Its adaptiveness is reflected in the model's ability to respond to classroom dynamics and changes in students' learning needs in real time. In addition, the model emphasizes the importance of mapping students' thinking processes to facilitate deeper and more reflective literacy learning. Accordingly, this model can serve as a reference for the development of teaching materials as well as a guideline for literacy teacher training. Overall, these findings reinforce the argument that integratively designed cognitive strategies can serve as a strong foundation for developing effective and contextual literacy learning models.

BIBLIOGRAPHY

Arrosyad, M. I., & Nugroho, F. (2021). Pengembangan Model Pembelajaran Membaca dan Numerasi di Tengah Evolusi Konsep Literasi. *Jurnal Basicedu*, *5*(6), 6378–6384.

Baha, D. O. A. (2017). Reading Models: A Review of the Current Literature. *International Journal of English Literature and Social Sciences*, *2*(3), 44–49.

https://doi.org/10.24001/ijels.2.3.6
Banditvilai, C. (2020). The Effectiveness of Reading Strategies on Reading Comprehension. *International Journal of Social Science and Humanity*, 46–50. https://doi.org/10.18178/ijssh.2020.V10.1012
Barak, M., & Levenberg, A. (2016). A Model of Flexible Thinking in Contemporary Education. *Thinking Skills and Creativity*, *22*, 74–85. https://doi.org/10.1016/j.tsc.2016.09.003
Birriy, A. F., Indahwati, N., & Nurhasan, N. (2020). Pengembangan Perangkat Pembelajaran Pendidikan Jasmani Adaptif Permainan Bocce Berbasis PBL Bagi Down Syndrome untuk Mengajarkan Keterampilan Motorik dan Berinteraksi Sosial. *JOSSAE (Journal of Sport Science and Education)*, *5*(2), 94–103.
Cahyani, N., Hutagalung, E. N. H., & Harahap, S. H. (2024). Berpikir Kritis Melalui Membaca: Pentingnya Literasi Dalam Era Digital. *IJEDR: Indonesian Journal of Education and Development Research*, *2*(1), 417–422. https://doi.org/10.57235/ijedr.v2i1.1795
Chalaune, B. S. (2021). Paulo Freire's Critical Pedagogy in Educational Transformation. *International Journal of Research -GRANTHAALAYAH*, *9*(4), 185–194. https://doi.org/10.29121/granthaalayah.v9.i4.2021.3813
DeSutter, D., & Stieff, M. (2017). Teaching Students to Think Spatially Through Embodied Actions: Design Principles for Learning Environments in Science, Technology, Engineering, And Mathematics. *Cognitive Research: Principles and Implications*, *2*(1), 22. https://doi.org/10.1186/s41235-016-0039-y
Eppler, M. J. (2006). A Comparison between Concept Maps, Mind Maps, Conceptual Diagrams, and Visual Metaphors as Complementary Tools for Knowledge Construction and Sharing. *Information Visualization*, *5*(3), 202–210. https://doi.org/10.1057/palgrave.ivs.9500131
Eslit, E. (2023). *21st Century Teaching: Updates, Challenges, and Best Practices*. https://doi.org/10.13140/RG.2.2.21864.65284
Faridah, S., Saputra, R. I., & Ramadhani, M. I. (2023). Strategi Guru dalam Meningkatkan Minat Membaca Siswa SD Negeri 2 Tambang Ulang. *Jurnal Terapung: Ilmu-Ilmu Sosial*, *5*(2), 60–69.
Hanipah, S. (2023). Analisis Kurikulum Merdeka Belajar dalam Memfasilitasi Pembelajaran Abad ke-21 pada Siswa Menengah Atas. *Jurnal Bintang Pendidikan Indonesia*, *1*(2), 264–275.
Harsiati, T. (2018). Karakteristik Soal Literasi Membaca pada Program PISA. *LITERA*, *17*(1). https://doi.org/10.21831/ltr.v17i1.19048
Harto, K., & Hawa, K. (2025). Refleksi Hasil PISA Dan TIMSS di Indonesia: Upaya Peningkatan Kompetensi Literasi Siswa Madrasah Melalui AKMI. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, *10*(02), 391–405.
Hidayat, F., & Muhamad, N. (2021). Model Addie (Analysis, Design, Development, Implementation and Evaluation) Dalam Pembelajaran Pendidikan Agama Islam Addie (Analysis, Design, Development, Implementation and Evaluation) Model in Islamic Education Learning. *J. Inov. Pendidik. Agama Islam*, *1*(1), 28–37.
Hussein, A. (2024). *Innovative Teaching Methods Enhancing Engagement and Learning Outcomes*.
Khoiri, M., Suyono, S., & Harsiati, T. (2025). Unlocking Minds: The Nexus of Reading Literacy and Cognitive Strategies in Educational Advancement. *College & Research Library News*, *86*(04). https://doi.org/10.5860/crln.86.4.157
Lestari, W., Selvia, F., & Layliyyah, R. (2019). Pendekatan Open-Ended terhadap Kemampuan Metakognitif Siswa. *At-Ta'lim: Jurnal Pendidikan*, *5*(2), 184–197.
Li, S., & Lajoie, S. P. (2022). Cognitive engagement in Self-Regulated Learning: An Integrative Model. *European Journal of Psychology of Education*, *37*(3), 833–852. https://doi.org/10.1007/s10212-021-00565-x
Marhaeni, A. (2016). Rosenblatt's Transactional Theory and Its Implementation in the Teaching

of Integrated Reading. *Jurnal Ilmu Pendidikan*, *5*. https://doi.org/10.17977/jip.v5i4.1052
Marmet, M. D. (2023). Bridging the power gap: the impact of pedagogical strategies and relationship-building on student success. *Journal of Research in Innovative Teaching and Learning*, *16*(2), 192–209. https://doi.org/10.1108/JRIT-01-2023-0009
Muhidin, A., & Doriza, S. (2024). *Belajar Membelajarkan Siswa: Praktik Baik Pembelajaran Mendalam, Bermakna, dan Gembira*.
Pambudi, M. A. (2022). Strategi Guru dalam Meningkatkan Literasi Digital pada Siswa. *Jurnal Inspirasi Manajemen Pendidikan*, *10*(03), 636–646.
Papen, U. (2023). The (New) Literacy Studies: The Evolving Concept of Literacy as Social Practice and Its Relevance for Work with Deaf Students. *Cultura & Psyché*, *4*(1), 67–84. https://doi.org/10.1007/s43638-023-00067-1
Pontjowulan, P. (2025). Revitalisasi Literasi Membaca dan Menulis sebagai Strategi Pembelajaran Bahasa Indonesia di SMK Menghadapi Tantangan Abad 21. *Educationist: Journal of Educational and Cultural Studies*, *3*(3), 222–231.
Putnam, A. L. (2015). Mnemonics in Education: Current Research and Applications. *Translational Issues in Psychological Science*, *1*(2), 130–139. https://doi.org/10.1037/tps0000023
Putrayasa, I. M., Suwindia, I. G., & Ari Winangun, I. M. (2024). Transformasi Literasi di Era Digital: Tantangan dan Peluang untuk Generasi Muda. *Education and Social Sciences Review*, *5*(2), 156. https://doi.org/10.29210/07essr501400
Rejeki, S. K., & Pangesti, I. (2024). Pelatihan Guru SMP untuk Penguatan Literasi dan Numerasi Pondok Pesantren Modern Daar El Nayl Kecamatan Sukaraja Bogor. *Jurnal Akselerasi Merdeka Belajar Dalam Pengabdian Orientasi Masyarakat (AMPOEN): Jurnal Pengabdian Kepada Masyarakat*, *2*(1), 41–47.
Ritchhart, R., & Church, M. (2020). *The Power of Making Thinking Visible: Practices to Engage and Empower All Learners*. Wiley.
Rivero Galeano, R., Gómez Salgado, A., & Lorduy Arellano, D. (2020). Metacognitive Strategies and Learning Quality: A Systematic Mapping Study. *Proceedings of the 7th International Conference on Educational Technologies 2020*, 48–56. https://doi.org/10.33965/icedutech2020_202002L007
Safarudin, R., Zulfamanna, Z., Kustati, M., & Sepriyanti, N. (2023). Penelitian Kualitatif. *Innovative: Journal Of Social Science Research*, *3*(2), 9680–9694.
Suppawittaya, P., & Yasri, P. (2021). The Comparison of Chunking Methods to Enhance the Cognitive Capacity of Short-term Memory to Retain Textual Information among High School Students. *International Journal on Research in STEM Education*, *3*(1), 27–35. https://doi.org/10.31098/ijrse.v3i1.502
Suraprajit, P. (2019). Bottom-up vs Top-down Model: The Perception of Reading Strategies among Thai University Students. *Journal of Language Teaching and Research*, *10*(3), 454. https://doi.org/10.17507/jltr.1003.07
Susanti, D. (2020). *Pengaruh Model Pembelajaran Discovery Learning Tipe Poe (Prediction, Observation, and Explanation) terhadap Kemampuan Metakognitif Ditinjau dari Aktivitas Belajar Peserta Didik*. UIN Raden Intan Lampung.
Utami, P. R., Rahmawati, L., & Noktaria, M. (2025). Pengembangan Kompetensi dan Soft Skill dalam Implementasi Kurikulum Merdeka: Tinjauan Literatur. *MANAJERIAL: Jurnal Inovasi Manajemen Dan Supervisi Pendidikan*, *5*(1), 55–65.
van Kesteren, M. T. R., Krabbendam, L., & Meeter, M. (2018). Integrating educational knowledge: reactivation of prior knowledge during educational learning enhances memory integration. *Npj Science of Learning*, *3*(1), 11. https://doi.org/10.1038/s41539-018-0027-8
Winn, A. A. S., DelSignore, L., Marcus, C., Chiel, L., Freiman, E., Stafford, D., & Newman, L. (2019). Applying Cognitive Learning Strategies to Enhance Learning and Retention in Clinical Teaching Settings. *MedEdPORTAL*, *15*, 10850. https://doi.org/10.15766/mep_2374-8265.10850

Yasri, P., Suppawittaya, P., & Pratchayapong Yasri, P. S. (2021). The Effectiveness of Chunking Methods for Enhancing Short-Term Memory of Textual Information. *Psychology and Education Journal*, *57*(9), 6313–6327. https://doi.org/10.17762/pae.v57i9.2963

Zhao, Q. (2024). The Application of Cognitive Strategies in University English Reading Instruction. *Applied & Educational Psychology*, *5*(2). https://doi.org/10.23977/appep.2024.050207