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DESCRIPTIVE ANALYSIS OF INNOVATION IN LEARNING STRATEGIES AND METHODS WITHIN THE KURIKULUM MERDEKA FRAMEWORK IN THE ENGLISH LANGUAGE LEARNING PROCESS

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ABSTRACT

Learning strategies and methods are an inseparable whole. As professional teachers, they are required to master various learning strategies and methods in facing Industry 4.0. Furthermore, teachers will continue to develop innovative learning strategies and methods to address the challenges of the times, especially in the context of independent learning. This paper reviews models of innovative learning strategies and methods currently being developed in various literatures. This research is a literature review using descriptive analysis. This paper concludes that there are eight types of strategies that can be used by teachers, namely: Expository Learning Strategies (SPE), Inquiry Learning Strategies (SPI), Problem-Based Learning Strategies (SPBM), Learning Strategies to Improve Thinking Skills (SPPKB), Cooperative Learning Strategies (SPK), Contextual Learning Strategies (CTL), Affective Learning Strategies, and Computer-Based and Electronic Learning Strategies (E-Learning). In addition, there are 14 (fourteen) learning methods, namely: lecture method, question and answer method, discussion method, demonstration and experiment method, simulation method, recitation method, Drill practice method, Peer Teaching Method, problem solving method, team teaching method, field trip method, project method, section method and global method.

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INTRODUCTION

Strategies and methods are crucial elements in learning. Using strategies makes it easier for teachers to identify information and manage each learning step effectively. Likewise, methods facilitate the learning process and improve student learning outcomes, enabling students to achieve their goals as easily and effectively as possible. Demands on teachers are increasingly complex in the era of the Industrial Revolution 4.0. Teachers are required to understand the challenges and strategies for facing this era (Angsana, 2019). Furthermore, students are also required to think critically. Learning approaches

and designs tend to rely on case studies to stimulate their active participation (Rahayu, 2021). Especially in the context of independent learning, learning strategies and methods play a crucial role in the educational context.

Discussions about learning strategies and methods are nothing new in the world of education. For example, research conducted by Claire E. Weinstein and Richard E. Mayer discussing learning strategies (Weinstein & Mayer, n.d.), Virginia Locastro's research on learning strategies and learning environments (Locastro, 1994), Fransico Cano-Garcia and Fernando Justicia's research on learning strategies, styles, and approaches (Cano-Garcia & Justicia-Justicia, 1994), and many more. Research related to methods includes research by Michael J. Price and Richard M. Felder on inductive teaching and learning methods (Prince & Felder, 2006), research by Scott A. Engum, Pamela Jeffries, and Lisa Fisher discussing computer-based education and traditional learning methods (Engum et al., 2003), and others. The research that the author examines is a collection of old and new theories regarding current learning strategies and methods.

LITERATURE REVIEW

Innovation in learning strategies and methods within the Merdeka Belajar framework includes the use of varied and integrated methods, such as project-based learning, discussion methods, simulations, case studies, and the use of digital technology. Furthermore, an emphasis is placed on flexible, collaborative learning that is relevant to students' needs and interests to encourage the development of essential competencies and the character of the Pancasila Student Profile.

Innovative Learning Strategies

- 1. Project-Based Learning: Students work on projects aimed at developing soft skills and character.
- 2. Collaborative Learning: Encourages collaboration among students to learn together, rather than individualistically.
- 3. Problem-Based Learning: Students solve real-life problems that encourage the discovery of new ideas.
- 4. Differentiated Learning: Teachers provide flexibility to adapt learning to each student's individual abilities.
- 5. Discovery/Inquiry-Based Learning: Students are encouraged to discover new concepts and ideas independently.

Innovative Methods and Tools

- 1. Digital Technology: Utilizing audio and video aids and digital platforms such as the Merdeka Mengajar Platform.
- 2. Simulations and Role play: Acting out or simulating a situation for deeper understanding.
- 3. Group Discussions and Brainstorming: Building ideas and understanding collaboratively.
- 4. Outside the Classroom: Applying learning in real-world environments for a more contextual learning experience.
- 5. Gamification and Storytelling: Using game or story elements to make learning more engaging and memorable.

The main objectives of innovation in Merdeka Belajar:

- 1. Flexibility: Providing teachers and students with the freedom to design and implement learning that aligns with their needs, talents, and interests.
- 2. Focus on the Essentials: Material is simplified so that teachers and students can focus on essential competencies, such as literacy and numeracy.
- 3. Character Development: Strengthening character development through projects aligned with the Pancasila Student Profile.
- 4. Enjoyable Learning Environment: Creating a fun learning environment for both students and teachers.

RESEARCH METHOD

This type of research is a literature review, which, according to Arksey, all literature review methods offer a set of tools that researchers need to use appropriately (Arksey & O'Malley, 2005). In this study, the researcher collected articles, books, journals, and other sources relevant to the topic. The analysis technique used was descriptive analysis.

RESULT AND DISCUSSION

Definition of Learning Strategy

In general, strategy is understood as a way of doing something. Learning strategies are ways of engaging students in learning activities (Yaumi, 2018, p. 59). Learning strategies can be defined as student behaviors intended to influence how students process information (R. E. Mayer, 1988). Dick, Carey, and Carey, as cited by Muhammad Yaumi, distinguish between micro and macro learning strategies. Micro learning strategies include various learning and teaching activities such as group discussions, independent reading, case studies, lectures, computer simulations, worksheets, cooperative group projects, and so on. In contrast, macro learning strategies include learning and teaching activities starting from the initial stage of motivating students to mastering topics that lead students to achieve learning objectives. Micro learning strategies are called learning methods as stated by AT&T, as cited by Suparman (Yaumi, 2018, p. 59).

Types of Learning Strategies

Expository Learning Strategy (ELS)

An expository learning strategy emphasizes the verbal delivery of material from a teacher to a group of students to ensure optimal mastery of the subject. This is a teacher-centered learning approach, as the teacher plays a crucial and dominant role in this strategy. The teacher presents material in a well-structured, systematic, and comprehensive manner to ensure students remain attentive and understand it effectively and accurately (Aji & Budiyono, 2018). According to John D.W. Andrews, an expository learning strategy involves three steps: (1) Concept introduction, which provides students with a general orientation to the material; (2) Working with raw materials or data from existing subjects; and (3) Generalization, which asks students to expand, generalize, and test newly acquired knowledge (Andrews, 1984).

Inquiry Learning Strategy (SPI)

The inquiry learning strategy is a teacher-led discussion method in which the teacher poses a series of open-ended questions to the class, asks students to write down their

individual responses, and encourages discussion among students (Crawford et al., 2005, p. 90). The inquiry learning strategy can also be defined as a series of learning activities that emphasize critical and analytical thinking processes to find answers to a problem (Aji & Budiyono, 2018). This inquiry-based learning approach encompasses activation methods, different organizational forms, and, at the very least, problem-based learning. The teacher, rather than transmitting subject matter through a complete presentation, creates knowledge through problem-solving and a system of questions (Serafín et al., 2015). Inquiry groups are used to stimulate students to become skilled questioners. They also allow students to test the validity of hypotheses, determining through direct experience whether they are valid (Donald C. et al., 2010, p. 267).

Problem Based Learning Strategy (SPBM)

Problem-Based Learning (PBLS) is a learning strategy where students work in small collaborative groups and learn what they need to know to solve problems. The teacher acts as a facilitator, guiding student learning (Hmelo-Silver, 2004). PBLS is an educational method that uses real-world problems as a critical context to encourage students to think critically and develop the skills to solve proposed problems. Results obtained within the framework of the profile project emphasize that the quality of communication between teachers and students is crucial. Teachers are considered partners and active participants during training activities. Furthermore, teachers must pay close attention to feedback received from students to effectively monitor and adjust the training process (Gorghiu et al., 2015). Furthermore, it is important to develop it because humans inevitably face problems. PBLS is expected to provide training and develop individual skills to solve problems, from simple to complex (Aji & Budiyono, 2018).

Learning Strategy for Improving Thinking Skills (SPPKB)

SPPKB is a learning strategy that emphasizes students' thinking skills. Joy and Weil, as quoted by Wina Sanjaya, place this learning model in the Cognitive Growth learning model: Increasing the Capacity to Think (Sanjaya, 2016, p. 225). The learning strategy model for improving thinking skills (SPPKB) is a learning model that focuses on developing students' thinking skills through examining facts or children's experiences as material for solving the problems presented (Sanjaya, 2016, pp. 226-227).

Cooperative Learning Strategy (CSLS)

Cooperative learning strategies are small-group approaches to teaching that hold students accountable for individual and group achievement (Donald C. et al., 2010, p. 268). It is also a generic approach to teaching that has given rise to various methods for facilitating collaborative learning in small groups. It is a way to build a "specific relationship" between students and teachers that creates a "specific climate" that encourages students to engage their thoughts, knowledge, and feelings in the learning process (Sharan, 2010). According to Johnson & Johnson, as cited by Lori Kupczynski et al., cooperative learning strategies combine five essential elements: (1) positive interdependence; (2) individual accountability; (3) face-to-face, promotive interaction; (4) social skills; and (5) group processing (Kupczynski et al., 2012). The benefits of cooperative learning strategies are high-level thinking, motivation and enthusiasm, learning interpersonal skills, and promoting interpersonal and intergroup understanding (Crawford et al., 2005, p. 48).

Contextual Learning Strategy (CTL)

Contextual Learning Strategy (CTL) is a learning concept that helps teachers connect learning materials to students' real-world situations and encourages students to connect their knowledge and apply it to everyday life (Aji & Budiyono, 2018). Contextual

Learning Strategy (CTL) includes eight components: (1) making meaningful connections; (2) doing important work; (3) independent learning; (4) collaborating; (5) thinking critically and creatively; (6) nurturing the individual; (7) achieving high standards; and (8) using authentic assessment (Johnson, 2002, p. 24).

Affective Learning Strategies

Attitude learning strategies generally confront students with conflicting or problematic situations. Through these situations, it is hoped that students can make decisions based on values they deem good (Sanjaya, 2016, p. 279). Some models include the consideration model (developed by Mc. Paul), the cognitive development model (developed by Lawrence Kohlberg), and the value clarification technique. Several difficulties in affective learning exist, including: (1) the educational process, according to the applicable curriculum, tends to be directed at intellectual development; (2) the difficulty of exercising control due to the many factors that can influence a person's attitude development; (3) the success of attitude formation cannot be evaluated immediately; (4) the influence of technological advances that offer a variety of program choices impacts the formation of children's character (Sanjaya, 2016, pp. 286-287).

Computer-Based and Electronic-Based Learning (E-Learning) Strategies

According to Rosenberg, as cited by Leonardo Caporarello and Giacomo Sarchioni, e-learning is the use of internet technology to provide various solutions that improve knowledge and performance (Caporarello & Sarchioni, 2014). Meanwhile, according to Welsd et al., e-learning can be defined as the use of computer network technology, especially through intranets, to convey information and instructions to individuals (Welsh et al., 2003). Speaking about the perception of e-learning, it can be divided into two types, namely (Priyahita, 2020): (a) Electronic-based. Learning systems tend to use information and communication technology concepts, especially those with an electronic background. Its use is not only internet-based, but also other electronic devices such as film, Overhead Projectors (OHP), video, projectors, and others. (b) Internet-based. Slightly different from the previous type, the use of internet-based e-learning relies on online internet facilities as its primary instrument. The learning system is required to use the internet. To implement this type, schools or educational institutions must have computers connected to the internet. As a result, the level of flexibility in accessing learning materials increases because it is not limited by distance, space, and time, and can be done anywhere and anytime.

Definition of Learning Methods

The word method comes from the Latin meta, meaning through, and hodos, meaning the path to or way to. The term itself is a system or method that regulates an ideal (Uhbiyati, 2013, p. 163). More specifically, Ramayulis concludes that a method is a set of ways and paths used by educators in the learning process so that students can achieve learning objectives or master certain competencies formulated in the subject syllabus (2013, p. 272). Meanwhile, Nana Sudjana argues that a teaching method is a way used by teachers to establish relationships with students during the teaching process (Sudjana, 2013, p. 76).

Various Learning Methods

Lecture Method

The lecture method is the oral presentation of lesson material. This method is not always bad if it is well-prepared, supported by tools and media, and considers the limits of its possible use (Sudjana, 2013, p. 77). The advantages of this method include: (1)

lectures are a 'cheap' and 'easy' method to implement; (2) lectures can present broad subject matter; (3) lectures can highlight key points that need to be emphasized; and (5) class organization using lectures can be simplified (Sanjaya, 2016, p. 148). The disadvantages of this method include: (1) the material that students can master as a result of lectures will be limited to what the teacher has mastered; (2) lectures without demonstrations can result in verbalism; (3) teachers who lack good speaking skills often perceive lectures as a boring method. and (4) through lectures, it is very difficult to know whether all students have understood what is being explained or not (Sanjaya, 2016, pp. 148-149).

Question and Answer Method

The question-and-answer method is a teaching method that allows for direct, two-way communication because it simultaneously creates a dialogue between teacher and students (Sudjana, 2013, p. 78). It serves as a bridge of communication or collaboration between teachers and students (Liu, 2017). In the author's opinion, this method has the advantage of two-way learning, allowing the material discussed to complement each other based on reading experience. However, it should be emphasized that teachers must read extensively on the topic to maintain their authority. Despite its advantages, it also has a disadvantage: not all students dare to ask questions.

Discussion Method

The discussion method is the exchange of ideas and opinions among students or teachers (Smaldino et al., 2011, p. 36). According to Killen, as cited by Wina Sanjaya, the main purpose of this method is to solve problems, answer questions, increase and understand students' knowledge, and make decisions (Sanjaya, 2016, p. 154). The advantages of this method are that it is engaging, challenging, inclusive, and provides opportunities for new ideas. However, its disadvantages include the potential for limited participation, sometimes being unchallenging, and the level of difficulty (Smaldino et al., 2011, p. 36).

Demonstration and Experimental Methods

The demonstration method involves students seeing a real-life example of a skill or procedure to be learned (Smaldino et al., 2011, p. 32). The main difference between a demonstration and an experiment lies in the implementation. A demonstration simply demonstrates a process in front of the class. Experiments, on the other hand, give students the opportunity to experiment with the process themselves. However, when combined with experiments, demonstrations can enhance the effectiveness of learning (Asra, 2008, pp. 101-102). The advantages of this method include seeing before doing, task guidance, saving supplies, and safety. However, the disadvantages include indirect implementation, limited visibility, and subsequent problems (Smaldino et al., 2011, p. 32).

Simulation Method

Simulation can be defined as a learning method that involves imitating behavioral processes. Therefore, simulation is essentially a form of game-based learning. Its purpose is to provide an understanding of a concept or principle or to practice problem-solving skills based on real-life situations. Simulations take various forms. Popular ones include sociodrama, psychodrama, and role-playing (Asra, 2008, pp. 99-100). According to the author, the advantage of this method is that all students participate in the learning process and deepen their respective roles, allowing them to remember the details of the material. However, a drawback of this method is time management. Simulations require a significant amount of time.

Recitation Method

Recitation or assignments are not the same as homework, but rather broader. Assignments can be done at home, at school, in the library, and elsewhere. Recitation stimulates children to actively learn both individually and in groups (Sudjana, 2013, p. 81). According to Backer, recitation is a direct instructional method in which a teacher asks a question, a student responds to the question, and the teacher evaluates this response (Backer, 2017). Meanwhile, Charles B. Schultz and Timothy R. Dangel define recitation as an instructional practice in which students respond to a teacher's question by verbally presenting information previously provided to them (Schultz & Dangel, n.d.). According to the authors, the advantages of this method are: (a) students are more active than the teacher; (a) students' curiosity is heightened by the assigned task; and (c) they are independent. Furthermore, this method has disadvantages: (a) difficulty finding references; (b) students' lack of understanding of assignment instructions; and (c) students feel burdened if they lack a foundational understanding.

Skill Training Method (Drill)

According to Akinpelu as quoted by Umar Mohammed Kani, et al., drill is a method often used in traditional teaching methods so that students acquire the first basics of a subject (Kani et al., 2015). The drill method is a teaching method where students carry out practice activities so that students have higher dexterity or skills than those learned (Yohaidah, n.d.).

Peer Teaching Method

David Boud defines peer learning broadly, then, as 'students learning from and with each other, both formally and informally.' The emphasis is on the learning process, including the emotional support students offer each other, as much as on the learning task itself (Boud, 2001). In higher education, James H. Fret and N.A. Whitman argue that there are five types of peer teaching, divided into two groups: the first group consists of instructors recruited from more senior students who have successfully completed a particular course, known as "close peers." There are three types: teaching assistants, tutors, and counselors. The second group consists of partnerships and workgroups. These are better known as "peer peers" because they are at the same level. Partnerships refer to one-on-one relationships in which two students interact as teacher and learner, and workgroups refer to groups of students who share a common task (Frey & Whitman, 1990).

Problem Solving Method

The problem-solving method is not only a teaching method but also a method of thinking, because in problem-solving, other methods can be used, starting from searching for data to drawing conclusions (Sudjana, 2013, p. 85). It is an area of cognitive psychology related to the processes involved in solving problems (Pal & Poyen, 2017). Problem-solving is cognitive processing directed at transforming a given situation into a goal-oriented situation when no clear solution method is available to the problem-solver (T. E. Mayer, 1999). Meanwhile, according to Donald R. Woods, problem-solving is the process used to find the best answer to an unknown, or a decision subject to several constraints (Woods et al., 1997). According to Jamin Carson, there are several steps in the problem-solving method, namely: (a) reading, which is when someone identifies the problem; (b) exploring, which is when someone looks for patterns or attempts to determine the concepts or principles at play in the problem; (c) choosing a strategy, which is where a person draws a conclusion or makes a hypothesis about how to solve the problem based on what he or she found in steps one and two; (d) solving the problem,

which is after a method is chosen, the student applies it to the problem; and (e) reviewing and extending, which is where the student verifies the answer and looks for variations in the problem-solving method (Carson, n.d.).

Team Teaching

Team teaching is essentially a teaching method in which two or more teachers work together to teach a group of students (Sudjana, 2013, p. 86). According to Francis J. Buckley, S.J., team teaching is when all team members attend some or all class sessions to observe, interact, ask questions, and learn (Buckley, S.J., 2000). According to Goetz, there are two categories of team teaching: (a) category A, where two or more instructors teach the same students at the same time in the same class. There are several types of category A, namely: traditional team teaching, collaborative learning, supportive team teaching, parallel instruction, differentiated separate classes, and teacher monitors. (b) category B, where instructors work together but do not necessarily teach the same group of students or have to teach at the same time. Category B has several types: team members meet to share ideas and resources but function independently; teams of teachers share the same resource center; teaching different subgroups within the entire group; one individual plans instructional activities for the entire team, and team members share planning, but each instructor teaches their own specific skill area to the entire group of students (Goetz, 2000). According to Eisen & Tisdell, there are several advantages to team teaching, including: (a) sharing power with fellow teachers to pave the way for shared control with students; (b) directly observing what other professionals do in the classroom to contribute to modeling best practices; and (c) gaining insight while developing curriculum together, planning assessments, and organizing materials (Laughlin et al., n.d.). The disadvantage of team teaching for teachers is the time element. Meanwhile, the disadvantage for students is that because there are many perspectives on the topic being discussed in class, there are many shades of gray (Goetz, 2000).

Field Trip

Field trips, as a teaching method, have a distinct meaning, distinct from field trips in the general sense. Field trips here refer to visits outside the classroom for learning purposes (Sudjana, 2013, p. 87). They can also be defined as a type of experiential learning that takes students outside the traditional classroom setting and into new modes of learning (Ramachandiran & Dhanapal, 2016). According to the authors, this method has advantages, including: (a) students directly experience the material being discussed, not just theory; (b) students experience enjoyment from what they see directly in the material being discussed. However, this method also has disadvantages, including: (a) sometimes high costs; (b) remote locations; and (c) the safety of all students during the trip.

Project Method

According to Alberty, as quoted by Grady Roberts and Julie Harlin, a project is an activity, the purpose of which is the outcome or achievement of an objective, other than learning (i.e., the acquisition of knowledge, skills, etc.) that is valuable to students. He further elaborates that the project method is a technique used by a teacher in which a tangible goal or product provides motivation for completion. The acquisition of knowledge is a byproduct of the project method. Although valuable, Alberty acknowledges that the project method should not be the only technique used in educating students (Roberts & Harlin, 2007).

Teileren Method

According to Suhendro as quoted by Budi Herdiana, et al., the teileren method is a learning method that places more emphasis on mastering each part of the elements of a learning material (Herdiana et al., 2018).

Ganze Method

According to Amir as quoted by Farida Riyadi, et al., the Global method is a teaching method where students are asked to read the entire material and then they continue the summary that they get or that they take as the core of the material (Riyadi et al., 2022).

CONCLUSION

Learning strategies and methods are inseparable. Learning strategies are ways to engage students in learning activities. While learning methods are the methods used by teachers in the learning process to achieve learning objectives. This paper concludes that there are 8 (eight) types of strategies that can be used by teachers, namely: Expository Learning Strategies (SPE), Inquiry Learning Strategies (SPI), Problem-Based Learning Strategies (SPBM), Learning Strategies for Improving Thinking Skills (SPPKB), Cooperative Learning Strategies (SPK), Contextual Learning Strategies (CTL), Affective Learning Strategies, and Computer-Based and Electronic-Based Learning Strategies (E-Learning). There are 14 (fourteen) learning methods that can be implemented, namely: lecture method, question and answer method, discussion method, demonstration and experiment method, simulation method, recitation method, skills training method (Drill), Peer Teaching Method, problem solving method, Team Teaching, field trip method, Project Method, Teileren Method and Ganze Method.

REFERENCES

- Aji, W. N., & Budiyono, S. (2018). The Teaching Strategy of Bahasa Indonesia in Curriculum 2013. 7.
- Andrews, J. D. W. (1984). Discovery and Expository Learning Compared: Their Effects on Independent and Dependent Students. *The Journal of Educational Research*, 78(2), 80–89. https://doi.org/10.1080/00220671.1984.10885578
- Angsana, J. (2019). Tantangan Dan Strategi Guru Di Era Revolusi Industri 4.0 Dalam Meningkatkan Kualitas Pendidikan.
- Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), 19–32. https://doi.org/10.1080/1364557032000119616
- Backer, D. I. (2017). The Politics of Recitation: Ideology, Interpellation, and Hegemony. *Harvard Educational Review*, 87(3), 357–379. https://doi.org/10.17763/1943-5045-87.3.357
- Boud, D. (2001). Making the Move to Peer Learning. *Peer Learning in Higher Education: Learning from and with Each Other*, 1–17.
- Buckley, S.J., F. J. (2000). Team Teaching; What, Why, and How? Sage.
- Cano-Garcia, F., & Justicia-Justicia, F. (1994). Learning strategies, styles and approaches: An analysis of their interrelationships. *Higher Education*, 27(2), 239–260. https://doi.org/10.1007/BF01384091

- ISSN (print): XXXX | ISSN (online): XXXX
- Caporarello, L., & Sarchioni, G. (2014). *E-LEARNING: THE RECIPE FOR SUCCESS*. 10(1), 12.
- Carson, J. (t.t.). A Problem With Problem Solving: Teaching Thinking Without Teaching Knowledge. *Problem Solving*, 8.
- Crawford, A., Saul, W., Mathews, S. R., & Makinster, J. (2005). *Teaching And Learning Strategies For The Thinking Classroom*. The International Debate Education Association.
- Donald C., O., Robert J., H., Richard C., C., Michael S., T., & Abbie H., B. (2010). *Teaching Strategies; A Guide to Effective Instruction*. Cengage Learning.
- Engum, S. A., Jeffries, P., & Fisher, L. (2003). Intravenous catheter training system: Computer-based education versus traditional learning methods. *The American Journal of Surgery*, 186(1), 67–74. https://doi.org/10.1016/S0002-9610(03)00109-0
- Frey, J. H., & Whitman, N. A. (1990). Peer Teaching: To Teach Is to Learn Twice. *Teaching Sociology*, 18(2), 265. https://doi.org/10.2307/1318523
- Goetz, K. (2000). *Perspectives on Team Teaching*. https://people.ucalgary.ca/~egallery/goetz.html
- Gorghiu, G., Drăghicescu, L. M., Cristea, S., Petrescu, A.-M., & Gorghiu, L. M. (2015). Problem-based Learning—An Efficient Learning Strategy in the Science Lessons Context. *Procedia Social and Behavioral Sciences*, *191*, 1865–1870. https://doi.org/10.1016/j.sbspro.2015.04.570
- Herdiana, B., Aria, M., Rahajoeningroem, T., Kurniawan, B., Utama, J., & Hartono, B. (2018). Penerapan Metode Integrasi Teileren-Poject pada Program Inovasi IPTEK dan Kreativitas Guru-Guru Elektronika Industri di SMKN 9 Kabupaten Garut dalam Kegiatan Workshop Aplikasi Mikrokontroller. *Jurnal Pengabdian Kepada Masyarakat*, 4(1), 41. https://doi.org/10.22146/jpkm.32696
- Hmelo-Silver, C. E. (2004). Problem-Based Learning: What and How Do Students Learn? *Educational Psychology Review*, 16(3), 235–266. https://doi.org/10.1023/B:EDPR.0000034022.16470.f3
- Johnson, E. B. (2002). Teaching and Learning. Corwin Press, Inc.
- Kani, U. M., Sa'ad, T. U., & Polytechnic, A. T. A. (2015). Drill as a Process of Education. European Journal of Business and Management, 4.
- Kupczynski, L., Mundy, M. A., Goswami, J., & Meling, V. (2012). Cooperative Learning In Distance Learning: A Mixed Methods Study. *International Journal of Instruction*, 10.
- Laughlin, K., Nelson, P., & Donaldson, S. (t.t.). Successfully Applying Team Teaching with Adult Learners. 8.
- Liu, L. (2017). Application of Cooperative Principle and Politeness Principle in Class Question-answer Process. *Theory and Practice in Language Studies*, 7(7), 563. https://doi.org/10.17507/tpls.0707.10
- Locastro, V. (1994). Learning Strategies and Learning Environments. *TESOL Quarterly*, 28(2), 409. https://doi.org/10.2307/3587445
- \Mayer, R. E. (1988). LEARNING STRATEGIES: AN OVERVIEW. Dalam *Learning* and Study Strategies (hlm. 11–22). Elsevier. https://doi.org/10.1016/B978-0-12-742460-6.50008-6
- Mayer, T. E. (1999). Encyclopedia of Creativity: Vol. II. Academic Press.

- Pal, A., & Poyen, Er. F. B. (2017). Problem Solving Approach. *International Journal of Advanced Engineering Research and Science*, 4(5), 184–189. https://doi.org/10.22161/ijaers.4.5.29
- Prince, M. J., & Felder, R. M. (2006). Inductive Teaching and Learning Methods: Definitions, Comparisons, and Research Bases. *Journal of Engineering Education*, 95(2), 123–138. https://doi.org/10.1002/j.2168-9830.2006.tb00884.x
- Priyahita, R. (2020). The Utilization of E-Learning and Artificial Intelligence in the Development of Education System in Indonesia. *Proceedings of the 2nd Jogjakarta Communication Conference (JCC 2020)*. 2nd Jogjakarta Communication Conference (JCC 2020), Yogyakarta, Indonesia. https://doi.org/10.2991/assehr.k.200818.061
- Rahayu, K. N. S. (2021). Sinergi Pendidikan Menyongsong Masa Depan Indonesia Di Era Society 5.0. *Jurnal Pendidikan Dasar*, 2(1).
- Ramachandiran, M., & Dhanapal, S. (2016). Evaluation of the Effectiveness of Field Trips in the Teaching and Learning of Biosciences. Dalam S. F. Tang & L. Logonnathan (Ed.), *Assessment for Learning Within and Beyond the Classroom* (hlm. 159–173). Springer Singapore. https://doi.org/10.1007/978-981-10-0908-2_15
- Ramayulis. (2013). Ilmu Pendidikan Islam (cet. X). Kalam Mulia.
- Riyadi, F., Gunawan, Y. I., Firdaus, M. I., & Rohim, A. (2022). THE EFFECT OF GANZE METHOD ON THE EIGHTH GRADE STUDENTS' READING COMPREHENSION AT SMPN 16 KOTA TANGERANG. *Globish: An English-Indonesian Journal for English, Education, and Culture*, 11(1), 70. https://doi.org/10.31000/globish.v11i1.5595
- Roberts, G., & Harlin, J. (2007). The Project Method In Agricultural Education: Then And Now. *Journal of Agricultural Education*, 48(3), 46–56. https://doi.org/10.5032/jae.2007.03046
- Sanjaya, W. (2016). *Strategi Pembelajaran Berorientasi Standar Proses Pendidikan* (cet. XII). Prenadamedia Group.
- Schultz, C. B., & Dangel, T. R. (t.t.). The Effects of Recitation on the Retention of Two Personality Types. *American Educational Research Journal*, 10.
- Serafin, Č., Dostál, J., & Havelka, M. (2015). Inquiry-Based Instruction in the Context of Constructivism. *Procedia Social and Behavioral Sciences*, 186, 592–599. https://doi.org/10.1016/j.sbspro.2015.04.050
- Sharan, Y. (2010). Cooperative learning: A diversified pedagogy for diverse classrooms. *Intercultural Education*, 21(3), 195–203. https://doi.org/10.1080/14675981003760390
- Smaldino, S. E., Lowther, D. L., & Russel, J. D. (2011). *Instructional Technology and Media for Learning: Teknologi Pembelajaran dan Media untuk Belajar* (T. B.S., Ed.; A. Rahman, Penerj.; cet. I). Kencana.
- Sudjana, N. (2013). *Dasar-Dasar Proses Belajar Mengajar* (cet. XIII). Sinar Baru Algensindo.
- Sumiati, & Asra. (2008). Metode Pembelajaran (cet. II). CV Wacana Prima.
- Uhbiyati, N. (2013). *Dasar-Dasar Ilmu Pendidikan Islam* (cet. I). PT. Pustaka Rizki Putra.

- Weinstein, C. E., & Mayer, R. E. (t.t.). THE TEACHING OF LEARNING STRATEGIES.
- Welsh, E. T., Wanberg, C. R., Brown, K. G., & Simmering, M. J. (2003). E-learning: Emerging uses, empirical results and future directions. *International Journal of Training and Development*, 7(4), 245–258. https://doi.org/10.1046/j.1360-3736.2003.00184.x
- Woods, D. R., Hrymak, A. N., Marshall, R. R., Wood, P. E., Crowe, C. M., Hoffman, T. W., Wright, J. D., Taylor, P. A., Woodhouse, K. A., & Bouchard, C. G. K. (1997). Developing Problem Solving Skills: The McMaster Problem Solving Program. *Journal of Engineering Education*, 86(2), 75–91. https://doi.org/10.1002/j.2168-9830.1997.tb00270.x
- Yaumi, M. (2018). Media dan Teknologi Pembelajaran (I). Prenadamedia Group.
- Yohaidah, I. (t.t.). The Use of The Drill Method to Improve Learning Outcomes Ability tJoourW nal heoamrepAageB: utton Shirt on students httpw://ietjhourInnalt.uepli.leedcu/tinudaexl.pDhpi/sIJaCSbNiEl/ities. 8.