

## The Effect of Project-Based Learning Model in Science Subjects on Creative Thinking Ability of Elementary Students

Mia Nurmalasari<sup>1</sup>, Aan Yuliyanto\*<sup>2</sup>, Yani Fitriyani<sup>3</sup>, Della Syifa Nuraeni<sup>4</sup>, Sandi Maulana<sup>5</sup>, Egi Nurohman Hidayat<sup>6</sup>

<sup>1,2,4,5,6</sup>Elementary School Teacher Education, Institut Pangeran Dharma Kusuma, Indramayu, Indonesia

<sup>3</sup>Elementary School Teacher Education, Universitas Muhammadiyah, Kuningan, Indonesia

\*aanyuliyanto16@gmail.com

**Abstract.** Creative thinking is essential for students because it allows them to find better and more effective solutions to various life challenges. Creative thinking is among of the skills identified as required in the 21st century education. The four indicators of creative thinking are originality, elaboration, flexibility, and fluency. This literature review used an integrative review design to ascertain the influence of the Project Learning Model on elementary school students' creative thinking abilities in science subjects. The Project Learning model is a method of instruction that divides the class into projects and gives students the freedom to explore learning activities, work on projects collaboratively, and produce a product. The Project-Based Learning Model has several stages, including the project implementation stage. At this stage, students face challenges and obstacles that require thinking creatively to find diverse and in-depth solutions. Therefore, applying the project-based learning model can train students to cultivate the ability to think creatively, encouraging them to collaborate and solve problems.

**Keywords:** Project-Based Learning, Creative Thinking Skills, Elementary School

**How to Cite:** Nurmalasari, M., Yuliyanto, A., Fitriyani, Y., Nuraeni, D. S., Maulana, S., & Hidayat, E. N. (2025). The Effect Of Project-Based Learning Model In Science Subjects On Creative Thinking Ability Of Elementary Students. *Proceeding The 7th International Conference Elementary Education*, 7(1) 512-522

### INTRODUCTION

Education in the 21st century faces several difficulties and obstacles, especially in the learning process, which requires innovation in the learning model applied. According to Law Number 20 of 2003 concerning the National Education System, Learning is a process of interaction between students, educators, and learning resources in a learning environment. Learning aims to develop students' potential. The challenges of education in the 21st century encourage attention to the development of Science Subjects in Elementary Schools, which possess an essential role in shaping students' knowledge and skills. Science education in elementary schools seeks to increase students' understanding, attitudes, and creative and critical thinking abilities (Nasrah et al., 2021; Suhelayanti et al., 2023)

Unfortunately, there are still many teachers who dominate learning activities and do not provide chances for pupils to participate fully in the learning process. This can hamper students' interest and the ability to think creatively when studying science. As a result, the achievement of science learning objectives is less successful. The Project-Based Learning model can be the right solution to improve students' creative thinking abilities in elementary school science subjects. Moreover, education currently faces 21st-century skills, thus this project-based learning model is considered capable of being used for foster 21st-century skills. (Nurhidayah et al., 2021). The Project-Based Learning model is a learning activity that aims to resolve issues by project activities and produce products collaboratively (Yuliyanto et al.,

2023). Project-based Learning enables students to learn to think, discover, choose, determine, and create rather than information is absorbed passively through training and explanations from instructors, as in conventional teaching (Song et al., 2024).

According to Yuliyanto (2024), Creative thinking skills are one of the higher-order thinking skills that characterize 21st-century skills. Creative thinking is the cognitive process that enables students to utilize their imagination to formulate ideas, inquiries, and hypotheses, explore alternatives, and assess themselves and their peers' concepts, outcomes, and processes. (Uloli, 2021).

The research conducted by (Maulidyah et al., 2020) found the results that the Project Learning Model can improve the creative thinking skills of fourth-grade students of SD Labschool Unesa Lidah Wetan Surabaya. Research from (Biazus & Mahtari 2022) The purpose of this study was to examine the effects of project-based learning and direct learning on secondary school students' ability for creative thought. According to the research findings, the creative thinking skills of the two sample groups in this study improved both before and after the learning process. The fluency indicator was found to have the highest improvement in both groups, followed by the flexibility, originality, and elaboration indicators. Nevertheless, the accomplishment of creative thinking abilities of students in the experiment group who studied using the project-based learning model It is stated to have an extraordinary influence compared to students who use direct learning models in their learning.

Thus, the results of previous research indicate that the implementation of project-based learning models influences students' creative thinking abilities at several school levels. Unfortunately, from several previous studies, there are still few studies that specifically examine its influence in the context of science subjects in elementary schools. Therefore, this research aims to determine whether the project-based learning model can influence the improvement or achievement of creative thinking abilities in elementary school students, particularly in the subject of science.

## **RESULT OF LITERATURE REVIEW**

### **Project-Based Learning Model**

According to Dewi (2022), project-based learning (PjBL) is a learning model that uses activities or projects that are part of the process of learning. Through the form of Project Based Learning, students are able to collect, evaluate, analyze, synthesize, and explore information. With project-based learning, students can think more comprehensively from various sides. Students can choose a real-world problem that they are interested in and then try to find the

solution through group discussion, problem analysis, solution construction, and presentation of results. (Chen et al., 2022).

The purpose of Project-Based Learning is to enhance students learning experience in terms of strengthening learning motivation, work motivation, work habits, collaboration skills, communication skills, creativity development, critical thinking, leadership, self-discipline, decision-making, accessing and analyzing information from various sources, using new technology, and others required in 21st-century skills (Simeru et al., 2023). The Project Based Learning model requires students to can collaborate in finding information and evaluating the results so that the problem can be resolved. This learning model creates an active and participatory learning environment. Students play a role in decision-making and face challenges that encourage critical and creative thinking. Their involvement in collective information management fosters responsibility, while continuous evaluation helps them improve. The process of reflection allows students to learn from experience, and the emphasis on evaluating the final product highlights the importance of the process. Project Based Learning prepares students with relevant skills for real-world challenges. One of the reasons for using the Project Learning model in Learning is that it can open up various chances to increase creativity in a mutually supportive group work process and bring out students' thinking skills that can be applied in solving project problems with various interpretations and different data (Gurning et al., 2024).

The stages of implementing the Project-Based Learning Model, according to Wajdi (2017), include (1) The question at the beginning of learning activities. The questions asked it is a real-world question that begins with thorough investigation. (2) Project planning: in this project planning, activities will be determined which will be carried out by students from the beginning to the end of Learning, such as determining rules, choosing activities that will be carried out to answer essential questions, dividing tasks and responsibilities between group members, choosing tools and materials. (3) Scheduling the project activity stage, in this section students must prepare a schedule of duties for implementing the project based on the planning that has been made. (4) Project supervision is ongoing; this supervision serves as a guidance process in addition to monitoring students' work. (5) Assessment is carried out about the results of student efforts in their projects and is conducted to assess the achievement of students' abilities. (6) Project evaluation: The tasks performed by the teacher and students reflect on project implementation.

Of course, this learning model also has advantages and disadvantages in the implementation process. According (to A. Y. Sari, 2018), There are advantages and disadvantages to the Project-Based Learning Model. These advantages is (1) Increased motivation, because

learning involves a number of steps that inspire students to think more creatively. (2) Improve problem-solving skills. Many sources describe project-based learning environments as making students are more engaged and adept at resolving challenging issues. (3) Students must develop and utilize communication skills to enhance collaboration and the importance of collaboration in projects. (4) Improving skills in resource processing, well-implemented project-based learning, and students with learning organizing projects and allocating time and other resources, like equipment, so as not to completed tasks.

In addition, the project-based learning model also has several disadvantages, including (1) Each subject contains challenges that may not always be addressed by the project. (2) It is difficult to choose the right project task according to student characteristics and learning objectives. (3) The preparation of assignments is not a simple task. (4) It is difficult to find relevant reference sources.

### **Creative Thinking Ability**

Creative thinking skills are one of the higher-order thinking skills that characterize 21st-century skills. Creative thinking is the cognitive process that enables students to utilize their imagination to formulate ideas, inquiries, and hypotheses, explore alternatives, and assess themselves and their peers' concepts, outcomes, and processes (Uloli, 2021). Creative Thinking (CT) further states that it can make students more aware of their cognitive shortcomings when they attempt to solve problems by assessing the necessary information, both that which is already possessed and that which is not yet possessed (Giancola et al., 2022). Creative thinking skills are an essential aspect of creating innovations and finding ideas to solve problems. Creative thinking is needed by learners not only to deepen the learning experience but also to deal with problems in the learning process (Gurning et al., 2024).

Possession of creative thinking skills will significantly helpful students in classroom learning. (Kartikasari et al., 2022). According to Kiraga (Yuliyanto, 2024), Students who possess creative thinking skills will have a better understanding and a broader perspective compared to those who do not have such abilities. So that students with creative thinking capacity will be able to generate concepts and solve problems. Therefore, creative thinking skills are essential in the learning process. Therefore, it is crucial to enhance students' creative thinking skills in the learning process. Students' creative thinking abilities in Learning can affect learning outcomes, including in science subjects (Pujawan et al., 2022). In other words, it can be said that creative thinking is beneficial for students in learning and understanding the material (E. D. P. Sari et al., 2023).

Thus, it is concluded that the ability to think creatively is an individual's ability to generate a various of new ideas, ideas, or approaches to solving problems. Everyone needs to develop and practice this creative thinking ability, as this allows them to find better and more effective solutions to various challenges in their lives.

TTCT-V (Torrance Test of Creative Thinking Verbal) assesses three aspects of creative thinking: (1) Fluency, where the child can give many ideas with words; (2) Flexibility, where the child can provide a variety of ideas, shifting from one approach to another, or employing various strategies; (3) Originality, the child's ability to generate unusual ideas (Torrance, 2018; Fauziah et al., 2021). According to (Munandar, 2016) Creative thinking indicators include four indicators, that is : (1) Fluent Thinking, when students reach this indicator, students can find answer ideas to solve problems ; (2) Flexible Thinking, when students reach this indicator, they can provide varied solutions (from different perspectives); (3) Original Thinking, when students reach this indicator, they can produce unique answers (using their language or their own words that are easy to understand); and (4) Elaboration skills, the students' ability to formulate concepts or provide a comprehensive explanation of a response is an achievement of this indicator.

### **Science Subject**

Education cannot be separated from the content of Learning because Learning is carried out in the school environment or educational units and covers a variety of subjects, one of which is science content. Science learning contains students' scientific skills that must be developed. One aspect of science learning is scientific thinking skills that are relevant to 21st-century skills (Gurning et al., 2024). One of the subjects related to students' creative and cognitive thinking skills is Natural Science. In science subjects, there is an understanding of practical science concepts that can be applied in daily life related to how to work, how to think, and how to solve problems (Maulidyah et al., 2020).

According to Fowler (in Samatowa, 2016) states that science is a science that is related to natural phenomena and objects that are systematic and arranged regularly in a system. That is, they do not stand alone. One is interrelated with the other, and they explain each other so that they form a complete unity.

There are four main components in the subject of science. One is the first attitude, this involves an interest in objects, living beings, natural events, and causal relationships that lead to new problems that can be solved with appropriate methods. Second, science is open-ended, which is a process consisting of problem-solving procedures through the scientific method, which includes hypothesis formulation, design of experiments or trials, evaluation, measurement,

and conclusion drawing. Third, to produce legal forms, hypotheses, facts, and principles. The fourth is application, which is the use of scientific principles and procedures in daily life. All of these components characterize a whole science that actually cannot be separated from one another (Arifianti, 2020).

Science learning in elementary schools emphasizes providing direct experience to students, where those who learn will be actively involved in real experiences. Because effective scientific instruction must provide students with the opportunity to ask questions and connect what they learn to real-world situations, generate ideas, and build curiosity about everything in their environment (Wahyuni, 2020).

Science subject material in elementary school learning that can be used as a project includes various exciting materials. One of them is the water cycle, where students can create a water cycle model using bottles, soil, and plants to demonstrate the processes of evaporation, condensation, and precipitation. In the material of energy sources, students can make a windmill model that can rotate when hit by the wind. In addition, in the material of human respiration, students can also make simple teaching aids with the help of used plastic bottles, straws, tape, and balloons that can assist students in understanding how humans breathe.

## DISCUSSION

The results of research from (Lavli & Efendi, 2023) with the title "*The Effect of Project Based Learning Model on Creative Thinking Ability*" showed the results of a significant effect of the Project Based Learning model on creative thinking ability. Every indicator of creative thinking improves with its application the Project-Based Learning model, and the posttest scores achieved were higher compared to students in conventional learning classes. Using the Project Learning model can improve students' creative thinking abilities. Creative thinking ability is one of the student abilities that can be grown through the learning process because students need to have the ability to think flexibly, which is one aspect of creative thinking ability and can find discoveries. Creative thinking abilities can be determined using indicators of fluency, flexibility, originality, and elaboration (Ningsih et al., 2021).

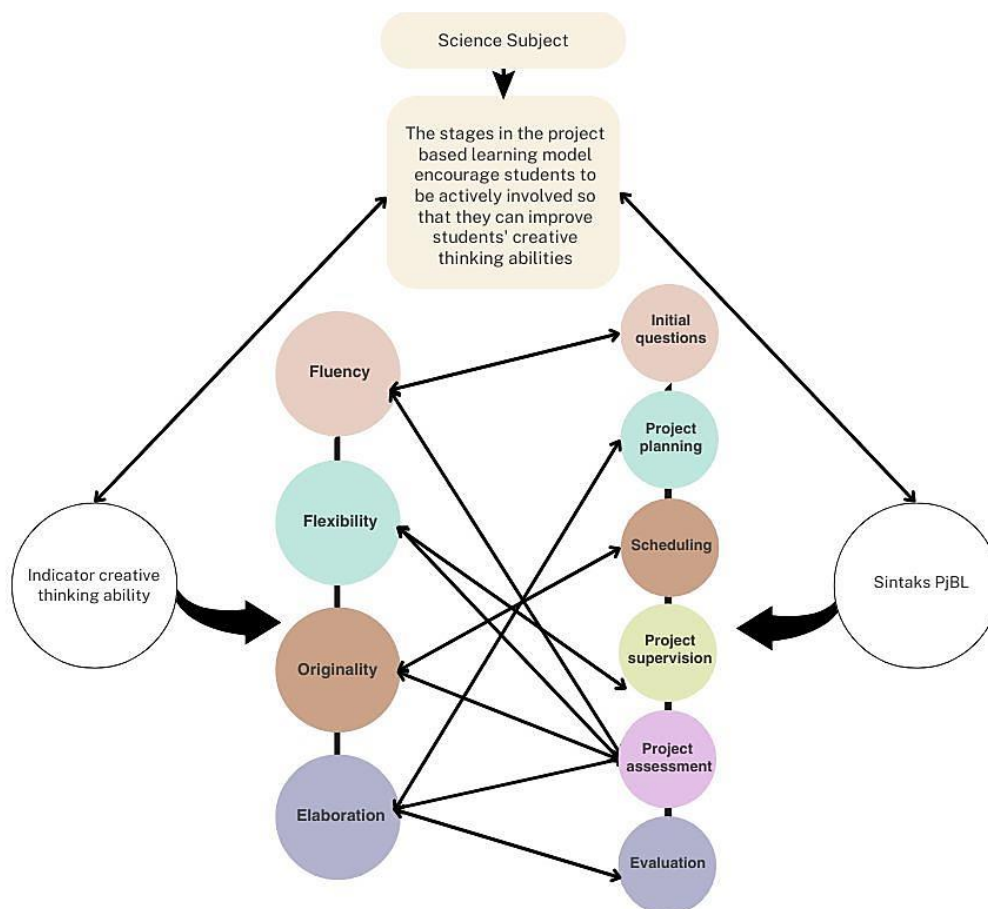
Project-based Learning is one of the many ways that can be used to help learners face future challenges and survive and succeed in the increasingly fierce competition in the 21st century (Rafik et al., 2022). Based on the findings of previous research, Project-Based Learning (PjBL) has a significant impact on students' creative thinking abilities. This is because the learning syntax in the project-based learning model helps students to improve their creative thinking abilities. The following is a description of the stages of the project-based learning model that can influence each indicator of the ability to think creatively:



1. In the first stage, namely Questions at the Beginning of Learning Activities, The teacher asked opening questions that can build students' thinking. Students will try to respond to the question and provide arguments for that response. At this stage, students are able to digest and understand problems, convey information based on their abilities and language, and think directly about what products or projects can be created based on the questions asked. Therefore, this stage can help students think creatively, especially in the aspects of flexibility thinking and fluency thinking (Rafik et al., 2022).
2. The second stage of project-based learning is project planning. In this stage, students select materials that are in line with the concept of the project to be made. Students will try out ideas by developing various information so that the aspect of creative thinking skills that are developed is elaboration.
3. The third stage is scheduling project activities. This stage of preparing the schedule will be carried out by the students themselves and the teacher only as a companion. So that students can understand that in doing a project, excellent and systematic scheduling is needed so that planning can be carried out well. At this stage, the aspects of creative thinking that are developed are original Thinking and Flexible Thinking.
4. The fourth stage is project monitoring. In carrying out their projects, students are supervised by the teacher. At this stage, students will create a project that has been planned previously so that they can develop their creativity in producing a project.
5. The next stage is assessment, which continues with presentation activities and class discussions related to the project results. In this activity, of course, students are trained to be fluent in conveying project results (fluency), providing arguments for project results (flexibility), strengthening answers or ideas of friends (elaboration), and able to propose new problems that have not been studied in learning activities (originality) (Wahida et al., 2015).
6. The last stage of the project-based learning model is project evaluation. At this stage, a reflection will be carried out regarding the learning process that has been applied in this phase, the aspects of creative thinking abilities that are trained for students are aspects of elaboration and evaluation.

In all stages of the project-based learning model, students are able to provide different interpretations of an object of observation. Then, students work to find solutions to the problem and can have discussions with their group friends to identify solutions from the results of their observations. In addition, students can also detail the observation activities carried out, starting with detailing the steps of the project, detailing an object of observation, and detailing the structure of a project report. Students are also able to evaluate the ideas presented for

use in daily life, therefore it can be said that project assignments given to students can develop their creative thinking abilities (Nita & Irwandi, 2021).



**Figure 1.** Chart of the influence of the project-based learning model on creative thinking ability

Thus, based on the explanation and the diagram above, each stage in the project-based learning model can enhance every indicator of creative thinking skills, indicating that project-based learning has an effect on improving the creative thinking abilities of elementary school students.

Project-based Learning can improve 21st-century skills, especially creative thinking (creativity), because Project-Based Learning is able to connect theory with practice and develop potential problem-solving, communication, and collaboration skills (Rafik et al., 2022). The findings of this investigation are consistent with the research conducted by Mokambu (2021), which found that the project-based learning model has more influence on students' creative thinking ability than conventional learning models for science subjects. The project-based learning model can provide authentic learning experiences to students so that they can think creatively and produce attractive products. So, based on previous research, the project-based learning model is efficacious in improving students' creative thinking abilities because, through stages that involve students actively and interactively in solving problems and producing a project or



product, students can develop their creative thinking abilities needed to face the challenges of education in the 21st century.

## CONCLUSION

Improving creative thinking skills by using a project-based learning model can help students to develop their creative thinking skills. The stages of the project-based model encourage students' active involvement in learning. Through the various stages of project-based learning, starting from the first stage of asking questions to the last stage of project evaluation, students are trained to think creatively, both in the aspects of fluency thinking, flexibility thinking, originality thinking, and elaboration. Project Based Learning not only strengthens creative thinking skills but also prepares students to face the challenges of the 21st century by connecting theory and practice and improving problem-solving, communication, and collaboration skills. Nevertheless, during the learning process, the use of learning models does not always run optimally or meet expectations because each learning model has advantages and disadvantages. One of the disadvantages of the project-based learning model is that it is challenging to choose the right project that suits the characteristics of students because they have different characters and learning styles.

This research certainly has several limitations, the first of which is that it does not include factors that can influence students' creative thinking ability. Second, the research design is still qualitative, so the results of this literature review are not empirical, and limited reference sources could be a factor in the limitations of this literature review. Finally, this study only examines the effect of the project-based learning model on the creative thinking abilities of elementary school students, specifically in science subjects. Therefore, future researchers are expected to examine more deeply the effect of project-based learning models in a broader context, not only on specific subjects and specific abilities.

## REFERENCES

- Arifianti, U. (2020). Project Based Learning dalam Pembelajaran IPA. *Workshop Nasional Penguatan Kompetensi Guru Sekolah Dasar*, 3(3), 2079–2082.
- Biazus, M. de O., & Mahtari, S. (2022). The Impact of Project-Based Learning (PjBL) Model on Secondary Students' Creative Thinking Skills. *International Journal of Essential Competencies in Education*, 1(1), 38–48. <https://doi.org/10.36312/ijece.v1i1.752>
- Chen, S. Y., Lai, C. F., Lai, Y. H., & Su, Y. S. (2022). Effect of project-based Learning on the development of students' creative thinking. *International Journal of Electrical Engineering and Education*, 59(3), 232–250. <https://doi.org/10.1177/0020720919846808>
- Dewi, M. R. (2022). Kelebihan dan kekurangan Project-based Learning untuk penguatan Profil Pelajar Pancasila Kurikulum Merdeka. *Inovasi Kurikulum*, 19(2), 213–226. <https://doi.org/10.17509/jik.v19i2.44226>

- Fauziah, L., Rizkiyah, F., Miarsyah, M., & Ristanto, R. H. (2021). Pengembangan TTCT-V (Torrance Test Of Creative Thinking Verbal) Berbasis Lingkungan Untuk Tingkat SMA. *Jurnal Pendidikan Biologi*, 8(1), 1–11.
- Giancola, M., Palmiero, M., Piccardi, L., & D'amico, S. (2022). The Relationships between Cognitive Styles and Creativity: The Role of Field Dependence-Independence on Visual Creative Production. *Behavioral Sciences*, 12(7). <https://doi.org/10.3390/bs12070212>
- Gurning, H. G., Siagian, A. F., & ... (2024). Pengaruh Model Project Based Learning Terhadap Kemampuan Berpikir Kreatif Siswa Kelas V Sd. ... *Jurnal Indonesia (P3JI)*, 2(2), 23–31. <https://jurnal.migascentral.com/index.php/p3ji/article/view/198%0Ahttps://jurnal.migascentral.com/index.php/p3ji/article/download/198/181>
- Kartikasari, I. A., Usodo, B., & Riyadi. (2022). The Effectiveness Open-Ended Learning and Creative Problem Solving Models to Teach Creative Thinking Skills. *Pegem Egitim ve Ogretim Dergisi*, 12(4), 29–38. <https://doi.org/10.47750/pegegog.12.04.04>
- Lavli, R. O. E. H., & Efendi, N. (2023). Effect of Project-Based Learning Model on Creative Thinking Ability. *Jurnal Ilmu Pendidikan (JIP) STKIP Kusuma Negara*, 15(2), 115–126. <https://doi.org/10.37640/jip.v15i2.1804>
- Maulidyah, E., Hidayat, M. T., Kariyun, S., & Hartatik, S. (2020). Pengaruh Model Pembelajaran Project Based Learning Terhadap Kemampuan Berpikir Kreatif Ipa Kelas Iv Sd. *Jurnal Didika: Wahana Ilmiah Pendidikan Dasar*, 6(2). <https://doi.org/10.29408/didika.v6i2.2379>
- Mokambu, F. (2021). Pengaruh model project based learning terhadap kemampuan berpikir kreatif siswa pada pembelajaran ipa di kelas V SDN 4 Talaga Jaya. *Prosiding Seminar Nasional Pendidikan Dasar "Merdeka Belajar Dalam Menyambut Era Masyarakat 5.0," November*, 56–62.
- Munandar, U. (2016). *Pengembangan Kreativitas Anak Berbakat*. Rineka Cipta.
- Ningsih, M. Y., Efendi, N., & Sartika, S. B. (2021). Pengaruh Model Project Based Learning Terhadap Berpikir Kreatif Peserta Didik dalam Pembelajaran IPA. *Jurnal Inovasi Pendidikan Sains (JIPS)*, 2(2), 42–51. <https://doi.org/10.37729/jips.v2i2.1403>
- Nita, R. S., & Irwandi. (2021). Peningkatan Keterampilan Berpikir Kreatif Siswa Melalui Model Project Based Learning (PjBL). *BIOEDUSAINS: Jurnal Pendidikan Biologi Dan Sains*, 4(2019), 231–238.
- Nurhidayah, I. J., Wibowo, F. C., & Astra, I. M. (2021). Project Based Learning (PjBL) learning model in science learning: A literature review. *Journal of Physics: Conference Series*, 2019(1). <https://doi.org/10.1088/1742-6596/2019/1/012043>
- Pujawan, I. G. N., Rediani, N. N., Antara, I. G. W. S., Putri, N. N. C. A., & Bayu, G. W. (2022). Revised Bloom Taxonomy-Oriented Learning Activities To Develop Scientific Literacy and Creative Thinking Skills. *Jurnal Pendidikan IPA Indonesia*, 11(1), 47–60. <https://doi.org/10.15294/jpii.v11i1.34628>
- Rafik, M., Febrianti, V. P., Nurhasanah, A., & Muhajir, S. N. (2022). Telaah Literatur: Pengaruh Model Pembelajaran Project Based Learning (PjBL) terhadap Kreativitas Siswa Guna Mendukung Pembelajaran Abad 21. *Jurnal Pembelajaran Inovatif*, 5(1), 80–85. <https://doi.org/10.21009/jpi.051.10>
- Samatowa, U. (2016). *Pembelajaran IPA di Sekolah Dasar*. Indeks.
- Sari, A. Y. (2018). Implementasi Pembelajaran Project Based Learning Untuk Anak Usia Dini. *Motoric*, 1(1), 10. <https://doi.org/10.31090/paudmotoric.v1i1.547>

- Sari, E. D. P., Trisnawati, R. K., Agustina, M. F., Adiarti, D., & Noorashid, N. (2023). Assessment of Students' Creative Thinking Skill on the Implementation of Project-Based Learning. *International Journal of Language Education*, 7(3), 414–428. <https://doi.org/10.26858/ijole.v7i3.38462>
- Simeru, A., Natusion, T., Takdir, M., Siswati, S., Susanti, W., Karsiwan, W., Suyani, K., Mulya, R., Friadi, J., & Nelmira, W. (2023). *Model-Model Pembelajaran* (Sutomo (ed.); p. 236). Lakeisha.
- Song, X., Razali, A. B., Sulaiman, T., & Jeyaraj, J. J. (2024). Impact of Project-Based Learning on Critical Thinking Skills and Language Skills in EFL Context: A Review of Literature. *World Journal of English Language*, 14(5), 402–412. <https://doi.org/10.5430/wjel.v14n5p402>
- Suhelayanti, Z, S., & Rahmawati, I. (2023). Pembelajaran Ilmu Pengetahuan Alam Sosial (IPAS). In *Penerbit Yayasan Kita Menulis*.
- Uloli, R. (2021). *Berpikir Kreatif dalam Penyelesaian Masalah Tantangan Pembelajaran Abad 21*. RFM Media.
- Wahida, F., Rahman, N., & Gonggo, T. (2015). Pengaruh Model Pembelajaran Berbasis Proyek Terhadap Keterampilan Berpikir Kreatif Dan Hasil Belajar Siswa Kelas X SMA Negeri 1 Parigi. *Jurnal Sains Dan Teknologi Tadulako*, 36–43.
- Wahyuni, R. A. (2020). Meningkatkan Hasil Belajar IPA dengan Menggunakan Model Pembelajaran Predict, Discuss, Explain, Observe, Discuss, Explain (PDEODE). *Seminar Nasional Pendidikan, FKIP UNMA 2020*, 477–486.
- Wajdi, F. (2017). Implementasi Project Based Learning (Pbl) Dan Penilaian Autentik Dalam Pembelajaran Drama Indonesia. *Jurnal Pendidikan Bahasa Dan Sastra*, 17(1), 86. [https://doi.org/10.17509/bs\\_jpbs.v17i1.6960](https://doi.org/10.17509/bs_jpbs.v17i1.6960)
- Yuliyanto, A., Sofiasyari, I., Farikhin, I., & Rogibah. (2023). *Model-Model Pembelajaran untuk Sekolah Dasar*. CV.Eureka Media Aksara.