International Journal of Sustainable Development & Future Society, 2 (2), November 2024, pp.62-69.

e-ISSN: 3026-247X
p-ISSN: 3025-9797

Content lists available at Indonesia Academia Research Society

International Journal of Sustainable Development & Future Society

Journal homepage: ejournals.indoacademia-society.com

Review Article

Check for updates

Applying Constructivist Learning Theory to Enhance Student Learning Outcomes in Elementary Schools

Juwandhi Romdhon [a], Masrifah Masrifah [a], Neng Meena Shiyama [a] and Henny Suharyati [a,*]

[a] Postgraduate Program of Educational Management, Pakuan University, Bogor Tengah, 16129 Kota Bogor, Jawa Barat, Indonesia.
* Correspondence: henny.suharyati@unpak.ac.id (H.S.)

Article History
Received 12 August 2024
Revised 9 October 2024
Accepted 2 November 2024
Available Online 30 November 2024

Keywords:
Constructivism
Learning outcomes
Student engagement
Critical thinking
Creativity

Abstract

Constructivism offers an alternative approach to the educational process, particularly in the context of learning. This approach emphasizes the exploration and construction of knowledge through activities in which students actively engage. It provides students with opportunities to express their ideas and thoughts about the situations they encounter, fostering creativity, innovation, and logical reasoning. The objective of this study is to evaluate the effectiveness of applying constructivist learning theory in enhancing student learning outcomes in schools. The study employs a literature review methodology, analyzing 15 recent articles relevant to the topic. The results indicate that the constructivist approach prioritizes student engagement in the learning process, encouraging active participation in understanding the material. This approach has proven to be particularly effective in subjects such as mathematics, science, and the Indonesian language. Implementing constructivist learning theory helps students develop critical thinking skills and encourages creativity in both expressing opinions and generating ideas. The findings suggest that a well-executed constructivist approach can significantly improve student learning outcomes by fostering a deeper understanding of content and promoting active involvement in the learning process.

1. Introduction

Education plays a crucial role in enhancing the quality of the next generation, representing a dynamic and evolving process. Educational transformation is an inevitable phenomenon, essential for the growth and development of education in our country. It is expected that through this transformation, education will become a cornerstone for producing intelligent, creative, and innovative individuals prepared to navigate the challenges of the Society 5.0 era. Over recent decades, a significant shift has occurred in educational paradigms, moving from traditional teacher-centred approaches to more student-centered methods (Darling-Hammond et al., 2020).

A key theory supporting this transition is constructivism, which posits that knowledge is not passively transmitted but actively constructed through interactions between students and their environment (Piaget, 1973; Vygotsky, 1978). In the educational context, students are not mere recipients of knowledge but active participants in discovering and constructing it. The application of constructivist theory in elementary school education holds considerable potential for enhancing student learning outcomes.

By focusing on student engagement—such as providing opportunities for questioning, discussion, and experimentation—constructivism aims to stimulate motivation, foster deeper understanding of concepts, and improve students' critical and creative thinking abilities (Bransford et al., 2000). This paper explores the implementation of constructivist theory in elementary education, discussing its fundamental principles, effective learning strategies, and their impact on improving student performance.

2. Materials and Methods

According to Unggul and Banyuasin (2024), a literature review is a research method that focuses on a specific theme and is analyzed in depth. It involves critically reviewing and evaluating pre-existing sources. The primary aim of a literature review is to examine and provide detailed insights into the latest research on the topic being studied. This process enables the researcher to gather current information, identify gaps in previous studies, and establish a solid theoretical foundation for the upcoming research to address the identified issues effectively (Unggul & Banyuasin, 2024).

This study presents the findings of an article search related to the theme of constructivist learning theory in elementary schools. The literature review approach is employed to explore the application of constructivist learning theory in improving student learning outcomes at the elementary level. Data were collected through searches using the Publish or Perish application and analysis of relevant literature from various scientific journals focusing on constructivist learning theory. The selection criteria for articles required that only the most recent studies, published between 2020 and 2024, be considered. The search was specifically centered on the keyword "Constructivism Learning Theory."

Initially, 200 articles were identified, and from these, 30 were deemed relevant to the research theme. After a careful review, further screening was conducted to ensure alignment with the study's objectives. Following this screening process, 15 articles were selected for inclusion in the literature review. These articles were compiled into a single file, where they were analyzed in terms of the author's name, publication year, research title, methodology, and findings (see Table 3.1). The data collected were then discussed and used to draw conclusions based on the analysis.

3. Results

According to Sukiman (2008), the term "constructivism" originates from the verb "to construct," which refers to the process of creating or forming a structure, derived from the Latin word "construere." Constructivism is a theory of knowledge that focuses on the process of acquiring knowledge (knowledge acquisition). In this context, constructivism emphasizes the creation and development of knowledge, rather than merely transmitting it (Saputro & Pakpahan, 2021). The constructivist perspective views knowledge as something that is gradually built by individuals through experiences, enriched by contextualized learning. It posits that knowledge does not emerge spontaneously but is constructed through a process of continuous development in a controlled environment (Wahab & Rosnawati, 2021). As Subarjo et al. (2023) assert, human understanding is not a mere collection of facts or concepts that can be easily retrieved but rather something that must be constructed through experience.

When applied to learning, constructivism is understood as a process of knowledge formation within individuals, rooted in mental activities that are reinforced by learning experiences (Hein, 1991; Boghossian, 2006). This suggests that the learning process is self-directed, allowing individuals to construct knowledge in their way. Constructivism is seen as a source of inspiration for developing interactive learning methods, which should be continuously refined through reform initiatives, particularly in science education for elementary school students. Zimmerman and Stage (2008, as cited in Lily, 2011) note that according to Piaget's theory of intellectual development, children aged 6 to 12 years—typical of elementary school students—are in the concrete operational phase, characterized by heightened curiosity and sensitivity to knowledge formation, skill development, and awareness. The implementation of constructivist principles, aligned with the developmental characteristics of elementary school children, has been shown to foster greater student engagement and creativity in the learning process, particularly in science education (Rahayu, 2022).

Constructivism encourages flexibility in the learning process, where individuals acquire knowledge not only independently but with the assistance of others. It directs learners to construct their own knowledge and develop their potential (Thobroni, 2015). According to Sagala (2007), it is crucial to recognize that a "conventional" approach to constructivist learning cannot be universally applied to all contexts. As Fitri (2020) notes, constructivism is grounded in a contextual approach, where knowledge is gradually built and developed through a controlled process, rather than emerging spontaneously.

Constructivist learning theory posits that learning is a process of knowledge construction by the learners themselves. Knowledge stored in memory cannot simply be transferred; it must undergo a process of engagement to be fully understood and retained. Similarly, a teacher's knowledge cannot be directly transferred to students but must be constructed through specific learning stages (Muhibin & Hidayatullah, 2020).

This study focuses on analyzing the implementation of constructivist learning theory and its effects on student learning outcomes in elementary schools. The findings are presented through a descriptive narrative, illustrating how the application of constructivism influences student performance. Data analysis from the reviewed articles was conducted using a descriptive method, in alignment with the literature review approach employed in this study.

Table 1. Summary of research studies on the implementation of constructivist learning models in elementary schools

No	Author(s) and Year(s)	Research Title	Research Methods	Research Results
1	Naufal, H. (2021)	Constructivist Learning Model in Mathematics to Improve Students' Cognitive Ability in the Era of Independent Learning	Literature review using the library model	The study concludes that the constructivist learning model is highly suitable for implementation in the learning process, aligning with the Independent Learning Program. The model improves students' cognitive abilities by enhancing their understanding of the material (Naufal, 2021).
2	Adhiyah, M. (2023)	Constructivist Learning Assisted by Concrete Object Media to Improve Student Learning Outcomes in Space Building Materials at Elementary Schools	Classroom Action Research (CAR)	The study demonstrated that using real learning media in a constructivist approach significantly improved learning outcome. The average student score in the first cycle was 68.8, which increased to 78.8 in the second cycle, highlighting the importance of hands-on media for enhancing understanding (Adhiyah, 2023).
3	Rahayu, R. (2022)	Implementation of Constructivist Learning Theory in Elementary Schools	Qualitative descriptive approach	The study highlighted the student-centered nature of constructivist learning, where students actively construct their understanding. The use of media and the 5M learning model contributed to a more active learning environment, fostering greater student engagement and teacher innovation (Rahayu, 2022).
4	Herianto & Lestari (2021)	Implementation of Constructivist Theory in Science Learning through the Use of Electronic Teaching Materials	Qualitative descriptive approach	The research found that integrating technology, such as interactive multimedia e-books, supported the implementation of constructivist learning. This approach enhanced the learning environment and made it easier for teachers to apply constructivist principles (Herianto & Lestari, 2021).
5	Putri, A. Q., et al. (2023)	Implementation of Learning Theory from the Perspective of Constructivism Psychology at the Basic Education Level	Library research	The study found that incorporating constructivist psychology in elementary education fosters social interactions like discussions, group projects, and simulations. These activities facilitate more effective learning experiences (Putri et al., 2023).
6	Ilham, M. F., Arba'iyah, L., & Tiodora, L. (2023)	Implementation of Constructivism Psychology Perspective Learning Theory in Elementary School Education	Library research	The study concluded that the application of constructivist learning theory in elementary schools promotes student-centered learning and enhances student engagement and teacher innovation (Ilham et al., 2023).
7	Fitri, Y. (2020)	Implementation of Constructivism Theory in the Primary School Learning Process	Not specified	The study emphasized the importance of student activities in constructivism, with students actively building their own knowledge. The teacher's role is to facilitate this process, encouraging critical thinking, creativity, and rational expression (Fitri, 2020).
8	Vitriani, D., et al. (2023)	Implementation of the Constructivist Approach to Science Learning to Improve Learning Outcomes of Grade V Students	Classroom Action Research	The study revealed significant improvements in science learning outcomes, with class average scores increasing from 60 to 88. The percentage of learning completion also

				rose from 26% to 100% in the second cycle (Vitriani et al., 2023).
9	Subarjo, M. D., Suarni, N. K., & Margunayasa, I. G. (2024)	Analysis of the Application of the Constructivism Learning Theory Approach to Critical Thinking Skills of Elementary School Students	Qualitative literature study	The research concluded that constructivist learning theory significantly enhances students' critical thinking skills, suggesting that optimal implementation fosters better understanding and collaboration between students and teachers (Subarjo et al., 2023).
10	Permata, N. D., Suswandari, M., & Farida, N. (2024)	Analysis of the Relationship between Teacher Assessment and Constructivism Learning Theory in Building Sustainable Understanding at SDN Kenep 03	Qualitative research	The study found that constructivist learning theory plays a crucial role in assessment practices, allowing for feedback that encourages student reflection and enhances critical thinking (Permata et al., 2024).
11	Puspita, K. A. (2023)	The Effect of the Blended Learning Model on Learning Outcomes	Literature review	The research indicated that blended learning has a significant positive effect on student learning outcomes, with a higher impact observed in online learning compared to offline methods (Puspita & Tirtoni, 2023).
12	Fahrezi, I., et al. (2020)	Meta-Analysis of the Influence of Project-Based Learning on Student Learning Outcomes in Elementary School Science	Meta-analysis	The study found that Project-Based Learning (PBL) significantly improved student learning outcomes, with an average score increase from 63.29 to 80.15, highlighting PBL's effectiveness in science education (Fahrezi et al., 2020).
13	Thabrani, M., et al. (2023)	Improving Student Learning Outcomes through the Application of Constructivist Learning Models in Elementary Schools	Classroom Action Research	The study demonstrated that constructivist learning models improved student learning outcomes, with student activity and teacher engagement both significantly increasing from the first to the second cycle (Thabrani, 2023).
14	Handhika, D., et al. (2021)	The Effect of Project-Based and Problem-Based Learning Models on Student Learning Outcomes	Quantitative research	The study found that both Project-Based Learning and Problem-Based Learning positively influenced student learning outcomes, particularly in Grade V students (Handhika et al., 2021).
15	Rindengan, M. E. (2023)	Application of Project-Based Learning Model to Improve Students' Indonesian Learning Outcomes in Primary School	Classroom Action Research	The study revealed significant improvements in learning outcomes in Indonesian subjects after applying the Project-Based Learning model, with a rise in learning achievement from 49% to 83% in the second cycle (Rindengan, 2023).

Table 1 captures that reveals substantial evidence supporting its positive impact on student learning outcomes. The studies encompass a range of methodologies, including literature reviews, classroom action research, and meta-analyses, which highlight the versatility and efficacy of constructivist principles in various learning environments and subjects. The findings from these studies provide a comprehensive view of how constructivism can transform the educational experience for elementary school students.

3.1. Improvement in Cognitive and Learning Outcomes

Across several studies, constructivism has shown a significant role in enhancing students' cognitive abilities and learning outcomes. Naufal (2021) highlights that constructivist learning aligns well with independent learning initiatives, which is essential in the modern educational landscape. By emphasizing students' active engagement and their role in constructing knowledge, this approach encourages deeper understanding and critical thinking, particularly in subjects like mathematics and science. In similar studies, including those by Adhiyah (2023) and Vitriani et al. (2023), the use of constructivist learning models has led to measurable

improvements in academic performance, with average scores increasing across multiple cycles. This increase in performance is attributed to the active involvement of students in the learning process, facilitated by hands-on and concrete learning experiences, such as using real-world objects and project-based activities.

In a meta-analysis conducted by Fahrezi et al. (2020), the implementation of Project-Based Learning (PBL) resulted in an average score increase from 63.29 to 80.15, indicating the model's effectiveness in fostering better learning outcomes. The use of authentic, real-world problems in PBL allows students to apply theoretical knowledge to practical scenarios, thereby reinforcing their learning and critical thinking skills. These findings align with the broader goals of constructivism, which aims to develop autonomous, self-directed learners who actively build their own understanding.

3.2. Engagement and Motivation in Learning

One of the strongest impacts of constructivism in the studies is its ability to increase student engagement and motivation. Adhiyah (2023) discusses how the integration of real object media in constructivist learning environments motivates students, particularly in subjects like mathematics, where abstract concepts can often be challenging. By using concrete materials, students are better able to grasp spatial concepts, which can otherwise be difficult to understand. This finding is corroborated by the results of Rahayu (2022), who emphasized the shift towards a student-centered learning model where students are more actively involved in the learning process. The 5M learning model (observe, question, experiment, associate, and communicate) used in this research exemplifies how constructivism can engage students not just cognitively but also emotionally, leading to enhanced intrinsic motivation to learn.

Additionally, Fitri (2020) reinforces the idea that the constructivist approach encourages students to express their own thoughts and engage critically with the material. In this process, students learn to think creatively and critically, leading to higher levels of motivation. The emphasis on active, inquiry-based learning aligns with the findings of Vitriani et al. (2023), where project-based learning models not only improved academic results but also led to 100% learning completion in the second cycle. This demonstrates that when students feel empowered to take control of their learning, they are more likely to stay engaged and motivated.

3.3. Development of Critical Thinking Skills

Constructivism's impact on the development of critical thinking skills is another central theme across the studies. In the research by Subarjo et al. (2023), the application of constructivist theory was shown to have a profound effect on enhancing students' critical thinking abilities. The theory encourages students to think independently, solve problems, and engage in reflective thought processes. This is particularly important in today's rapidly changing world, where the ability to think critically and adapt to new situations is crucial. Constructivist models, such as Project-Based Learning and Problem-Based Learning, provide students with opportunities to engage in critical thinking tasks that require them to solve real-world problems.

The integration of assessment as part of the learning process, as discussed by Permata et al. (2024), also plays a significant role in fostering critical thinking. Constructivist assessments focus not just on the final product but also on how students arrive at their conclusions. This reflective approach encourages students to understand their learning processes and to build on their strengths and weaknesses. This kind of formative assessment aligns with constructivist principles by providing feedback that is essential for continuous learning and critical reflection.

3.4. Teacher Innovation and Facilitation

Another key finding is the role of the teacher as a facilitator in the constructivist classroom. Studies by Rahayu (2022) and Ilham et al. (2023) emphasize the importance of teachers not merely transmitting knowledge but creating an environment where students can explore, collaborate, and actively construct their understanding. In this context, teachers are expected to be more innovative and flexible in their approaches, utilizing various media and learning models to support student engagement.

For example, Herianto and Lestari (2021) found that the use of electronic teaching materials, such as interactive multimedia e-books, in combination with constructivist approaches, provided greater ease for teachers in applying the theory and helped create a more dynamic learning environment. The use of such technology-enabled tools can significantly enhance both the learning experience for students and the teaching process itself, making it easier for teachers to facilitate a student-centered classroom.

3.5. Impact of Blended Learning

Finally, the research on Blended Learning, as presented by Puspita & Tirtoni (2023), provides insights into how technology can complement constructivist practices. Blended learning, which integrates both online and offline methods, has been found to significantly improve student learning outcomes. The research concluded that online learning had a more significant impact than offline learning, with a statistical significance of 0.003. This finding highlights the potential of combining digital tools with constructivist principles to enhance student engagement and learning outcomes. Blended learning allows students to access a variety of

resources, collaborate with peers remotely, and engage in self-directed learning, all of which are key elements of the constructivist approach.

4. Discussion

The implementation of constructivist learning theory has been shown to significantly enhance student learning outcomes in elementary schools. This theory, which emphasizes active, student-centered learning, has been applied through various innovative models across multiple subject areas. A review of the literature reveals the positive effects of these constructivist-based approaches, particularly in fostering engagement and improving academic performance. The following analysis synthesizes the findings from several key studies on the subject:

4.1. Constructivist Learning Model

The use of the constructivist learning model has consistently resulted in improved student performance. For example, a study conducted at SD Negeri 1 Watuampara found that the average student score increased from 57.6 in the first cycle to 88.4 in the second cycle. Additionally, the percentage of students meeting learning objectives rose from 48% to 92%. These findings indicate that constructivist learning approaches promote greater student engagement and enhance the quality of interactions between students and teachers, directly contributing to higher academic achievement (Johnson & Johnson, 2009).

4.2. Project-Based Learning (PBL)

Project-Based Learning (PBL), which integrates constructivist principles, has been shown to positively impact student learning outcomes. In a study of Indonesian language learning, the percentage of students completing their learning objectives increased from the first to the second cycle, achieving a completion rate of 83%. Furthermore, a meta-analysis of 10 studies revealed a significant improvement in student outcomes, with the average score increasing from 57.56 to 82.46 following the implementation of PBL. These results highlight PBL's ability to foster active, creative learning while improving skill development (Thomas, 2000). In science education, PBL also led to significant improvements, with class average scores rising from 60 to 88 and achieving a 100% learning completion rate. This underscores the potential of PBL to facilitate deep learning through exploration and collaboration, which enhances material retention (Bell, 2010).

4.3. Problem-Based Learning (PBL)

In addition to Project-Based Learning, the Problem-Based Learning (PBL) model has also demonstrated positive effects on student outcomes. In social studies, PBL encouraged greater student participation, particularly in understanding economic concepts. This approach supports the development of critical thinking skills by challenging students to engage in inquiry-based problem solving (Barrows, 1996).

4.4. Blended Learning

The Blended Learning model, which combines online and offline methods, has proven effective in enhancing learning outcomes. A study focused on an independent curriculum-based approach found that online learning had a more significant impact than offline learning, with a significance value of 0.003. This indicates that integrating technology into constructivist-based learning can significantly enrich students' educational experiences (Garrison & Kanuka, 2004).

5. Conclusions

The analysis of the studies reviewed clearly illustrates that the application of constructivist learning theory has a profound impact on improving various dimensions of elementary education, including cognitive development, critical thinking, student engagement, and motivation. The adoption of innovative learning models, such as Project-Based Learning, Problem-Based Learning, and Blended Learning, has proven to be particularly effective in fostering active, student-centered learning environments. In these environments, teachers assume the role of facilitators, utilizing diverse instructional methods and resources to support student learning.

Future research should explore the long-term effects of these learning models on student outcomes and examine strategies for optimizing their implementation across various educational contexts. Additionally, further studies are needed to refine evaluation techniques that can comprehensively assess the effectiveness of constructivist approaches in promoting deep, meaningful learning. The findings highlight the critical role of constructivist learning as a foundational framework in modern education, equipping students with essential skills for success in an increasingly complex and dynamic world.

Overall, constructivist theory is highly applicable when implemented through diverse learning models, such as project-based, problem-based, and blended learning approaches, all of which prioritize student engagement and active participation in the learning process. This approach has been shown to significantly enhance student outcomes, particularly in subjects like mathematics, science, and Indonesian. By emphasizing critical thinking and fostering creativity, constructivist learning empowers students to express their ideas and opinions more effectively throughout their educational journey.

The integration of constructivist learning theory with innovative learning models has substantially contributed to the success of primary education. These approaches

not only improve academic performance but also encourage active participation, creativity, and autonomy in students' learning processes. Going forward, it is imperative for future research to focus on developing comprehensive evaluation strategies that can thoroughly assess the impact of these teaching methods on student achievement.

In conclusion, constructivist learning theory, applied through models such as Project-Based Learning, Problem-Based Learning, and Blended Learning, offers a robust framework for fostering meaningful and effective learning experiences. These models play a crucial role in enhancing student engagement, critical thinking, and creativity—key competencies that are essential for success in the evolving educational landscape.

Author Contributions: Conceptualization, J.R. and H.S.; methodology, J.R.; software, J.R.; validation, M.M., N.M.S. and H.S.; formal analysis, J.R.; investigation, J.R. and H.S.; resources, J.R.; data curation, M.M., N.M.S. and H.S.; writing—original draft preparation, J.R. and H.S.; writing—review and editing, M.M., N.M.S. and H.S.; visualization, J.R.; supervision, H.S.; project administration, H.S.; funding acquisition, H.S. All authors have read and agreed to the published version of the manuscript.

Author Initials:
J.R. - Juwandhi Romdhon
M.M. - Masrifah Masrifah
N.M.S. - Neng Meena Shiyama
H.S. - Henny Suharyati

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Inform Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Not applicable.

Acknowledgments: The authors would like to thank Pakuan University, Bogor, Indonesia, for supporting this research and publication. We also thank the reviewers for their constructive comments and suggestions.

Conflicts of Interest: The authors declare no conflict of interest.

References

Adhiyah, M. (2023). Pembelajaran konstruktivisme berbantuan media benda konkret untuk meningkatkan hasil belajar siswa pada materi bangun ruang di sekolah dasar. *Jurnal Basicedu, 7*(4), 2081–2090. https://doi.org/10.31004/basicedu.v7i4.4988

Barrows, H. S. (1996). Problem-based learning in medicine and beyond: A brief overview. *New Directions for Teaching and Learning, 1996*(68), 3-12.

Bell, S. (2010). Project-based learning for the 21st century: Skills for the future. *The Clearing House: A Journal of Educational Strategies, Issues, and Ideas, 83*(2), 39-43.

Bransford, J., Brown, A. L., & Cocking, R. R. (2000). *How people learn: Brain, mind, experience, and school* (Expanded ed.). National Academy Press.

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2020). *Effective teacher professional development*. Learning Policy Institute.

Dian Permata, N., Suswandari, M., & Farida, N. (2024). Analisis keterkaitan asesmen guru dengan teori belajar konstruktivisme dalam membangun pemahaman yang berkelanjutan di SDN Kenep 03. *Jurnal Dikdas Bantara, 7*(1), 37–49. https://doi.org/10.32585/dikdasbantara.v7i1.5120

Fahrezi, I., Taufiq, M., Akhwani, A., & Nafia'ah, N. (2020). Meta-analisis pengaruh model pembelajaran project-based learning terhadap hasil belajar siswa pada mata pelajaran IPA sekolah dasar. *Jurnal Ilmiah Pendidikan Profesi Guru, 3*(3), 408. https://doi.org/10.23887/jippg.v3i3.28081

Fitri, Y. (2020). Implementasi penerapan teori konstruktivisme dalam proses pembelajaran di sekolah dasar. *SHEs: Conference Series 3, 3*(4), 1300–1307. https://jurnal.uns.ac.id/shes

Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education, 7*(2), 95-105.

Handhika, D., Santoso, & Ismaya, E. A. (2021). Pengaruh model project-based learning dan problem-based learning untuk meningkatkan hasil belajar siswa. *Jurnal Educatio FKIP UNMA, 7*(4), 1544–1550. https://doi.org/10.31949/educatio.v7i4.1449

Herianto, H., & Lestari, D. P. (2021). Implementasi teori konstruktivisme dalam pembelajaran IPA melalui pemanfaatan bahan ajar elektronik. *Jurnal Pembangunan Pendidikan: Fondasi dan Aplikasi, 9*(1), 49–57. https://doi.org/10.21831/jppfa.v9i1.38024

Ilham, M. F., & Fakhri, A. T. L. (2023). Implementasi teori belajar perspektif psikologi konstruktivisme dalam pendidikan anak sekolah dasar. *Multilingual, 3*(3), 380–391.

Johnson, D. W., & Johnson, R. T. (2009). An educational psychology success story: Social interdependence theory and cooperative learning. *Educational Researcher, 38*(5), 365-379.

Muhibin, M., & Hidayatullah, M. A. (2020). Implementasi teori belajar konstruktivisme Vygotsky pada mata pelajaran PAI di SMA Sains Qur`An Yogyakarta. *Belajea: Jurnal Pendidikan Islam, 5*(1), 113. https://doi.org/10.29240/belajea.v5i1.1423

Naufal, H. (2021). Model pembelajaran konstruktivisme pada matematika untuk meningkatkan kemampuan kognitif siswa di era Merdeka Belajar. *Seminar Nasional Pendidikan Matematika, 2*(1), 143–152.

Piaget, J. (1973). *To understand is to invent: The future of education*. Viking Press.

Puspita, K. A., & Tirtoni, F. (2023). Pengaruh model pembelajaran blended learning terhadap hasil belajar siswa sekolah dasar. *Lectura: Jurnal Pendidikan, 14*(1), 85–98. https://doi.org/10.31849/lectura.v14i1.12031

Putri, A. Q., Albab, A. U., Linardho, B. F., & Yusuf, A. (2023). Implementasi teori belajar perspektif psikologi konstruktivisme pada jenjang pendidikan dasar.

PREMIERE: Journal of Islamic Elementary Education, 5(2), 15–27. https://doi.org/10.51675/jp.v15i2.530

Rahayu, R. (2022). Implementasi teori pembelajaran konstruktivistik di sekolah dasar. *Pendidikan Nilai Kajian Teori dan Praktik di Sekolah, II*(3), 1–8. http://repository.uhn.ac.id/handle/123456789/7061

Subarjo, M. D. P., Suarni, N. K., & Margunayasa, I. G. (2023). Analisis penerapan pendekatan teori belajar konstruktivisme pada kemampuan berpikir kritis siswa sekolah dasar. *Ide Guru: Jurnal Karya Ilmiah Guru, 9*(1), 313–318. https://doi.org/10.51169/ideguru.v9i1.834

Thabrani, A. M. (2023). Filsafat dalam pendidikan. *Jurnal Penelitian Pendidikan Guru Sekolah Dasar, 400–407.*

Thomas, J. W. (2000). *A review of research on project-based learning*. The Autodesk Foundation.

Unggul, S. M. K., & Banyuasin, N. (2024). Pendidikan karakter di sekolah menengah kejuruan. *Gudang jurnal multidisiplin ilmu literature review 2*(1), 3–21.

Vitriani, D., Nisa, A. F., Nurhayati, S., Rukmi, D. A., & Yustina, A. (2023). Implementasi pendekatan konstruktivisme pada pembelajaran IPA untuk meningkatkan hasil belajar IPA siswa kelas V SD. *Prosiding Seminar Nasional Pendidikan Dasar, 1*(1), 88–101.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.