

# INTEGRATION OF PROJECT-BASED LEARNING (PJBL) MODELS IN DEEP LEARNING AT IMAM SYAFI'I ISLAMIC ELEMENTARY SCHOOL

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## ABSTRACT

*This study aims to analyze in depth the integration of the Project-Based Learning (PjBL) model in strengthening deep learning in elementary schools. This study uses a qualitative approach with a case study conducted at SD Islam Imam Syafi'i, with informants consisting of the principal, teachers, and students. Research data were collected through participatory observation during the project learning process, in-depth interviews to explore the perceptions and experiences of informants, and analysis of learning documents. Data validity techniques were carried out through source triangulation and techniques to ensure the validity of the research results. Data analysis referred to the Miles, Huberman, and Saldaña model, which includes the processes of data reduction, data presentation, and conclusion drawing. The results showed that the integration of PjBL effectively improved students' conceptual understanding, creativity, and active engagement in the deep learning process. Teachers acted as facilitators who guided students' exploration, reflection, and collaboration in completing projects. These findings confirm that the application of PjBL is able to instill deep learning values such as critical thinking, reflection, and independent learning that are relevant to the demands of the Merdeka Curriculum. It is recommended that schools provide sustainable policy support and integrate PjBL by maximizing digital technology to expand meaningful learning practices.*

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## 1. INTRODUCTION

Islamic elementary education plays a strategic role in shaping students' character, morality, and critical thinking skills. In the context of the 21st century and the Industrial Revolution 4.0 era, Islamic educational institutions are challenged to integrate Islamic values with modern, technology-based, and deep learning

approaches. One innovative approach relevant to these needs is Project-Based Learning (PjBL), a learning model oriented toward real-world projects to develop students' critical, collaborative, and creative thinking skills.

Although deep learning is often associated with Artificial Intelligence (AI), in an educational context, the term emphasizes the students' ability to construct profound conceptual understanding rather than merely memorizing facts. Thus, the integration of PjBL and deep learning approaches in Imam Syafi'i Islamic Elementary School serves as a strategic innovation to address 21st-century learning needs aligned with Islamic values.

The primary issue in current Islamic elementary school instruction is the low level of student engagement and conceptual understanding. Numerous studies indicate that traditional learning models remain dominant, with teacher-centered instruction causing students to be passive and less encouraged to think critically. [1].

Other research indicates that the implementation of PjBL can enhance students' creativity and learning motivation in Islamic elementary schools [2]. However, few studies have deeply examined how the integration of PjBL with a deep learning approach can strengthen students' spiritual, cognitive, and social dimensions within the context of primary Islamic education.

Phenomena in the field show that Islamic elementary schools, such as Imam Syafi'i, have begun to implement active methods, yet their application is often partial. Research by [3] confirms that although a curriculum based on Active Deep Learning Experience (ADLX) has been implemented, its effectiveness remains limited due to a lack of synergy between learning strategies and Islamic values.

Furthermore, research by [4] reveals that madrasah teachers' readiness to implement deep learning is still low due to limited training and conceptual understanding. This phenomenon highlights a gap between innovative educational policy expectations and field practices.

Theoretically, Project-Based Learning emphasizes experiential learning, collaboration, and the creation of authentic products. Conversely, deep learning emphasizes the depth of understanding and connections between concepts. However, the integration of both within an Islamic education context remains under-researched. Research by [5] found that PjBL activity designs can strengthen deep learning capabilities in blended learning environments, but it has not addressed the integration of Islamic spiritual values. Similarly, a study by [6] only discussed Al-Qur'an-based PjBL integration in Islamic studies without in-depth exploration of technological aspects or deep learning.

Consequently, there is a theoretical gap asserting the need for an integrative learning model that not only combines the strengths of PjBL as an experiential and collaborative approach but also applies deep learning principles that emphasize conceptual depth and reflective processing, grounded in Islamic spiritual values as a moral and ethical foundation. This integrative model is expected to bridge the divide between modern constructivist theory and the holistic orientation of Islamic education, resulting in a learning approach that is not only academically effective but also spiritually and socially meaningful.

Empirical studies on PjBL in Islamic elementary schools are still limited to aspects of creativity or motivation [7]; [8]. Meanwhile, research on deep learning integration in madrasahs indicates that the main obstacles are technological limitations and teacher training [9].

To date, there has been no comprehensive study developing an integrative PjBL-Deep Learning model based on Islamic values at the elementary level. Therefore, this research is of high urgency to bridge these research gaps.

This research presents significant novelty across three interconnected dimensions. First, from a conceptual perspective, this study designs a Project-Based Learning (PjBL) model oriented toward deep learning principles

within the specific context of Islamic education. This approach emphasizes not only the profound mastery of academic concepts but also integrates spiritual dimensions and Islamic values, ensuring the learning process is more meaningful and contextual for students within an Islamic school environment.

Second, from an empirical perspective, this study offers novelty through the direct implementation of the integrative PjBL–Deep Learning model at Imam Syafi'i Islamic Elementary School. This field test allows the researcher to obtain empirical evidence regarding the model's effectiveness in enhancing student engagement, critical thinking skills, and the reinforcement of Islamic character. Consequently, the findings are not merely conceptual but possess practical value that can be replicated in other Islamic educational institutions.

Third, from a theoretical perspective, this research enriches the educational discourse by synthesizing constructivism, humanism, and Tawhid (monotheistic) values as the foundation for developing meaningful learning. The integration of these three pillars creates a new synthesis that positions students as active subjects in constructing knowledge, developing human potential, and fostering spiritual awareness. Thus, this study not only addresses existing research gaps but also expands the theoretical horizons of holistic and transformative Islamic learning models.

Preliminary observations and interviews at Imam Syafi'i Islamic Elementary School indicate that although the learning process has moved toward active and collaborative approaches, the majority of learning activities remain focused solely on cognitive outcomes. Teachers tend to rely on conventional lectures or individual assignments that emphasize rote memorization of concepts, while opportunities for students to explore, experiment, and create authentic products remain limited. Interviews with several teachers also revealed that while they acknowledge the importance of project-based learning, they lack clear guidelines for integrating PjBL with Islamic values and deep learning principles into a cohesive framework.

Furthermore, interviews with students showed higher enthusiasm for practical and collaborative learning, such as environmental projects or creating creative Islamic-themed media. However, these activities have not been fully directed toward developing Higher-Order Thinking Skills (HOTS) or profound reflection on the spiritual values of each task. Classroom observations further demonstrated that some students are not yet able to deeply relate academic concepts to real-world contexts and Islamic values.

These findings reinforce the existence of a gap between the active learning approaches currently applied and the overarching goals of Islamic education, which emphasize a balance between knowledge, skills, and character (akhlak). This aligns with research by [10] which proves that the integration of PjBL with STEM can enhance students' critical thinking and collaborative abilities. By adopting a similar framework, this study offers a new development that incorporates deep learning and Islamic spirituality as key differentiators, ensuring the learning process not only sharpens cognitive abilities but also deepens students' reflective consciousness and faith.

The primary objective of this research is to analyze in-depth the integration of the Project-Based Learning (PjBL) model in strengthening deep learning at Imam Syafi'i Islamic Elementary School. This study does not focus on the development of a new model as found in Research and Development (R&D) approaches; rather, it is oriented toward a contextual and interpretative understanding of how the implementation of PjBL can shape a meaningful and spiritually-valued deep learning process within an Islamic primary education environment.

This research seeks to describe in detail the actual conditions of PjBL and deep learning principles in the field, including the interaction dynamics between teachers and students in a project-based learning context. Through observation and in-depth interviews, this study aims to gain an understanding of the extent to which the

PjBL approach has been implemented, how teachers facilitate critical, reflective, and collaborative thinking processes, and how students internalize Islamic values during the learning process.

Furthermore, this research focuses on analyzing the forms of integration between Project-Based Learning and deep learning principles capable of supporting the creation of meaningful learning. The analysis is directed toward identifying instructional strategies, project designs, and reflective activities that allow students to connect academic concepts with their daily spiritual and social experiences.

Another objective is to interpret the impact of PjBL integration on students' conceptual understanding, collaborative abilities, creativity, and the reinforcement of spiritual values. Using a qualitative case study approach, this research explores how the application of PjBL can foster deep learning that balances the cognitive, affective, and psychomotor dimensions.

Thus, this research is expected to contribute theoretical and practical insights regarding the effectiveness of PjBL integration in the context of Islamic education. The findings are intended to serve as a foundation for other Islamic schools to develop learning that not only encourages academic proficiency and 21st-century skills but also nurtures deep spirituality, ethics, and Islamic values among students.

The integration of PjBL and deep learning holds great potential in shaping students who are not only cognitively superior but also spiritually and socially conscious. Previous research has proven the partial success of PjBL implementation in science education [11] and Islamic Religious Education [12], yet it has not combined the depth of conceptual thinking and spiritual values within a single instructional framework. This research is of vital importance because Islamic primary education requires methodological innovations capable of balancing 21st-century cognitive demands with the reinforcement of faith (*iman*) and character (*akhlak*). Imam Syafi'i Islamic Elementary School could serve as a national reference model in the development of an integrated Islamic learning paradigm based on PjBL and deep learning.

## 2. RESEARCH METHOD

This study employs a qualitative approach with a descriptive-exploratory research design. This approach was selected to gain a profound understanding of the integration process between the Project-Based Learning (PjBL) model and the deep learning approach within the instructional context of Imam Syafi'i Islamic Elementary School. This method allows the researcher to explore complex and multi-layered educational phenomena through social, spiritual, and pedagogical context analysis [13].

The research was conducted at Imam Syafi'i Islamic Elementary School, an Islamic educational institution grounded in Quranic values and pedagogical modernization. This site was chosen because it has partially implemented project-based learning elements and possesses the digital infrastructure readiness required to support deep learning. The study was carried out over a six-month period (January–June 2025), encompassing the stages of planning, model implementation, classroom observation, and evaluation of learning outcomes.

The research informants consisted of the school principal, teachers for grades IV–VI, and 30 students. The informants were selected using a purposive sampling technique, considering their direct involvement in the implementation of innovative learning models [14].

Data collection techniques included participant observation, in-depth interviews, documentation, and teacher reflections. To ensure data trustworthiness, this study employed source and method triangulation by comparing results from interviews, observations, and instructional documents to ensure the consistency and credibility of the findings [15].

Data were analyzed using the Miles and Huberman technique, which involves iterative stages of data reduction, data display, and conclusion drawing/verification [16]. A thematic analysis was conducted to identify integration patterns between PjBL and deep learning, as well as their impact on students' cognitive, affective, and spiritual dimensions [17].

### 3. RESULTS AND DISCUSSION

#### **Initial Conditions of PjBL and Deep Learning Implementation at Imam Syafi'i Islamic Elementary School**

Preliminary observation results indicate that the learning process at Imam Syafi'i Islamic Elementary School has begun to adopt active and collaborative approaches; however, their implementation remains limited to task-based activities and simple group discussions. Teachers still tend to rely on a teacher-centered approach for content delivery, while the application of Project-Based Learning (PjBL) has not been fully integrated with deep learning principles and Islamic values.

Based on interviews with teachers, it was found that the majority of the teaching staff understand the importance of project-based learning but lack a comprehensive understanding of how to link these projects with Islamic spiritual values and Higher-Order Thinking Skills (HOTS). Teachers revealed that PjBL implementation often concludes at the stage of creating a physical product, without being followed by profound reflection on the meaning of the learning experience.

This is further supported by an interview with the school principal, who stated that while the school curriculum provides space for project-based learning through the Integrated Islamic Thematic Program, there is currently no clear methodological guidance to direct the integration of PjBL and deep learning. This condition creates an opportunity for research to explore and describe how the integration of these two approaches can be carried out effectively and contextually within an Islamic school environment.

These findings align with research by [18], which asserts that Project-Based Learning can enhance student engagement and motivation, but its effectiveness depends heavily on project design and the reflective support provided by the teacher. Thus, the initial conditions at Imam Syafi'i Islamic Elementary School illustrate an urgent need to synergize PjBL with deep learning grounded in Islamic values.

#### **Implementation of the Integrative Project-Based Learning and Deep Learning Model**

Observations of the implementation of the integrated Project-Based Learning (PjBL) model within deep learning at Imam Syafi'i Islamic Elementary School demonstrate significant changes in learning dynamics. The learning process in this study follows several systematically designed stages to ensure a robust integration between the PjBL model and deep learning principles within an Islamic educational context. Each stage plays a vital role in building a learning experience that is meaningful, reflective, and grounded in Islamic values [19].

**Identification of Islamic-Thematic Problems** In the first stage, teachers and students collaboratively identify contextual issues relevant to the students' daily lives. Selected themes are typically derived from Islamic values, such as "*Cleanliness is Part of Faith*" or "*Preserving Nature as Allah's Trust (Amanah)*." At this stage, students are trained to recognize real-world problems through an Islamic lens, ensuring that learning is not merely cognitive but also fosters moral and spiritual awareness. This activity encourages a sense of environmental responsibility, social sensitivity, and an understanding of Islamic teachings relevant to contemporary life.

**Project Planning** In the second stage, students begin to design project execution steps both independently and collaboratively. The teacher serves as a facilitator, assisting students in formulating objectives, determining necessary tools and materials, and distributing roles based on each group member's abilities. During this process, values such as cooperation (*ta'awun*), honesty, discipline, and responsibility are heavily emphasized. Students learn to organize time, manage resources, and develop effective work strategies, creating a collaborative and productive learning environment.

**Project Execution** The third stage is the core of the PjBL activity. Students conduct mini-research, field observations, and product development according to the predetermined theme. In the context of Imam Syafi'i Islamic Elementary School, these activities may include simple experiments, interviews, the creation of educational media, or social simulations that integrate scientific concepts with spiritual values. This process provides experiential learning that nurtures critical, creative, and reflective thinking skills. Through tangible activities, students also learn about hard work, perseverance, and the importance of accountability toward their tasks and group outcomes.

**Presentation of Project Results** In the fourth stage, students showcase their work to the class or the school community. Presentations vary in form, such as digital products, educational videos, posters, or miniature models, depending on the project's nature. Students are encouraged to communicate their ideas and findings effectively, both orally and visually. This stage serves as a vital platform to practice courage, self-confidence, argumentation, and respect for others' opinions. Furthermore, it strengthens collaborative communication, a key 21st-century skill. The teacher provides feedback and links project outcomes to both academic aspects and Islamic values, enabling students to see the connection between knowledge and spiritual responsibility.

**Spiritual Reflection** The final stage is spiritual reflection, which is the hallmark of deep-learning-oriented PjBL in an Islamic school environment. Students are invited to review their learning process and experiences, then relate them to the teachings of the Qur'an or Hadith. For instance, after completing a cleanliness-themed project, students reflect on the meaning of the Hadith regarding cleanliness as a reflection of faith. Reflection is conducted individually or in groups through reflective journals, class discussions, or thematic *tadarus* (study) sessions. This process fosters spiritual consciousness, gratitude, and the ability to connect knowledge with faith (*iman*) and character (*akhlak*).

**Conclusion of the Implementation** Overall, these five stages form a comprehensive and integrative learning cycle. Each stage emphasizes not only cognitive project achievements but also instills Islamic values that strengthen students' affective and spiritual dimensions. Through this process, learning becomes a vehicle for Islamic character building and the development of deep learning capabilities, where students understand not only the "*what*" and "*how*" but also the "*why*" of their education. This approach makes learning more meaningful, relevant to real life, and aligned with the goals of Islamic education, which nurture a balance between *'ilm* (knowledge), *iman* (faith), and *amal* (deeds).

Observations show that students appear enthusiastic and active throughout every project stage. They collaborate productively, discuss ideas, and demonstrate high creativity. Activities such as peer review and learning journals have proven effective in fostering deep learning by encouraging students to understand concepts meaningfully and engage in self-reflection regarding relevant Islamic values [20].

The teacher acts as a facilitator and *murabbi* (guide), ensuring that every project activity contains moral and spiritual value. The teacher's role shifts from a mere information provider to a mentor of thinking and reflection processes, consistent with the principles of student-centered learning [21].

### **Teacher and Principal Interview Results**

In-depth interviews with teachers and the school principal reveal a positive perception of the integration of PjBL with deep learning. Teachers stated that following the implementation of this model, students demonstrated an improvement in reflective thinking and systematic problem-solving skills. One teacher noted that students are now better able to relate academic concepts to the realities of daily life. For instance, while studying the theme of cleanliness, students did not merely grasp theoretical concepts but also practiced them through the student-initiated "School Friday Cleanliness Movement" project.

The school principal added that this pedagogical transformation aligns with the school's vision to develop integrated Islamic learning that emphasizes a balance between knowledge (*ilm*), faith (*iman*), and deeds (*amal*). He emphasized that the successful implementation of this model depends heavily on a collaborative culture among teachers and the readiness of digital infrastructure. This statement supports the findings of [22], which explain that school system support and access to technology are essential prerequisites for the effectiveness of deep-learning-oriented project-based learning.

Furthermore, teachers affirmed that PjBL implementation not only enhances cognitive aspects but also strengthens character building and students' spiritual values. Every project concludes with a religious reflection, such as reciting Quranic verses relevant to the project theme. This approach has proven effective in reinforcing values of responsibility, trustworthiness (*amanah*), and spiritual awareness among students [23].

### **Document Study and Project Product Analysis**

Analysis of instructional documents, project reports, and photographic documentation reveals a diverse range of student work as products of the project-based learning process. Notable works include digital posters themed "Etiquette of Learning in Islam," short videos on "Preserving Nature as Allah's Trust (*Amanah*)," and miniatures of an "Eco-Friendly School" collaboratively designed by student groups.

These products do not only illustrate the mastery of cognitive knowledge but also reflect the application of deep learning through the ability to connect academic knowledge with spiritual and social contexts. Each work is accompanied by a written reflection demonstrating how students interpret their learning experiences within the framework of Islamic teachings.

This finding is consistent with research by [24], which shows that PjBL implementation increases intrinsic motivation and a sense of ownership over the learning process. Visual documentation also captures students' enthusiasm during the projects; they were seen working in groups, engaging in active discussions, and passionately presenting their work to their classmates.

Thus, the document study reinforces the observation and interview results, confirming that the integration of PjBL and deep learning successfully creates a meaningful, reflective, and engaging learning atmosphere for students.

### **Analysis of Results Based on Research Objectives**

The integration of Project-Based Learning (PjBL) and deep learning produces a learning pattern that positions students as active subjects who construct knowledge through direct experience. In the context of Islamic education,

this integration strengthens the spiritual dimension because every project is consistently linked to the values of *Tawhid* (monotheism) and *Akhlak* (character/ethics) [12].

This finding is consistent with constructivist theory, which emphasizes that meaningful learning occurs when students actively construct meaning from their experiences [25]. By incorporating spiritual reflection, PjBL in this school serves not only as a pedagogical strategy but also as a vehicle for shaping Islamic character and morality.

The research results indicate that students involved in deep-learning-based projects show significant improvements in thematic concept understanding and collaborative abilities. Through activities such as group discussions, project planning, and result presentations, students learn to respect others' opinions, think critically, and solve problems collaboratively.

These results align with research by [26], which demonstrates that PjBL is effective in fostering 21st-century skills, including collaboration, communication, and creativity. Furthermore, teachers confirmed that this approach encourages students to be more independent and reflective in their learning [27].

The integration of Islamic values into projects enables students to understand that every learning activity carries the significance of worship (*ibadah*). Each project consistently concludes with a spiritual reflection session that connects learning outcomes with Quranic verses or Hadiths. This reflection reinforces the awareness that knowledge must be practiced and directed toward the common good (*maslahah*). This finding is in line with research by [28], which asserts that Islamic value-based learning can strengthen students' affective and spiritual dimensions, ensuring they are not only intellectually intelligent but also possess noble character.

### **Discussion of Results**

The integration of Project-Based Learning with deep learning at Imam Syafi'i Islamic Elementary School shows results consistent with existing theories and previous research findings. PjBL, combined with spiritual reflection, is proven to build deeper and more meaningful learning. Students do not only master academic concepts but also understand the relevance of Islamic values in real life [12].

From the perspective of constructivist theory, this learning supports the process of knowledge construction rooted in students' direct experiences. Meanwhile, from a humanistic perspective, this approach meets students' learning needs holistically, covering cognitive, emotional, and spiritual dimensions [29].

Institutionally, the successful implementation of this model depends on the principal's leadership in encouraging cross-subject teacher collaboration and the utilization of digital technology as a learning tool. The use of platforms such as Google Classroom and Canva has proven effective in supporting collaborative activities and project presentations [30].

Overall, the results of this study reinforce the position of PjBL and deep learning integration as an effective strategy for developing students who are not only academically excellent but also possess spiritual awareness, social responsibility, and a collaborative spirit.

## **4. CONCLUSION**

The research results indicate that the implementation of the PjBL model integrated with deep learning principles is capable of creating a learning process that is more meaningful, reflective, and contextual in accordance with Islamic values. Based on observations, interviews, and documentation, it was found that this model successfully increases students' active participation, strengthens critical thinking and collaborative abilities, and

fosters spiritual awareness and social responsibility in every learning activity. Teachers play a vital role as facilitators and spiritual mentors who ensure the harmonious integration of knowledge, skills, and Islamic values.

The study recommends that the implementation of deep-learning-based PjBL be carried out sustainably and developed across various subjects, particularly in science, social studies, and religious education. Furthermore, schools need to strengthen teacher capacity through training in Islamic value-based project design and the use of digital technology to support student collaboration.

The implications of this research show that the integration of this model impacts not only cognitive learning outcomes but also character building, social empathy, and students' spiritual depth. Moving forward, this model has the potential to serve as a reference in designing integrated Islamic learning systems that are relevant to 21st-century demands without abandoning the foundation of *Tawhid* (monotheistic) values.

## REFERENCES

- [1] R. Mariska and Z. Mustakim, "Innovative approach in Islamic elementary education: Effective strategies for enhancing education quality," *Tadibia Islam.*, 2024, doi: 10.28918/tadibia.v4i1.7281.
- [2] K. Fatmawati and M. Zulyanty, "PROJECT BASED LEARNING: BEST PRACTICE AND OPTIMALIZING STUDENTS' CREATIVITY OF TEACHER TRAINING FOR ISLAMIC ELEMENTARY SCHOOL," *JIP J. Ilm. PGMI*, 2022, doi: 10.19109/jip.v8i1.11704.
- [3] S. L. Oktadriani, I. Khuluqo, and I. Istaryatiningtias, "Evaluation of the Effectiveness of ADLX-Based Curriculum Management in Integrated Learning: Case Study in an Islamic Elementary School in DKI Jakarta Province," *Int. J. Soc. Sci. Hum. Res.*, 2024, doi: 10.47191/ijsshr/v7-i01-57.
- [4] F. Isnaeni, S. A. Budiman, N. Nurjaya, and M. Mukhlisin, "Analysis of the Readiness for Implementing Deep Learning Curriculum in Madrasah from the Perspective of Educators," *Attadrib J. Pendidik. Guru Madrasah Ibtidaiyah*, 2025, doi: 10.54069/attadrib.v8i1.841.
- [5] J. Gao, "Research on project-based learning activity design for deep learning capability," *Curric. Teach. Methodol.*, 2023, doi: 10.23977/curtm.2023.062019.
- [6] M. Al Husaini, T. Tahir, Z. A. Siddik, J. Jumadi, and M. Nesor, "Integrating Interdisciplinary Islamic Studies With Al-Qur'an Based Project Based Learning: Exploring Concepts And Theories In The Context Of Integrated Islamic Schools," *Metakognisi J. Kaji. Pendidik.*, 2023, doi: 10.57121/meta.v3i1.21.
- [7] A. Romsy and S. Sulistyaningsih, "UNLOCKING THE POTENTIAL OF PROJECT-BASED LEARNING: ELEVATING WRITING SKILLS IN ISLAMIC SCHOOL JUNIOR HIGH STUDENTS," *J. Visi Ilmu Pendidik.*, 2024, doi: 10.26418/jvip.v16i1.72152.
- [8] M. K. El Amin, H. Daulay, and S. H. Nasution, "Increasing the Interest of Students of SD Negeri 0514 Siali-Ali in Islamic Education Learning Through Project-Based Learning," *J. Profesi Guru Indones.*, 2024, doi: 10.62945/jpgi.v1i4.397.
- [9] A. N. Isnayanti, P. Putriwanti, K. Kasmawati, and R. Rahmita, "Integrasi Pembelajaran Mendalam (Deep Learning) dalam Kurikulum Sekolah Dasar: Tantangan dan Peluang," *Cokroaminoto J. Prim. Educ.*, vol. 8, no. 2, pp. 911–920, 2025.
- [10] A. Wiratman, B. Bungawati, and E. Rahmadani, "PROJECT-BASED LEARNING INTEGRATED WITH SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) TO THE CRITICAL THINKING SKILLS OF STUDENTS IN ELEMENTARY SCHOOL," *SITTAH J. Prim. Educ.*, 2023, doi: 10.30762/sittah.v4i2.1828.
- [11] L. N. D'Ambra, "A case study of project-based learning in an elementary school setting," 2014, doi: 10.23860/thesis-dambra-lauren-2014.
- [12] L. Rachman and N. Nurhanifansyah, "Integrasi Project-Based Learning dalam Pendidikan Agama Islam: Strategi, Tantangan, dan Efektivitas," *Adab. J. Pendidik. dan Pemikir.*, 2024, doi: 10.38073/adabuna.v4i1.2027.
- [13] T. Tempera and L. Tinoca, "Project-based learning in initial teacher education: contributions for the professional development of elementary school teachers," *Rev. Tempos e Espaços em Educ.*, 2022, doi: 10.20952/revtee.v15i34.17576.
- [14] Y. Mahardika and C. A. Jaya, "Persepsi Guru Terhadap Penerapan Deep Learning dalam Kerangka Kerja Pembelajaran Mendalam," *Edukasiana J. Inov. Pendidik.*, vol. 4, no. 3, pp. 1123–1139, 2025.

- [15] N. I. Zahroh, L. A. Nasution, A. D. Tazqia, H. A. I. Faiha, and D. Nurhayati, "Strategi pengumpulan data dalam penelitian kualitatif: Teknik, tantangan dan solusinya," *Tarbiyatul Ilmu J. Kaji. Pendidik.*, vol. 3, no. 6, pp. 107–118, 2025.
- [16] N. Latifah and A. Supena, "Analisis attention siswa sekolah dasar dalam pembelajaran jarak jauh di masa pandemi Covid-19," *J. basicedu*, vol. 5, no. 3, pp. 1175–1182, 2021.
- [17] N. Marfu'ah, A. Alwizar, and E. Dewi, "IMPLEMENTASI MODEL PEMBELAJARAN HOLISTIK DEEP LEARNING PADA MATA PELAJARAN PAI KELAS VII SMPN 5 PEKANBARU," *Res. Dev. J. Educ.*, vol. 11, no. 2, pp. 1049–1061, 2025.
- [18] T. Wulandari and N. A. F. Nawangsari, "Project-Based Learning in the Merdeka Curriculum in Terms of Primary School Students' Learning Outcomes," *EDUKASIA J. Pendidik. dan Pembelajaran*, 2024, doi: 10.62775/edukasia.v5i2.793.
- [19] S. Sutrisno and J. A. Nasucha, "Islamic Religious Education Project-Based Learning Model to Improve Student Creativity," *At-tadzkir Islam. Educ. J.*, 2022, doi: 10.59373/attadzkir.v1i1.3.
- [20] J. Serrano-Aguilera *et al.*, "Using Peer Review for Student Performance Enhancement: Experiences in a Multidisciplinary Higher Education Setting," *Educ. Sci.*, 2021, doi: 10.3390/educsci11020071.
- [21] M. Santosa, "Student-centered Learning," 2022, doi: 10.31219/osf.io/5xmkt.
- [22] A. Al-Abdullatif and A. Gameil, "The Effect of Digital Technology Integration on Students' Academic Performance through Project-Based Learning in an E-learning Environment," *Int. J. Emerg. Technol. Learn.*, vol. 16, 2021, doi: 10.3991/ijet.v16i11.19421.
- [23] M. H. Aulia, S. Syahidin, M. Faizin, and M. M. F. Ali, "Qur'anic Tadabbur Models for Enhancing Students Character and Spiritual Awareness," *Islam. Rev. J. Ris. dan Kaji. Keislam.*, 2025, doi: 10.35878/islamicreview.v14i1.1497.
- [24] M. Muslim, H. Saputra, M. Setiawan, M. Martias, and M. Nasir, "The influence of project based learning on student's intrinsic learning motivation," *INVOTEK J. Inov. Vokasional dan Teknol.*, 2021, doi: 10.24036/invotek.v21i2.915.
- [25] S. P. Chand, "Constructivism in Education: Exploring the Contributions of Piaget, Vygotsky, and Bruner," *Int. J. Sci. Res.*, 2023, doi: 10.21275/sr23630021800.
- [26] B. Sappaile, G. Hartinah, H. Hendrik, and E. Sumanik, "The Impact of Project-Based Learning on Students' Collaboration Skills in Secondary Schools," *Int. J. Educ. Res. Excell.*, 2025, doi: 10.55299/ijere.v4i1.1268.
- [27] J. F. Agudelo and A. M. M. Vasco, "Project-Based Learning as a catalyst for Students and Teacher Autonomy development: The experience in a State School in Nilo, Cundinamarca.," *Gist Educ. Learn. Res. J.*, pp. 31–48, 2019, doi: 10.26817/16925777.699.
- [28] I. Warsah, R. Morganna, B. A. A. Warsah, and B. H. H. Warsah, "Islamic Psychology-Based Educational Strategies For Student Character Development," *AJIS Acad. J. Islam. Stud.*, 2024, doi: 10.29240/ajis.v9i2.11326.
- [29] N. Sugrah, "Implementasi teori belajar konstruktivisme dalam pembelajaran sains," *HUMANIKA*, 2020, doi: 10.21831/hum.v19i2.29274.
- [30] C. Hsieh, Y.-R. Chen, and H. Li, "Impact of school leadership on teacher professional collaboration: evidence from multilevel analysis of Taiwan TALIS 2018," *J. Prof. Cap. Community*, 2023, doi: 10.1108/jpcc-01-2023-0002.