

# IMPLEMENTING PROJECT-BASED LEARNING (PJBL) TO FOSTER ENGAGING LEARNING AMONG PESANTREN STUDENTS IN CIANJUR (A Case Study in Pesantren SMP IT Almadinah)

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**Abstract.** This study investigates the implementation of Project-Based Learning (PJBL) as an instructional strategy to foster engaging learning experiences among pesantren students in SMP IT Almadinah. Pesantren education has traditionally emphasized teacher-centered approaches and text-based instruction, which may limit student engagement in contemporary learning contexts. Responding to this challenge, the present study explores how PJBL can create a more active, enjoyable, and meaningful learning environment while maintaining the values and educational traditions of pesantren institutions. The discussion is developed through a conceptual and contextual examination of PJBL within the pesantren educational framework. The discussions suggest that the implementation of PJBL has strong potential to increase student participation, collaboration, creativity, and motivation during the learning process. Students are likely to demonstrate greater enthusiasm and ownership of learning as they engage in authentic projects that connect academic content with real-life contexts relevant to their pesantren experience. Moreover, PJBL encourages the development of critical thinking, communication skills, and teamwork, aligning well with both 21st-century learning competencies and pesantren educational values. Although challenges such as time management and teacher adaptation may arise, project-based learning is considered a viable and innovative pedagogical approach for enhancing learning engagement in pesantren settings and is recommended for broader integration into pesantren-based educational practices.

**Keywords:** Collaborative learning, Islamic boarding school, Project based learning, Student engagement

## INTRODUCTION

### A. Background of the Study

Pesantren is a traditional Indonesian Islamic boarding school where students known as santri live and study religious sciences under the guidance of a Kyai or religious leader. It also has long functioned as a distinctive Islamic educational institution in Indonesia, where religious learning is closely intertwined with character formation and communal life shaped by Islamic values. As highlighted by Amrulloh [1], this institution predominantly employs instructional classical methods such as Bandongan and Sorogan, which focus on mastering traditional Islamic texts known as Kitab Kuning. Rochim et al. [2], further explained that these approaches prioritize preserving religious heritage through intensive recitation and memorization practices. This strong emphasis on Islamic teaching methods helps preserve religious authority while sustaining the scholarly traditions from one generation of santri to the next.

Building upon this traditional orientation, teacher-centered and text-based instruction continues to characterize many pesantren classrooms in contemporary Indonesia. Yamin et al. [3], found that learning activities in many pesantrens are still dominated by teacher explanation, with the Kiyai acting as the main source of knowledge. This instructional structure often reinforces passive knowledge reception rather than encouraging inquiry, collaboration, and critical engagement, as discussed by Azizah and Rohanita [4] in their analysis of modern curriculum integration. In response to these challenges, engaging and student-centered pedagogical approaches to modernize pesantren education without compromising its core identity. Rahman and Maulana [5] argued that Project-Based Learning (PJBL) can enhance student motivation, participation and collaborative learning experience by connecting academic content with real-world

problem solving. Recent global trends in religious education, such as the integration noted by Al Fikri and Shobahiya [6] indicate that global developments in religious education similarly emphasize contextualized and experiential learning as essential strategies for preparing students with 21st-century life skills. Moreover, contemporary scholarship on Islamic educational reform indicates that learner-centered pedagogy enables traditional Islamic institutions to adapt to technological and societal change while preserving their foundational religious values [7].

### ***Characteristics of traditional pesantren pedagogy***

Characteristics of traditional pesantren pedagogy is characterized by a strong emphasis on religious authority, mastery of classical Islamic texts, and the transmission of knowledge from the Kyai or teacher to the santri. Learning commonly takes place through instructional traditions such as Bandongan, Sorogan, memorization, recitation, and direct explanation of the Kitab Kuning. These approaches position the teacher as both a source of knowledge and a moral guide who plays a central role in shaping students' religious understanding and character. The learning process is also closely connected to pesantren values, including discipline, obedience, respect for teachers, communal responsibility, and the preservation of Islamic intellectual traditions. [2], [7]. Therefore, understanding the characteristics of traditional pesantren pedagogy is important as a foundation for developing instructional innovations that remain compatible with the cultural and religious identity of the institution [2], [7].

### ***Dominance of teacher-centered and text-based instruction***

One of the central characteristics of traditional pesantren learning is the continued dominance of teacher-centered and text-based instruction. In many learning situations, the teacher or Kyai serves as the primary authority and main source of knowledge, while students are expected to listen, follow explanations, memorize important information, and demonstrate their understanding through recitation or repetition. The Kitab Kuning and other religious texts function as the main learning resources, making textual interpretation and content mastery central components of the instructional process [2], [7]. Although this approach is effective for transmitting established religious knowledge, excessive reliance on teacher explanation may limit opportunities for active student participation. Students may have fewer opportunities to explore ideas independently, engage in collaborative activities, discuss contemporary issues, or apply their knowledge to practical situations. As a result, learning can become focused primarily on receiving and reproducing knowledge rather than constructing understanding through active engagement. Instead, it highlights the importance of integrating complementary instructional approaches that can increase student participation while maintaining respect for teachers, Islamic values, and the intellectual traditions of pesantren [8], [9].

### ***The need for engaging and student-centered learning approaches***

The changing demands of contemporary education require pesantren students to develop not only religious knowledge but also the competencies needed to participate effectively in modern society. These competencies include critical thinking, creativity, communication, collaboration, and problem-solving. Therefore, pesantren education needs learning approaches that encourage students to become more actively involved in the learning process. Engaging and student-centered learning provides opportunities for students to explore ideas, work collaboratively, investigate problems, make decisions, and apply their knowledge in meaningful contexts [2], [7]. Student-centered learning does not require pesantren to abandon its traditional educational foundations. Through collaborative and contextual activities, students can connect academic knowledge with real-world issues and develop practical as well as intellectual competencies. In the pesantren context, this approach can also be designed around Islamic values, community life, and students' daily experiences [2], [7]. Pedagogical innovation should be understood as an effort to strengthen the educational function of pesantren rather than replace its traditions. By combining traditional Islamic educational values with active and participatory learning, pesantren can preserve its distinctive identity while preparing students to respond to contemporary educational and social challenges [2], [7].

## **B. Problem Statement**

As stated by [9] that student engagement has increasingly been recognized as a central indicator of educational quality in contemporary learning environments, as it significantly influences academic achievement, motivation and long-term learning outcome. The students who are actively involved in learning activities tend to develop stronger cognitive abilities, exhibit a more profound understanding of pedagogical content, and maintain sustained throughout the learning process [8], further explained that conceptualize engagement as the integration of behavioral participation, emotional involvement and cognitive investment, emphasizing that meaningful learning occurs when these dimensions operate simultaneously. Nevertheless, empirical findings from Indonesian Islamic schools reveal that many

classrooms continue to rely on lecture-centered instruction, thereby limiting opportunities for interaction, inquiry, and collaborative meaning-making.

Recent qualitative studies document that lessons in pesantren settings remain predominantly teacher-centered and lecture-based, producing monotonous classroom atmosphere and constrained student participation [10]. Within pesantren settings in particular, the longstanding emphasis on textual mastery and the central authority of the teacher often constrains dialog exploration and peer collaboration [11]. Consequently, students may exhibit surface-level compliance rather than authentic engagement, underscoring the need for innovative pedagogical strategies capable of fostering active, cognitive rich participation. Moreover, tension exists between preserving pesantren tradition and adopting modern pedagogical innovations. While pesantren stakeholders acknowledge the importance of 21st-century competencies, apprehensions about maintaining Islamic values and institutional identity often slow the adoption of interactive methods [12].

### ***Limited student engagement in contemporary pesantren classrooms***

Despite the important role of pesantren in developing students' religious knowledge and character, student engagement remains a significant pedagogical concern in some contemporary pesantren classrooms. Learning activities are still frequently organized around teacher explanation, text reading, memorization, and individual recitation. Within this instructional structure, santri may spend a considerable portion of classroom time listening to explanations and reproducing information rather than actively participating in discussions, collaborative activities, inquiry, or problem-solving tasks. Consequently, opportunities for students to explore ideas, express opinions, and construct knowledge through direct experience may remain limited [8], [9]. A learning environment that provides limited interaction may also reduce students' sense of participation and responsibility in the learning process [8], [9]. However, student engagement should not be understood simply as frequent classroom interaction or increased student activity. Meaningful engagement involves students' cognitive, behavioral, and emotional participation in learning. Students need opportunities to ask questions, investigate issues, exchange perspectives, collaborate with peers, and connect academic content with relevant experiences. In the pesantren context, these activities can be designed in ways that remain consistent with Islamic ethics, discipline, respect for teachers, and the collective values of pesantren life. [8], [9].

### ***Tension between tradition and modern pedagogical innovation***

The development of modern pedagogical innovation in pesantren is often accompanied by a tension between the need to preserve established educational traditions and the demand to respond to contemporary learning needs. Pesantren has historically maintained a distinctive identity through the authority of the Kyai, the study of classical Islamic texts, close teacher-student relationships, discipline, and the transmission of religious values across generations. These elements are not merely instructional practices but represent important components of pesantren culture and institutional identity. Consequently, the introduction of new learning approaches may generate concerns about whether pedagogical innovation can be implemented without reducing the authority of teachers or weakening the religious and cultural foundations of pesantren [2], [7].

Teachers may need to move from primarily delivering knowledge toward facilitating learning, while students may be expected to take greater responsibility for exploring ideas, solving problems, and constructing understanding. Such changes can create uncertainty when they are perceived as inconsistent with traditional expectations regarding authority, discipline, and the role of santri in the learning process [2], [7]. Teachers' understanding of student-centered pedagogy, their confidence in managing interactive learning, and their perceptions of the compatibility between modern methods and Islamic educational principles are therefore important factors influencing the success of pedagogical change [2], [7]. Traditional Islamic values can provide the ethical and cultural foundation of learning, while modern pedagogical strategies can expand the ways in which students engage with knowledge. In this perspective, innovation does not necessarily require the abandonment of established traditions. Instead, it can function as an adaptive process that strengthens the capacity of pesantren to respond to contemporary educational demands while preserving its distinctive institutional identity [2], [7].

## **C. Purpose of the Study**

The aim of this study is to empirically measure the impact of PJBL on behavioral, emotional and cognitive engagement among pesantren students at Cianjur. This object focuses on accessible criteria observed in actual operation such as participation frequency and level, quality of collaborative work with classmates, commitment and concentration over time in their activities, and the willingness of learners to take some responsibility for their own learning during the phase of life called the project cycle. In line with the concepts from the holistic approach to engagement with school as set out by [8] and supported by meta analytic research which has pointed to both positive academic and motivational effects of PJBL [13], [8].

This research uses structured measures to examine the effect of teaching on engagement. This goal aims to reflect on whether and how inquiry-driven project design and its core elements can tally with pesantren educational traditions, institution of peace discipline, collective responsibility, and characters equally at home in the wild as one is in society. It draws on earlier work in culturally responsive pedagogy at private Islamic elementary schools [7] and on airmen accidentally extending their skills into other areas through adaptive innovation models practiced by religious institutions [14].

### ***To explore how PJBL can foster engaging learning***

The objective of this study is to explore how Project-Based Learning (PJBL) can foster more engaging learning experiences among santri in the pesantren context. PJBL is particularly relevant because it positions students as active participants in the learning process. Rather than relying primarily on teacher explanations and the passive reception of knowledge, students are encouraged to investigate topics, identify problems, collaborate with peers, develop ideas, and produce meaningful outcomes through project activities. [8], [15]. In the context of pesantren education, engaging learning is not limited to increasing students' participation in classroom activities. It also involves encouraging santri to develop cognitive, behavioral, and collaborative engagement throughout the learning process. Through PJBL, students may have greater opportunities to discuss ideas, work collectively, take responsibility for specific tasks, solve problems, and connect learning materials with situations that are relevant to their daily lives and social environment [8], [15]. Furthermore, the project-based learning process can create opportunities for students to move beyond memorization and knowledge reproduction. Students can apply what they learn to the development of concrete projects, allowing them to experience learning as a process of exploration, collaboration, reflection, and problem-solving. This approach is expected to support the development of important competencies, including critical thinking, communication, creativity, collaboration, and responsibility [7], [14].

### ***To contextualize PJBL within pesantren educational values***

The second objective of this study is to contextualize Project-Based Learning within the educational values and institutional characteristics of pesantren. The implementation of a modern pedagogical approach cannot be separated from the cultural, religious, and educational context in which learning takes place. Pesantren education is founded on Islamic values and is characterized by respect for teachers, discipline, moral development, communal responsibility, and the close integration of religious knowledge with everyday life. Therefore, the application of PJBL needs to be adapted to these values rather than implemented as a standardized model [7], [14]. Contextualizing PJBL within pesantren education means designing project activities that are relevant to the experiences, needs, and values of santri. Projects can be connected to Islamic teachings, community life, social responsibility, environmental issues, or other authentic challenges within the pesantren environment. In this way, students can actively participate in inquiry, collaboration, and problem-solving while remaining connected to the moral and religious foundations of their educational institution [8], [15].

## **THEORETICAL FRAMEWORK**

### **A. Project-Based Learning (PJBL)**

PJBL is grounded in constructivist learning theory, which basically says that students build knowledge by doing and experiencing things, not by just sitting there and absorbing lectures. Thomas [16] describes PJBL as a structured approach where learning revolves around complex tasks driven by real questions or messy problems, the kind that push students to design something, solve issues, make decisions, and actually investigate. Bell [17] adds that in this model, students act more like active investigators than passive listeners, slowly piecing together understanding through authentic inquiry. It moves the classroom away from teacher dominance and gives students more space to think, test ideas, even struggle a little.

The core ideas of PJBL come alive through the Gold Standard PJBL framework introduced by Larmer et al. [18], a model that brings together authenticity, sustained inquiry, student voice and choice, collaboration, critique plus revision, and public presentation of learning products in a way that feels closely tied to how people actually learn. Authenticity connects classroom tasks with real situations students recognize from everyday life, so learning no longer feels abstract or distant but meaningful and worth engaging in. Contemplation subsequently decelerates the progression, providing learners with the opportunity to review what was effective, what appeared perplexing, and how their cognitive processes have evolved throughout the experience. When these elements operate together, constructivist theory shifts from an abstract educational idea into concrete classroom practice that students can experience directly [19], [16].

### ***Definition and core principles***

Project-Based Learning (PJBL) is a student-centered instructional approach in which learning is organized around the process of investigating, understanding, and responding to meaningful questions, problems, or challenges. Instead of receiving knowledge primarily through direct instruction, students actively participate in exploring a topic and developing a project or product that demonstrates their understanding. The learning process usually involves identifying a problem, gathering and analyzing information, developing possible solutions, collaborating with others, and presenting the outcomes of the project [16], [15]. The central principle of PJBL is that students learn more meaningfully when they are actively involved in constructing and applying knowledge. Learning is therefore not limited to memorizing information or reproducing what has been explained by the teacher. Students are encouraged to connect concepts with practical situations and use their knowledge to address authentic challenges. This process positions students as active learners while teachers provide guidance, structure, feedback, and support throughout the project [19], [16].

Another important principle of PJBL is sustained engagement. Projects generally require students to work on a task over an extended period rather than completing isolated activities in a single lesson. This allows students to revisit ideas, solve emerging problems, revise their work, and gradually develop a deeper understanding of the subject matter. Through this process, learning becomes a continuous process of inquiry, application, evaluation, and improvement [16], [15]. In the pesantren context, these principles can be adapted without changing the fundamental role of teachers or the values of Islamic education. Teachers and Kyai can continue to provide academic, moral, and religious guidance, while santri are given greater opportunities to actively participate in exploring and applying knowledge. Thus, PJBL can serve as a complementary pedagogical approach that combines teacher guidance with student participation, practical experience, and meaningful learning [16], [15].

### ***Key components: authenticity, collaboration, inquiry, reflection***

The effectiveness of Project-Based Learning is closely related to several key components that distinguish it from conventional classroom activities. These components include authenticity, collaboration, inquiry, and reflection. Together, they create a learning process in which students are actively involved in constructing knowledge and applying it to meaningful situations [19], [16]. Authenticity refers to the connection between learning activities and problems, situations, or experiences that are relevant to students' lives. In PJBL, students do not work on projects merely to complete an academic task. Instead, they are encouraged to investigate issues that have practical relevance and produce outcomes that respond to a meaningful need or challenge. In the pesantren context, authentic projects can be connected to students' daily experiences, community life, Islamic practices, social responsibility, environmental concerns, or other issues that are relevant to the pesantren environment. This connection can help students understand the practical significance of what they learn [19], [16].

Collaborative projects can therefore build upon existing social values while developing more structured opportunities for teamwork and collective problem-solving [17], [18]. Inquiry encourages students to actively investigate questions and problems rather than simply receive information from the teacher. Students are expected to explore sources, ask questions, analyze information, and develop possible solutions. The inquiry process promotes deeper engagement because students participate directly in constructing their understanding. Teachers remain important throughout this process by guiding students, providing appropriate resources, monitoring progress, and ensuring that the learning process remains connected to the intended educational objectives [16], [15].

### ***Alignment with 21st-century competencies***

Project-Based Learning is closely aligned with the development of competencies commonly associated with 21st-century education. Contemporary students are expected not only to acquire subject knowledge but also to develop the ability to think critically, communicate effectively, collaborate with others, create innovative ideas, and solve complex problems. These competencies are increasingly important because students need to apply knowledge in changing academic, social, and professional contexts [17], [18]. PJBL provides a structured learning environment in which these competencies can be practiced through direct experience. Critical thinking develops when students analyze problems, evaluate information, compare possible solutions, and make decisions. Creativity is encouraged when students design projects, generate ideas, and develop original responses to challenges. Communication skills are developed through discussion, negotiation, presentation, and the explanation of project outcomes. At the same time, collaboration becomes essential because students need to work with others, share responsibilities, manage differences, and contribute to common goals [17], [18].

Problem-solving is also central to the PJBL process. Students are required to identify challenges, investigate possible causes, develop solutions, test their ideas, and evaluate the results. This process

encourages students to move beyond the passive acquisition of knowledge and develop the capacity to use what they have learned in practical and meaningful situations. In addition, the extended nature of project work can promote learner independence, responsibility, adaptability, and persistence [16], [15]. The development of these competencies is relevant to contemporary pesantren education. Santri are expected to maintain strong religious and moral foundations while also developing the knowledge and skills required to participate in wider society. Therefore, the development of 21st-century competencies should not be viewed as separate from pesantren values. Critical thinking can support deeper understanding, collaboration can strengthen communal responsibility, communication can support constructive interaction, and problem-solving can encourage students to respond responsibly to challenges in their communities [17], [18].

## **B. Engaging Learning**

Student involvement is not just about showing up in class. Most scholars describe it as a mix of three connected pieces: behavioral, emotional, plus cognitive engagement, all shaping how well students actually learn. Fredricks et al. [8] explain cognitive engagement as the student's intentional effort to think deeply and manage their own learning, emotional engagement as feelings like curiosity or a sense of belonging, and behavioral engagement as visible actions such as participating, asking questions, and sticking with difficult tasks. Empirical findings from Bond and Bedenlier [20] show that these dimensions do not stand alone; they interact and together predict motivation and long-term academic achievement. Meaningful and enjoyable learning goes beyond surface engagement and includes persistent drive and internalized comprehension. According to motivational design research, authenticity, choice, and constructive feedback all greatly increase students' intrinsic interest [21]. Enjoyable learning experiences are not only amusing, but also cognitively engaging and emotionally supporting, instilling a sense of achievement and competence. Indicators include enthusiastic engagement, reflective speech, persistence in complex activities, and the ability to transfer information between contexts. [22]. [23]

## **C. Pesantren Educational Context**

Meaningful and enjoyable learning extends beyond surface participation to encompass sustained motivation and internalized understanding. Research on motivational design highlights that authenticity, choice, and constructive feedback significantly enhance students' intrinsic interest [21]. Enjoyable learning experiences are not only entertaining but cognitively stimulating and emotionally supportive, fostering a sense of accomplishment and competence. Indicators include enthusiastic participation, reflective discourse, persistence in complex tasks, and the ability to transfer knowledge across contexts. Within project-based environments, these indicators become visible through collaborative dialogue, iterative problem-solving, and reflective documentation. Thus, engaging learning is theoretically grounded in both affective and cognitive investment, offering a comprehensive lens for evaluating pedagogical effectiveness.

Pedagogically, traditional pesantren practices such as *bandongan* and *sorogan* emphasize textual mastery, moral discipline, and strong teacher authority, resulting in structured yet predominantly teacher-centered learning environments. While these approaches effectively preserve classical Islamic scholarship, they may restrict inquiry-based interaction and collaborative exploration required in contemporary learning settings. Recent studies demonstrate that pesantren institutions are increasingly engaging in pedagogical transformation by integrating innovative learning models while maintaining religious authenticity [7].

### ***Core values and traditions of pesantren***

Pesantren is not merely an institution for transmitting Islamic knowledge but also an educational environment in which religious, moral, social, and communal values are developed through everyday practice. Its educational orientation emphasizes the integration of knowledge (*ilm*), moral conduct (*adab*), religious commitment, discipline, responsibility, and respect for teachers. These values are developed through formal learning as well as through students' daily participation in religious activities and communal life. Recent scholarship describes the pesantren curriculum as maintaining a strong orientation toward the continuity of Islamic knowledge while simultaneously incorporating humanistic values such as *adab*, exemplary conduct, *Khidmah*, and mentoring of Santri [8], [20]. A central element of pesantren tradition is the relationship between the *Kyai*, teachers, and santri. The *Kyai* holds an important position as a source of religious knowledge, educational guidance, and moral example. This relationship contributes to the transmission of knowledge and values across generations. In this educational structure, learning is not understood simply as the acquisition of information. Santri are also expected to develop appropriate attitudes, discipline, respect, and ethical conduct through their interaction with teachers and the wider pesantren community. Research on the transmission of *Kitab Kuning* similarly shows that the role of the *Kyai* extends beyond explaining texts to transmitting intellectual traditions, ethical values, and scholarly authority [15].

The study of Kitab Kuning represents another fundamental tradition of pesantren education. Classical Islamic texts function as important sources of religious and intellectual knowledge and have historically shaped the identity of pesantren. The transmission of these texts is commonly supported by traditional methods such as Bandongan and Sorogan. Bandongan generally involves collective learning in which the teacher reads and explains the text while students follow the explanation, whereas Sorogan provides a more individualized learning process in which students demonstrate their reading and understanding before the teacher. These methods have contributed to the continuity of Islamic scholarship and the development of students' textual and religious literacy [7], [2]. The pesantren tradition also emphasizes communal life. Santri learns within an environment where cooperation, mutual assistance, discipline, and shared responsibility form part of everyday experience. Religious study, worship, social interaction, and institutional responsibilities are interconnected. Consequently, the educational process extends beyond classroom activities and provides opportunities for students to develop personal and social qualities through lived experience. The tradition of Kitab Kuning itself also functions as a medium for transmitting values and religious orientations, including moderation, tolerance, and responsible religious practice [7], [2].

### ***Pedagogical characteristics***

The pedagogical characteristics of pesantren are strongly influenced by its historical function as a center for Islamic knowledge transmission and character formation. Traditional learning places considerable importance on the authority of the Kyai or teacher, the study of classical Islamic texts, disciplined learning routines, and close teacher-student interaction. The teacher plays a central role in selecting learning materials, explaining religious concepts, interpreting texts, correcting students' understanding, and providing moral guidance. Recent research on pesantren curriculum similarly identifies the central position of Kitab Kuning, the authority of the Kyai, and textual mastery as important features of the traditional educational orientation [7], [2]. Text-based instruction is one of the most prominent features of traditional pesantren pedagogy. Santri engaged extensively with Kitab Kuning and other Islamic texts under the guidance of teachers. This learning process requires students to develop careful reading, memorization, interpretation, and understanding of religious concepts. The tradition of studying Kitab Kuning remains an important characteristic of pesantren because it provides access to classical Islamic scholarship and supports the continuity of the intellectual traditions that distinguish pesantren from other educational institutions [7], [2].

## **RESEARCH CONTEXT AND APPROACH**

### **A. Case Study Setting Overview of SMP IT Almadinah, Cianjur [15]**

The study was carried out at SMP IT Almadinah, an Islamic educational institution located at Cianjur, West Java, Indonesia. The school is situated within the pesantren-based education system, where Islamic values, character building, and living arrangements are integral aspects of the learning process. Like other pesantren schools in Indonesia, the academic process is highly integrated with Islamic values, Islamic practices, and living arrangements. The students are engaged not only in the traditional process of learning but also in Islamic activities such as recitation of the Quran, Islamic studies, and communal prayers [7], [14]. The traditional pedagogy of pesantren is characterized by respect for religious authority and the pursuit of Islamic knowledge through teacher guidance. The traditional pedagogy of pesantren is highly influenced by classical learning processes such as bandongan and sorogan. The classical learning process is characterized by teacher guidance on Islamic values, where the teacher explains Islamic values to the students, who then read the material. The classical learning process is highly important for the preservation of Islamic intellectual values. The classical learning process is highly important for the continuation of Islamic intellectual values [7], [14]. [24]. [25]

Pesantren increasingly faces the challenge of equipping students with academic competencies that enable them to respond to the demands of the twenty-first century. Educational reforms in Indonesia have therefore encouraged Islamic educational institutions to adopt more innovative pedagogical approaches while maintaining their religious and cultural identity. In response to these developments, many pesantren-based schools have begun integrating learner-centered pedagogies that promote critical thinking, collaboration, and active learning among students [26]. SMP IT Almadinah is a good example of a site where the transition to this new pedagogy can be analyzed. The educational institution offers a traditional Islamic education, combined with modern academic curricula, and has gradually incorporated new approaches to teaching to increase student involvement in learning activities. In the context of the above, the implementation of Project-Based Learning (PJBL) will be used to explore the potential of student-centered learning within the pesantren educational culture [15], [13].

## B. Conceptual and Contextual Examination

Project-based learning is commonly referred to as a constructivist teaching model where students learn by discovering information through inquiry, problem-solving, and cooperative project development. Rather than students being taught by the teacher, students engage in activities that require them to explore, reflect, and produce meaningful results through the development of a project. Studies have shown that the implementation of project-based learning has a profound effect on student involvement, academic achievement, and critical thinking skills, more so than traditional teaching methods [13]. In the context of pesantren education, the implementation of student-centered learning must be carefully interpreted, given the traditional pesantren emphasis on Islamic moral values, hierarchical teacher-student relations, and traditional approaches to textual learning. Thus, the implementation of student-centered learning must not ignore traditional approaches to teaching but must instead find a way to integrate them with the new approaches [7], [14].

In the context of the above, project-based learning will be used to explore the potential of student-centered learning within the pesantren educational culture, where the new approaches are not used to replace traditional approaches to teaching but are used to support them. The inquiry-based and cooperative aspects of project-based learning are consistent with Islamic educational values of *Ukhuwah*, *Thalab al-ilm*, and the development of character. Project-based activities, where the project is connected to a meaningful issue concerning the students' social or religious experiences, can support the development of students' character. For example, tasks to be accomplished by students within a project might include analyzing issues in a community, designing an educational campaign, or creating a reflective media product on Islamic values and social responsibility. Through such tasks, students are able to apply academic learning while keeping alive the ethical orientation inherent in pesantren education. This perspective allows project-based learning to take place within the cultural logic of pesantren education without it being perceived as an external pedagogical model [15], [13]. [27]

## METHODS

### Research Design

This study adopts a qualitative case study design to examine how Project-Based Learning (PJBL) is implemented within a pesantren-based educational environment. A qualitative approach was considered appropriate because the focus of the research was not limited to measuring learning outcomes but rather to understanding how the learning process unfolds in everyday classroom practice. In particular, the study sought to explore how students participate in project activities, how collaboration emerges during group work, and how teachers guide students through the learning process [28]. A case study approach enables researchers to examine educational practices within their real-life context and to understand complex learning processes in depth [28]. In the context of pesantren education, classroom instruction is closely intertwined with broader educational values such as discipline, communal responsibility, and character formation. For this reason, examining the implementation of Project-Based Learning requires attention not only to instructional techniques but also to the cultural and institutional setting in which learning takes place. [29]

SMP IT Almadinah in Cianjur, West Java, Indonesia, selected as the research site because the institution represents a pesantren-based school that integrates traditional Islamic education with a modern academic curriculum. As discussed in the previous section, the school has recently begun incorporating more student-centered learning strategies in order to encourage greater student participation in classroom activities. This setting therefore provided an appropriate context for examining how project-based learning could be adapted within an educational environment that maintains strong religious traditions [30].

### Research Participants

The participants in this study consisted of two teachers and twenty two students who were directly involved in learning activities where project-based learning was applied. Students were the main participants in the study since they experienced the learning process firsthand and were actively engaged in project development, group discussions, and collaborative tasks. Their perspectives were important for understanding how project activities influenced their involvement and interaction during classroom learning [31]. Teachers were also included as key participants because they played an important role in organizing project tasks, guiding group discussions, and supporting students during the learning process. Their experiences provided insight into how Project-Based Learning was introduced and managed within the classroom [31]. Participants were selected using purposive sampling, a strategy commonly employed in qualitative research to identify individuals who possess relevant knowledge or experience related to the research topic [31]. By focusing on students and teachers who were directly involved in project-based

learning activities, the study aimed to obtain detailed insights into how the approach functioned within the classroom context.

### **Data Collection**

Data for this study were collected through classroom observations, semi-structured interviews, and document analysis. The use of multiple sources of data allowed the researcher to gain a more comprehensive understanding of the learning process while also strengthening the credibility of the findings [32].

#### ***Classroom Observations***

Classroom observations were conducted during learning sessions in which project-based learning activities were implemented. The observations focused on how students participated in project work, how they interacted with their peers during group discussions, and how teachers facilitated the learning process [32]. Observation is widely used in qualitative educational research to document classroom interactions and learning behaviors as they occur in their natural setting [32]. During the observation process, field notes were taken to document classroom dynamics, including patterns of student participation, collaboration among group members, and the ways students responded to project tasks.

#### ***Semi-Structured Interviews***

In addition to classroom observations, semi-structured interviews were conducted with teachers and several students who participated in the project activities. These interviews aimed to explore participants' experiences during project-based learning, including their perceptions of student engagement, collaboration, and the learning atmosphere in the classroom. Semi-structured interviews are widely used in qualitative research because they allow participants to describe their experiences and perspectives in greater depth [33]. This approach helps researchers gain deeper insights into participants' viewpoints that may not be fully visible through observation alone.

#### ***Document Analysis***

Relevant documents were also examined to complement the observational and interview data. These documents included lesson plans, project guidelines, instructional materials, and examples of student project work. Document analysis helps researchers understand how learning activities are structured and implemented within a particular educational setting [34]. In this study, the analysis of teaching materials and student projects provided additional insight into how project-based learning activities were designed and how students demonstrated their understanding through project outputs.

### **D. Project-Based Learning Framework**

The implementation of Project-Based Learning in this study was informed by previous studies that suggest that effective project-based learning typically involves collaborative inquiry, authentic problem solving, and the creation of meaningful learning products [15]. In line with these principles, students were encouraged to work collaboratively in small groups to explore a topic, discuss ideas, and develop a final project that reflected their understanding of the learning material. During the project process, teachers played a facilitative role by guiding discussions, providing feedback, and supporting students as they developed their projects.

### **E. Data Analysis**

The collected data were analyzed using thematic analysis, a qualitative analytical approach that focuses on identifying patterns and themes within textual data [35]. This approach is widely used in educational research to interpret participants' experiences and understand complex learning processes. The analysis began with a careful review of field notes, interview transcripts, and collected documents. During this stage, the researcher read through the data several times in order to gain a general understanding of the classroom experiences described by participants. Next, relevant segments of data were coded to identify meaningful aspects of the learning process. [36]

### **F. Trustworthiness of the Study**

Several strategies were employed to enhance the credibility and trustworthiness of the research findings. First, data triangulation was conducted by comparing information obtained from classroom observations, interviews, and document analysis. Triangulation helps strengthen the reliability of qualitative findings by drawing on multiple sources of evidence [30]. Second, prolonged engagement in the research setting allowed the researcher to gain a deeper understanding of classroom practices and student interactions during project-based learning activities. Spending sufficient time in the field helped reduce the risk of superficial interpretation. Finally, member checking was conducted by inviting participants to review and

clarify selected interview responses. This process helped ensure that the interpretations presented in the study accurately reflected the experiences and perspectives of the participants.

## **RESULTS AND DISCUSSION**

### **A. Increased Student Participation**

It can be seen that the application of the PJBL has successfully helped increase students' involvement in classroom activities. They are no longer merely the receiver of information but have become an active participant through participating in project work, inquiry, and discussion activities. According to Rahman and Maulana [5], PJBL allows students to learn actively by involving themselves in collaborative work, inquiry processes, and discussion. In the learning process, students were found to be more proactive in investigating learning resources and sharing their opinions in group discussion. Similarly, it was reported by Rahman and Maulana [5] that there is higher participation in learning among students who participate in collaborative projects than in conventional teaching-learning situations. This means that students have changed their passive roles in teacher-centered instruction into more active roles in student-centered instruction. Class interaction increased where the participants actively took part in discussion, questioning, and peer discussion sessions.

### **B. Development of Key Skills**

The study results revealed that the implementation of Project-Based Learning (PJBL) greatly contributed to the development of students' key skills, especially critical thinking and communication. Through project activities, learners were asked to investigate authentic problems, analyze information, evaluate alternative solutions, and make informed decisions in the course of the completion of assigned tasks. These processes developed higher-order thinking and a deeper understanding of the content of the learning. Students were also continuously communicating their ideas in discussion, presentation, and project exhibition, which improved their skills of stating opinions clearly and confidently. According to Thomas [16], PJBL engaged learners in constructive investigations involving problem-solving, decision-making, and inquiry activities that require active knowledge construction rather than passive information reception. In addition, Kokotsaki et al. [15] stated that project-based learning provides meaningful learning experiences by encouraging students' active involvement and authentic communication. Thus, the implementation of PJBL supported the development of analytical reasoning and effective communication skills in the learning process. Project work was carried out in groups, which led to a shared responsibility for the results and motivated students to learn from each other. Creativity was stimulated as students created products, developed original ideas, and searched for different ways of solving project-related challenges [15].

### **C. Student Motivation and Ownership**

The results indicated that the implementation of Project-Based Learning (PJBL) enhanced students' motivation and sense of ownership of learning in the pesantren context. Students found the learning activities to be more engaging and meaningful in relation to their daily lives through authentic projects based on real-world situations, increasing learners' accountability for task completion, problem-solving, and project objectives. As a result, students exhibited greater commitment, initiative, and resilience during the learning process. PJBL involves real-world and authentic tasks in which students participate in significant inquiry and create products valued by others [16]. Students also demonstrated emotional engagement and enthusiasm in discussions, collaborative activities, and the presentation of projects. Kokotsaki et al. [15] also argued that PJBL motivates the students through involvement as active agents in knowledge production and authentic problem-solving. Overall, the data suggest that the PJBL is useful in motivating the students, increasing their sense of ownership over their learning and encouraging positive emotional participation in classroom tasks.

### **Challenges in Implementation**

Although the implementation of Project-Based Learning (PJBL) generated positive responses in terms of student engagement, motivation, and learning ownership, the findings also revealed several challenges during its implementation in the pesantren context. The challenges were mainly related to students' unfamiliarity with student-centered learning, differences in students' levels of participation, time management, teacher facilitation, and the need to adapt project activities to the established educational culture of pesantren. These challenges indicate that the effectiveness of PJBL depends not only on the design of project activities but also on the readiness of teachers and students to adapt to a different pattern of learning interaction [21], [8].

## CONCLUSION

### 1. PJBL as a Viable Pedagogical Innovation in Pesantren

The findings indicate that Project-Based Learning (PJBL) represents a viable pedagogical innovation for the pesantren context. Its implementation provided Santri with greater opportunities to participate actively in learning through authentic projects, collaborative activities, inquiry, problem-solving, and project presentations. These characteristics are consistent with the core principles of PJBL, which organize learning around meaningful questions or problems and require students to engage in sustained inquiry and the development of tangible outcomes [16]. The literature also indicates that PJBL has promising potential to improve student engagement, motivation, and learning outcomes, although its implementation requires adequate teacher preparation and contextual support.

The findings further suggest that PJBL does not necessarily conflict with the educational traditions of pesantren. Instead, it can function as a complementary approach that expands existing learning practices. Teachers can continue to provide academic, religious, and moral guidance while students assume greater responsibility for investigating problems, collaborating with peers, and producing project outcomes. This balance is important because pedagogical innovation in pesantren needs to recognize the institution's distinctive educational values, including discipline, responsibility, respect for teachers, communal life, and character formation [15], [7].

### 2. Contribution to Engaging, Meaningful, and Value-Aligned Education

The implementation of PJBL contributed to a learning environment that was more engaging, meaningful, and connected to students' experiences. Students demonstrated greater participation, motivation, collaboration, initiative, and responsibility during project activities. These findings are consistent with recent evidence showing that student-centered, project-based approaches can support motivation by increasing students' involvement in meaningful and authentic learning tasks. A 2024 meta-analysis examining problem-based, project-based, and case-based learning found positive effects on several dimensions of student motivation compared with teacher-centered or lecture-based approaches [8], [21].

The importance of authenticity is particularly relevant to the present study. When projects are connected to real-world situations and meaningful audiences, students have greater opportunities to understand why the knowledge they are learning matters. Recent research on authentic-context PJBL has shown that real-world project contexts can strengthen behavioral, emotional, and cognitive engagement while also supporting group interaction and deeper understanding. Thus, the value of PJBL extends beyond making classroom activities more enjoyable. It can create conditions in which students invest greater cognitive and emotional effort in learning [13], [15].

### 3. Future Directions for Research and Practice

Despite these promising findings, further research is needed to establish a more comprehensive understanding of PJBL implementation in pesantren. Future studies should examine PJBL across different types of pesantren, student age groups, subject areas, and institutional settings. Such research would help determine whether the positive experiences identified in the present study are consistent across different pesantren environments or are influenced by particular institutional characteristics. Future research should also employ longer intervention periods and more systematic measurements of student engagement, motivation, learning outcomes, and skill development. Recent literature suggests that PJBL research still requires stronger evidence concerning long-term effects and implementation across diverse cultural and educational contexts. Comparative studies could also examine differences between PJBL, conventional teacher-centered instruction, and other student-centered approaches to provide stronger evidence regarding its relative contribution to learning outcomes [13], [15].

Overall, this study concludes that Project-Based Learning has meaningful potential as a pedagogical innovation in pesantren. Its contribution is not simply related to increasing classroom activity, but to creating opportunities for Santri to learn through authentic experience, collaboration, inquiry, reflection, and responsible action. When carefully adapted to the pesantren context, PJBL can support a form of education that is engaging and meaningful while remaining aligned with the values and traditions that define pesantren education. Further empirical research and sustained teacher development are nevertheless required to determine how this potential can be implemented consistently and effectively across diverse pesantren contexts [13], [15].

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