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Profile of Teachers' Instructional Actions in Project-Based Learning at Min 2 Samarinda

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Kata Kunci
Teacher instructional actions, project-based learning, learning effectiveness.

Abstrak
The quality of education in the 21st century is largely determined by teachers' ability to implement innovative, student-centered learning models that align with modern competency demands. In this context, Project-Based Learning (PjBL) has emerged as one of the most relevant approaches for fostering critical thinking, creativity, and collaboration among students. This study describes teachers' instructional actions in implementing PjBL at MIN 2 Samarinda, including planning, implementation, evaluation, and learning effectiveness. The method was descriptive qualitative, employing interviews, observations, and documentation with thematic analysis and triangulation. The results showed that teachers were able to design contextual learning objectives, flexible project steps, and relevant media. In implementation, teachers acted as facilitators and mentors through active guidance, group work, and simple technology. Evaluation was conducted using objective rubrics, feedback, and student reflection. However, two PjBL syntax stages—namely, planning, determining fundamental questions, and preparing project schedules—were not fully optimal. Overall, teachers' instructional actions effectively facilitated collaboration, motivation, and assessment of learning outcomes.

INTRODUCTION

Education systems across the globe are currently undergoing significant transformation in response to the demands of the 21st century. The World Health Organization (2020) and the Organisation for Economic Co-operation and Development (OECD, 2021) have emphasized that students in the modern era must be equipped not only with cognitive abilities but also with competencies such as critical thinking, creativity, communication, and collaboration—often referred to as the 4C skills. Countries such as Finland, Singapore, and Australia have actively integrated project-based and inquiry-driven learning models into their national curricula to address these demands (UNESCO, 2021). In Indonesia, this global trend is reflected in the implementation of the Independent Curriculum (*Kurikulum Merdeka*), which emphasizes experiential, student-centered learning approaches (Mujiburrahman et al., 2025; Prasetyo, 2023; Rahmawati & Aulia, 2026; Zainuddin et al., 2025).

Education in the 21st century faces far more complex challenges than previous eras (Dariyono & Rusman, 2023; dos Santos Cunha, 2025; Khahro & Javed, 2022; Srivastava, 2023; Supa'at & Ihsan, 2023). Technological developments, globalization, and new competency demand require a transformation in the learning process (Catacutan et al., 2023; Mustafidin et

al., 2024; Oliveira & De Souza, 2022; Voronkova et al., 2023). Students are no longer sufficiently equipped with cognitive abilities alone; they also need critical thinking skills, creativity, communication, collaboration, and sensitivity to socio-cultural changes. This transformation requires teachers to implement innovative learning models that accommodate the characteristics of today's students. One relevant model for the modern era is Project-Based Learning (PjBL). This model centers students and provides opportunities for them to solve real problems through structured project activities. PjBL not only develops conceptual understanding but also stimulates higher-order thinking skills, creativity, cooperation, and independence. In the context of the Independent Curriculum, PjBL is a recommended model because it integrates learning with real life and supports achievement of the Eight Graduate Profiles.

The transformation of the Indonesian curriculum through the Independent Curriculum emphasizes forming students with character, noble morals, independence, creativity, critical thinking, and collaboration skills. These values are reflected in the Eight Graduate Profiles: (1) faith and fear of God Almighty and noble character, (2) independence, (3) critical reasoning, (4) creativity, (5) mutual cooperation, (6) global diversity, (7) national insight, and (8) Pancasila spirit. PjBL is a strategic approach because all these dimensions can be integrated into project activities, from problem exploration to product presentation. During implementation, students interact, discuss, solve problems, and produce works, allowing character and academic aspects to develop simultaneously.

In the context of *madrasah* education units, including MIN 2 Samarinda, implementing PjBL is essential for supporting the Independent Curriculum. Teachers have introduced various learning innovations, but PjBL implementation still faces challenges. Initial observations reveal that while some teachers apply PjBL creatively, quality varies. Obstacles include essential questions that do not lead to authentic problems, unsystematic project planning, and inconsistent teacher facilitation of student groups.

Additionally, not all teachers can create proportionate project schedules or optimize learning resources. Project evaluation often focuses on final products, neglecting aspects of the learning process, creativity, cooperation, and student reflection. This highlights the need for in-depth examination of teachers' instructional actions—from planning and implementation to evaluation. Teachers' instructional actions are central to PjBL success. They not only deliver material but also design projects, facilitate discussions, provide guidance and feedback, and conduct comprehensive evaluations of student learning. Thus, the quality of these actions determines whether PjBL runs optimally and positively impacts students.

Several previous studies demonstrate the effectiveness of Project-Based Learning (PjBL) in boosting student engagement, creativity, and outcomes. Research by Nurmayanti and Doyin (2023) shows that teachers' roles as facilitators greatly encourage student innovation through projects. Akhyaruddin and Yusra (2023) found that systematic PjBL creates authentic learning climates and significantly improves outcomes. Solissa et al. (2024) reported that PjBL enhances motivation and achievement in elementary students, though challenges persist in teacher planning and readiness. However, these studies do not specifically examine how teachers' instructional actions (planning, communication, facilitation, and evaluation) influence *PjBL* success in basic *madrasas*. This creates a research gap in understanding teacher instruction quality in PjBL at MIN 2 Samarinda.

Previous research has emphasized cognitive outcomes, motivation, or general PjBL effectiveness. Studies on teachers' instructional actions—particularly instructional communication, group facilitation, and systematic project development—remain limited. Isna Inda (2023) stressed that teachers' instructional communication skills determine student understanding, especially in resource-limited schools. Suhendar (2023) showed its impact on motivation but did not link it to PjBL. The lack of integration between teachers' instructional actions and PjBL limits comprehensive empirical evidence on instruction quality in project-based learning.

Synthesis of prior studies reveals theoretical, empirical, and practical gaps. Theoretically, few studies integrate teachers' instructional action theory with PjBL implementation in basic education. Empirically, direct assessments of teacher planning, implementation, and evaluation in *madrasa* PjBL are scarce. Practically, teachers face obstacles in project planning, essential questions, group management, and process evaluation (Ratnasari et al., 2024; Zet Al Awab et al., 2021). These gaps indicate that PjBL implementation is suboptimal without standardized teacher actions.

This research fills these gaps with conceptual and practical contributions. It provides a comprehensive overview of how teachers at MIN 2 Samarinda plan, implement, and evaluate project-based learning. Findings will enrich PjBL literature at the *madrasah* level and offer recommendations to enhance teacher instruction, making PjBL more effective, boosting student confidence, and delivering meaningful learning.

This research offers novelty in several ways. First, it focuses on the profile of teachers' instructional actions rather than just student outcomes or general PjBL effectiveness. Second, it examines a basic *madrasah* (*MIN*), an understudied context in PjBL literature. Third, it uses comprehensive triangulation—observations, in-depth interviews, and documentation analysis—for richer, contextually grounded insights into PjBL enactment. These contributions will inform policy and practice in *madrasah* education.

Conditions at MIN 2 Samarinda show great potential for PjBL, but student enthusiasm must be matched by teachers' systematic readiness. Understanding teachers' instructional action profiles is crucial. This study provides a comprehensive overview of how MIN 2 Samarinda teachers plan, implement, and evaluate project-based learning. It also explores PjBL's effectiveness in boosting student involvement and competencies under the Independent Curriculum. By identifying strengths and weaknesses in instructional actions, schools can develop strategies to improve learning quality and teacher capacity for consistent PjBL. Thus, this research addresses PjBL implementation issues at MIN 2 Samarinda, refines practices, and elevates basic education quality.

METHODS

This study employed a descriptive qualitative approach to provide an in-depth description of the profile of teachers' instructional actions during the implementation of Project-Based Learning (PjBL) at MIN 2 Samarinda. This approach was chosen because it allowed researchers to understand learning phenomena naturally, comprehensively, and contextually, reflecting actual classroom conditions. The qualitative design provided space to explore teacher practices, student responses, and learning dynamics directly, without

manipulating variables. Thus, the research produced a comprehensive picture of how teachers planned, implemented, and evaluated project-based learning in an elementary school setting.

The research subjects included teachers and students from Class VC, teachers and students from Class VIB in Indonesian language subjects, and the *madrasah* principal, selected via purposive sampling. Subjects were chosen based on their direct involvement in PjBL application and relevant experience. Focused teachers were active practitioners who had repeatedly implemented PjBL in their classes, while students came from groups that fully participated in projects. The *madrasah* principal's involvement provided perspectives on policy, support, and curriculum implementation related to PjBL at MIN 2 Samarinda. This composition enabled researchers to capture diverse information from multiple viewpoints, enriching the findings.

Data collection utilized qualitative instruments: observation, in-depth interviews, and documentation. Observations captured teacher and student activities during learning, including facilitation of discussions, project monitoring, and feedback provision. In-depth interviews with teachers, students, and school staff elicited experiences, challenges, and perceptions of PjBL implementation. Documentation—such as lesson plans, project schedules, assessment sheets, and student work—served as supporting data to corroborate observations and interviews. These three instruments facilitated triangulation, enhancing data validity, richness, and accountability.

Data collection employed method triangulation and source triangulation. Method triangulation combined observations, interviews, and document analysis to avoid reliance on a single technique. Source triangulation cross-verified information from teachers, students, and school staff for consistency. For instance, project schedule preparation was not only queried from teachers but confirmed via documents and student interviews for alignment. This strategy ensured credible, accurate results on actual PjBL classroom practices.

The research procedure followed a qualitative flow: pre-field, fieldwork, and data analysis stages. In the pre-field stage, researchers conducted preliminary studies, defined the focus, obtained school permission, and prepared instruments. Fieldwork involved intensive classroom observations, subject interviews, and document collection related to PjBL implementation; researchers immersed themselves in classroom dynamics for deep understanding. Data analysis occurred iteratively from collection through completion, using the Miles and Huberman interactive model: data reduction, presentation, and conclusion/verification. Emergent patterns, categories, and themes constructed a complete profile of teachers' instructional actions.

Data analysis emphasized interpretive processes to uncover meanings from field data. For example, observation data on teachers' project monitoring was compared with interview data on strategies for student challenges. Data were then organized into themes: PjBL planning, implementation, monitoring, evaluation of learning experiences, and challenges. Validity was strengthened via member checks with teachers and informants to align interpretations with reality. This approach yielded an in-depth depiction of how teachers' instructional actions formed and evolved during PjBL.

The research results not only described PjBL practices but also offered contextual insights into supporting factors, obstacles, and development potential for project-based learning in elementary schools, particularly at MIN 2 Samarinda. The qualitative approach

enabled contributions of practical recommendations for teachers, schools, and future researchers on more effective, meaningful, and student-centered PjBL application.

RESULTS AND DISCUSSION

This research was carried out at MIN 2 Samarinda, a religious-based basic education institution that is committed to forming students with religious character, integrity, and 21st century competence. All research activities are carried out in a naturalistic manner through direct observation in the classroom, in-depth interviews with teachers and students, and analysis of learning documents related to the implementation of *Project-Based Learning* (PjBL). The results of this study illustrate how teachers' instructional actions are formed in the process of planning, implementing, and evaluating project-based learning, as well as the extent of the effectiveness of PjBL in increasing student involvement and competence.

1. Teachers' Instructional Actions on Learning Planning

a. Determining the Driving Question

In the early stages of planning, teachers have tried to formulate fundamental questions that are relevant to the context of students' lives. The questions that are prepared generally depart from environmental phenomena, social issues, and daily experiences that are easy for students to observe. The selection of the theme shows that teachers have understood the importance of relating the project to real situations so that students feel closer to the problem they are going to solve. The questions asked were proven to be able to foster students' curiosity, as seen from their active responses when the teacher introduced the topic. Nevertheless, the analysis of the research shows that the question is still general and has not fully challenged high-level critical thinking skills. Questions have not led to in-depth exploration that demands analysis, synthesis, or complex decision-making from students. The teacher admits that the process of designing fundamental questions is still a challenge because it must be adjusted to the heterogeneous abilities of students. Some students need simple questions, while others require more complex stimuli. This causes teachers to tend to choose medium-level questions that are safe for all students. The findings of the study confirm that one of the initial syntax of PjBL, namely formulating driving questions, has not been implemented optimally. Fundamental questions that have not yet been challenged cause project exploration to not reach the depth expected in the PjBL model.

b. Project Planning Preparation

In the project planning process, teachers have directly involved students in determining work steps, choosing learning resources to be used, and dividing roles in groups. This involvement shows the application of the principle of student-centered learning, where students are given space to organize their own learning process. This involvement has a positive impact on students' motivation to learn. Most students show higher enthusiasm because they feel they have a role and responsibility in the project. The sense of ownership of the project results also increases because they are involved from the planning stage. Despite this, research has found that students' contributions to planning have not been evenly distributed. In each group, there are several students who dominate making decisions, while other members tend to follow without giving an opinion. This condition shows that the dynamics of collaboration have not been balanced, so the principle of equal role distribution has not been achieved. Overall, the preparation of the project plan has been carried out quite well, because it still needs strengthening, especially in ensuring more equitable collaboration. Teachers need to intervene such as clearer division of tasks, role rotation, or discussion facilitation techniques so that each student has the opportunity to contribute.

c. Preparation of Project Implementation Schedule

In the aspect of preparing a schedule, teachers have made a project timeline that contains work stages and completion targets every week. However, the schedule has not been prepared systematically and often undergoes changes in the middle of project implementation. The change in schedule is mainly caused by two main factors, namely the limited face-to-face time and the presence of madrasah agendas that appear suddenly so as to reduce the time allocation for project work. This condition results in several stages of the project having to be compacted or moved to the next meeting.

Schedule inconsistencies have a direct impact on the rhythm of group work. Students experience confusion in understanding weekly targets and difficulty managing work time. Some groups even experience delays in completing certain stages because schedules change without careful planning. Of the entire planning syntax, scheduling is the weakest part. Unstable project timelines make project workflows not run optimally and hinder the achievement of project-based learning goals.

2. Teachers' Instructional Actions on the Implementation of Learning

The implementation of PjBL by Indonesian teachers in grades V and VI at MIN 2 Samarinda shows that teachers have carried out their roles as facilitators, directors, and motivators quite optimally. The two main syntax observed at this stage are (a) monitoring project activities and (b) testing project results**.**

a. Monitoring Activities and Project Progress

The results of the observation show that teachers carry out active and systematic monitoring. Before the project begins, the teacher provides a detailed explanation of the work steps through oral instructions, whiteboards, and instruction sheets. During the implementation of the project, the teacher goes around monitoring each group, asking about progress, and helping students through guiding questions so that they can find solutions independently. Grade V teachers apply mentoring that focuses on the structure of group work, such as providing examples of report frameworks and guiding the preparation of products without compromising student independence. On the other hand, grade VI teachers emphasized controlling the direction of the discussion so that students stay focused on solving problems according to the project objectives. These two patterns show that monitoring is not only in the form of supervision, but also active assistance to maintain process order, strengthen critical thinking skills, and ensure that students are able to complete tasks independently. The lesson plan documents, observation sheets, and teachers' notes reinforce the findings that the activity steps have been consistently arranged, including problem explanations, formation of heterogeneous groups, discussion and data collection, product preparation, and presentation of results. The division of roles in groups (chair, recorder, presenter, data seeker, and report compiler) helps ensure the involvement of each student.

Teachers also facilitate a variety of learning resources, including reading texts, worksheets, and multimedia presentations. Although the limitations of digital devices limit the use of technology in the classroom, teachers still provide alternatives through school projectors, educational videos, and examples of digital works. Motivation is given through verbal praise, appreciation of work, and real challenges such as the opportunity to appear in a speech competition. These strategies have been shown to increase student engagement, collaboration, and a sense of responsibility throughout the project.

b. Testing Project Results

The stage of testing the project results is carried out through group presentations in front of the class. Students display products such as stories, reports, speech texts, posters, and pictures. The teacher plays the role of providing feedback and spark questions, while other students provide feedback and suggestions for improvement. This process shows an increase

in students' communication skills, argumentation, and confidence. The assessment is carried out using rubrics that include process aspects (cooperation, responsibility, creativity, accuracy of work steps) and product aspects (originality of ideas, neatness, relevance of content). The teacher emphasized that the assessment is not only on the final result but also on the group work journey. In addition, students were asked to write reflections to assess their learning experience. Although reflection is still general, it helps students realize strengths and areas for improvement in the learning process. The best products are published in classrooms or wall magazines as a form of appreciation. These findings confirm that the process of testing project outcomes not only serves as a summative evaluation, but also as a means of reflective learning, character building, and 21st century competency development.

3. Teachers' Instructional Actions Towards Learning Evaluation

The evaluation of learning in the implementation of Project-Based Learning (PjBL) at MIN 2 Samarinda is carried out comprehensively through the provision of feedback, rubric-based assessments, as well as reflections and recommendations for improvement. The results of the study showed that the two teachers, both in grades V and VI, carried out evaluations not only oriented to the final product, but also to the learning process and the development of student competencies.

a. Providing Constructive Feedback

Teachers provide verbal and written feedback in an effort to help students understand the strengths and weaknesses of their work. Grade V teachers made more use of verbal feedback given immediately after the presentation, whereas grade VI teachers combined it with written feedback that contained detailed notes on student assignments. The feedback is received by students with different responses according to the stage of development; students of class V tend to see feedback as reinforcement, while students of class VI are more critical and make it material for reflection. Feedback plays a significant role in improving the quality of writing, completeness of structure, and thoroughness of students.

b. Project Assessment Based on Rubric

Teachers have prepared and socialized the assessment rubric since the beginning of the project. The rubric contains indicators related to content, text structure, language, neatness, cooperation, and time management. Assessments are conducted consistently on processes and products, followed by verbal or written comments to clarify the assessment findings. Students show awareness of the criteria used, although they do not fully utilize the revision opportunity optimally. The results of the assessment are the basis for teachers to improve their next learning strategy and improve the quality of student involvement in projects.

c. Reflections and Recommendations for Improvement

Both teachers apply reflection as an integral part of the evaluation. Grade V teachers engage students through reflection journals and class discussions to assess the learning experience, strategies used, and obstacles faced. Grade VI teachers apply more structured reflection through a table of the project's strengths and weaknesses and draw up concrete recommendations, such as strengthening speaking exercises or improving vocabulary. Reflection is also carried out collaboratively between teachers, so that there is a continuity of skill development between classes V and VI. The recommendations given have proven to have an impact on improving the quality of subsequent projects.

4. Effectiveness of PjBL Implementation

The implementation of Project Based Learning (PjBL) at MIN 2 Samarinda shows a fairly high effectiveness based on the achievement of learning objectives, student involvement, and learning outcomes. Observation findings and interviews with teachers of grades V and VI revealed that PjBL has a positive impact on students' academic and social development, although there are variations in strategies between levels.

a. Achievement of Learning Objectives

Grade V teachers reported improvements in report writing skills, cooperation, and students' courage in delivering their work. Grade VI teachers emphasized the development of logical thinking skills, the preparation of explanatory texts, and public speaking skills. Both teachers also noted that students' motivation increased because projects were considered more challenging, relevant, and gave room for creativity. The practice of learning documentation through portfolios, rubric notes, and presentation recordings is used to assess student progress while improving learning strategies. The obstacles that arise are mainly related to limited reading resources and access to technology, but teachers overcome them by providing alternative teaching materials.

b. Student Learning Outcomes

The results of the project assessment showed a significant improvement over previous learning. The average value of class V projects reached 85, higher than the previous average of 76. Meanwhile, class VI obtained an average of 86 with the most prominent skills in the aspects of speaking and reasoning. Observations also showed that about 90% of students actively collaborated in groups, and 85% showed increased motivation to learn during the project. In this study, the effectiveness of PjBL in MIN 2 Samarinda was quite significant. Students appear to be more active, enthusiastic, and able to work together cooperatively. The resulting project products show increased creativity and critical thinking skills. Interviews with teachers revealed that this model helps students understand concepts contextually and improves their motivation to learn. Overall, this study found that most of the PjBL syntax has been implemented well, however, the two PjBL syntax at the planning stage are determining the basic questions and compiling a project schedule that looks not optimal because the questions are still simple and the schedule is not systematic. These two findings are important aspects that need to be improved to improve the quality of PjBL implementation in the future. With improvements in this aspect, project-based learning has the potential to provide a more meaningful and immersive learning experience for students.

1. Teachers' Instructional Actions on Learning Planning

The planning stage is an important foundation in the implementation of Project-Based Learning (PjBL), because the quality of planning greatly affects the smooth learning in the next stage. At MIN 2 Samarinda, teachers have tried to prepare project plans according to the PjBL syntax, namely determining basic questions, preparing project planning, and making project implementation schedules. Although these three syntaxes are implemented, the research findings show that the two aspects of planning, the determination of fundamental questions and the preparation of project schedules, are not fully optimal**,** so they need to be strengthened. This is in line with the statement of Rahmawati & Nurhaliza (2021) that planning is the main foundation for the success of PjBL because the quality of planning determines the direction of students' thinking from the beginning.

a. Determining the Driving Question

The teacher determines the fundamental questions as the starting point for learning. These questions are structured based on themes relevant to students' lives, such as the environment, culture, or daily activities. These questions are able to foster curiosity and encourage students to do initial exploration. However, the results of the observations show that the fundamental questions formulated are still general and have not yet led to challenging authentic problems. Teachers have not fully utilized the characteristics of driving questions that should encourage in-depth investigations. These findings are supported by Lestari & Widodo (2021) who assert that fundamental questions should lead students to complex explorations that spur critical thinking skills. Thus, while relevant, the fundamental questions are not yet strong enough to lead students to small research processes and real problem-solving.

These findings are in line with Rahmawati & Nurhaliza (2021), who emphasize that driving questions should challenge and encourage independent investigation.

b. Project Planning Preparation

In compiling a project plan, the teacher involves students in discussions to determine the steps of the activity, tools and materials, and the division of tasks. Student involvement is a positive value because it fosters a sense of belonging and collective responsibility. This is in accordance with the view of Mukhlisin & Dewi (2023) that student participation in planning increases motivation and a sense of attachment to the project.

Teachers have compiled the flow of project activities starting from preparation, process, to presentation of results. This planning shows an understanding of the characteristics of PjBL that emphasizes the process, not just the final product.

c. Preparation of Project Implementation Schedule

In the aspect of preparing schedules, teachers make a division of project implementation time, but the schedule has not been structured in detail and is still flexible. There are often changes in the schedule following the conditions of the class or the madrasah agenda. As a result, some groups experienced delays, especially at the stage of data collection or product completion. These findings are consistent with Siregar et al. (2022) who stated that an unsystematic project schedule can hinder the smooth running of PjBL and reduce student discipline at work. The absence of a clear time breakdown causes students to have difficulty measuring progress and are not used to working with time targets. Ideally, as suggested by Mukhlisin & Dewi (2023), the project schedule contains the duration of each stage, weekly targets, and monitoring mechanisms. However, at MIN 2 Samarinda, the schedule is still set in general without specific time achievement indicators.

2. Teachers' Instructional Actions on the Implementation of Learning

The implementation stage is the core of PjBL, and at this stage the teacher has shown quite effective instructional actions as facilitators, guides, and motivators. This is in line with Ardiana & Setyono (2020) who emphasized that in PjBL, teachers play the role of facilitators who guide the students' exploration process.

a. Monitoring Project Activities

Teachers consistently monitor the group's progress, make visits to each group, provide direction, and help solve problems. Teachers also facilitate students with relevant learning resources, both from books and simple digital media. This intense monitoring activity has been proven to increase student engagement and strengthen group collaboration. These findings support Harlin & Yusuf (2024) who stated that routine monitoring in PjBL improves product quality and collaboration between group members.

b. Testing Project Results

At the stage of testing the results, the teacher assesses both the process and the final product. Assessments include creativity, thoroughness, communication, and cooperation. Students are also given the opportunity to present their work, which encourages the ability to speak and think systematically. This practice is in line with the principle of authentic valuation stated by Prameswari et al. (2022), that valuation in PjBL must include processes, not just final products.

3. Teachers' Instructional Actions Towards Learning Evaluation

The evaluation stage focuses on reflecting on the learning experience. The teacher provides an opportunity for students to evaluate their experiences through class discussions.

a. Student Reflection and Teacher Feedback

Reflection is done through open-ended discussions, where students express their experiences, obstacles, and things they learned. The teacher provides constructive feedback to each group. Even though reflection has been carried out, students' reflections are still general

and not in-depth. This finding is in line with Wibowo (2021) who stated that superficial reflection does not result in continuous improvement. Therefore, additional strategies such as reflective journals or portfolios, as recommended by Sundari & Hakim (2023), need to be implemented to make reflection more meaningful.

4. Effectiveness of PjBL Implementation

The effectiveness of the implementation of Project Based Learning (PjBL) at MIN 2 Samarinda can be seen through three main aspects, namely the achievement of student learning goals and outcomes. Data from observations, interviews with teachers, students, and principals show that project-based learning has been implemented quite well, despite differences in strategies between classes V and VI. This is in accordance with the findings that the practice of PjBL often varies between teachers due to differences in experience, creativity, and classroom management skills (Fitriani & Hasanah, 2022).

The effectiveness of the implementation of Project Based Learning (PjBL) at MIN 2 Samarinda is seen as high, as shown by the improvement of students' academic and social skills, more active learning engagement, and better learning outcomes compared to previous learning. In addition, the learning process becomes more meaningful, encouraging creativity, confidence, and more effective interaction between students.

a. Achievement of Learning Objectives

The implementation of PjBL at MIN 2 Samarinda is able to achieve learning goals, especially in improving literacy, speaking ability, and 21st century skills. In class V, students are more skilled in writing reports, drafting texts, and presenting project results. Class VI shows improvements in the ability to think logically, deliver speeches, and give feedback. Collaborative activities also strengthen communication skills and responsibility. PjBL increases student motivation and activeness, and helps teachers manage more student-centered learning. Although effective, the use of digital media and reflection activities still needs to be strengthened.

b. Student Learning Outcomes

PjBL has a significant impact on improving learning outcomes. In class V the project value rose from 76 to 85, while in class VI it reached an average of 86 with outstanding abilities in the aspects of speaking and reasoning. Most of the students have exceeded the KKM. Observations also showed increased participation, collaboration, motivation, and individual responsibility. Overall, PjBL improves academic achievement and social skills, although it requires more structured scheduling support and the use of digital learning resources.

CONCLUSION

This study effectively described teachers' instructional actions in implementing Project-Based Learning (PjBL) at MIN 2 Samarinda, covering planning, implementation, evaluation, and overall effectiveness. Findings revealed that teachers generally followed PjBL syntax, excelling in facilitation during implementation to boost student involvement, creativity, communication, collaboration, and engagement, with evaluation via reflection and feedback—though planning (basic questions and schedules) and reflection depth needed improvement. Implications underscore structured PjBL adoption at the elementary level, urging teacher skill-building in challenging projects and time management, school support via facilities and training, and student encouragement for active participation. Practical recommendations include digital media integration, reflection journals/portfolios, and regular evaluations. For future research, comparative or experimental studies across subjects, grade levels, or skills (e.g., critical thinking) could validate and expand these insights in diverse *madrasah* contexts.

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