Implementation of Project Based Learning in Improving Early Childhood Interpersonal Intelligence

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ABSTRACT
This research study investigates the implementation of Project Based Learning (PBL) to enhance early childhood interpersonal intelligence. The study explores the steps involved in planning PBL and presents specific strategies for its implementation in early childhood settings. This study used a qualitative approach with data collection techniques in the form of semi-structured interviews, non-participant observation, and documentation. Data analysis used Milles, Huberman, and Saldana’s interactive data analysis, namely: data condensation, data display, and conclusion. The research findings show that the implementation of PBL has a positive impact on students' interpersonal intelligence by promoting interaction, collaboration, and problem-solving skills. Strategies such as the division of diverse groups, assigning different roles, encouraging group discussions, providing peer feedback, and facilitating reflection, and evaluation were found to be effective in fostering interpersonal skills. Evaluation of PBL implementation involved formative and summative assessments, which allowed observation of student participation, feedback on interpersonal skills, assessment of project outcomes, and collecting feedback from students, parents, and teachers. The comprehensive evaluation process supports the effectiveness of PBL in improving early childhood interpersonal intelligence. The implications of this study highlight the importance of incorporating established educational theories and research findings into PBL planning, strengthening the theoretical foundation, and providing evidence-based support for the effectiveness of PBL in fostering early childhood interpersonal intelligence. The findings contribute to the field of early childhood education by providing practical guidance for educators who want to improve students' interpersonal skills through a project-based learning approach.

Keywords: Project-Based Learning, Early Childhood Education, Interpersonal Intelligence
menunjukkan bahwa implementasi PBL berdampak positif pada kecerdasan interpersonal siswa dengan mempromosikan interaksi, kolaborasi, dan keterampilan pemecahan masalah. Strategi seperti pembagian kelompok yang berbeda, memberikan peran yang berbeda, mendorong diskusi kelompok, memberikan umpan balik dari teman sebaya, serta memfasilitasi refleksi, dan evaluasi ditunjukkan efektif dalam menumbuhkan keterampilan interpersonal. Evaluasi implementasi PBL melibatkan penilaian formatif dan sumatif, yang memungkinkan pengamatan partisipasi siswa, umpan balik tentang keterampilan interpersonal, penilaian hasil proyek, dan mengumpulkan umpan balik dari siswa, orang tua, dan guru. Proses evaluasi yang komprehensif mendukung keefektifan PBL dalam meningkatkan kecerdasan interpersonal anak usia dini. Implikasi dari penelitian ini menyoroti pentingnya menggunakan teori pendidikan yang sudah mapan dan temuan penelitian ke dalam perencanaan PBL, memperkuat fondasi teoretis dan memberikan dukungan berbasis bukti untuk efektivitas PBL dalam menumbuhkan kecerdasan interpersonal anak usia dini. Temuan ini berkontribusi pada bidang pendidikan anak usia dini dengan memberikan panduan praktis bagi para pendidik yang ingin meningkatkan keterampilan interpersonal siswa melalui pendekatan pembelajaran berbasis proyek.

**Kata Kunci:** Pembelajaran Berbasis Proyek, Pendidikan Anak Usia Dini, Kecerdasan Interpersonal

**INTRODUCTION**

Teacher commitment plays a crucial role in the field of education, as it serves as a reference and motivation for teachers to fulfill their responsibilities and support the development of individuals throughout their lives (Rifa'i et al., 2022). Education holds the potential to contribute to the progress of society, and the responsibilities of teachers in the future will become increasingly complex due to global challenges (Afifah, 2017).

Early childhood is a critical phase for growth and development, often referred to as the "golden age." During this period, children experience rapid brain development, making it an opportune time to build a strong foundation (Khairi, 2018; Salabi, 2021). Interpersonal intelligence, which involves the ability to relate to others, is one of the multiple intelligences present in individuals (Nurhadi, 2018). It plays a significant role in fostering relationships, social communication, and understanding, contributing to individuals' overall success.

Developing interpersonal intelligence from an early age is crucial, as it supports children's socialization and lays the groundwork for future development (Nurunnisa, 2017). In the context of early childhood education, kindergarten serves as a pivotal environment for children to interact and develop essential social skills (Muadin, 2017a). The kindergarten curriculum aims to stimulate physical and spiritual growth, ensuring children's readiness for further education (Muadin, 2017b).

Project-Based Learning (PBL) emerges as a promising strategy to enhance children's collaboration and foster interpersonal intelligence. PBL aligns with the
concept of "learning by doing" and creates opportunities for students to work in groups, solve problems, and achieve common goals (Sari, 2018). Project-based learning or PjBL is a learning model that prioritizes students as the subject or center of learning and also includes projects/activities as a medium for learning (Sari & Astuti, 2018). By involving students actively in activities and projects aligned with competency development objectives, PBL facilitates the cultivation of interpersonal intelligence competencies in children.

The adoption of PBL as a learning model in early childhood education institutions, in line with regulations governing early childhood education standards, has been widespread (Nisfa et al., 2022). However, there is a need to address challenges related to children's collaboration, such as selfishness, a lack of tolerance, and difficulty cooperating with peers (Sahidun, 2018). To achieve the goal of developing interpersonal intelligence in early childhood, it is essential to involve both parents and teachers in kindergarten and early childhood education institutions. Parents can contribute through parenting patterns and value/norm education at home, while teachers in PAUD institutions can employ learning activities, methods, and strategies that support interpersonal intelligence development.

Interpersonal intelligence in early childhood is certainly different and has simpler characteristics than interpersonal intelligence in adults. Interpersonal intelligence in early childhood is emphasized on the child's ability to understand, respond, understand the intentions, goals, motivations and feelings of others so that he is able to socialize with the surrounding environment (Qowiyah, 2020). Project-based learning (PBL), which derives from John Dewey's concept of "learning by doing," not only influences children's collaboration skills but also fosters a conducive learning environment by incorporating learning models into the process.

Kindergarten serves as the initial platform for children to interact with their peers and develop essential social skills. It represents a level of formal early childhood education (PAUD) available for children aged 6 years and under. The kindergarten curriculum places emphasis on providing educational stimuli to facilitate physical and spiritual growth, ensuring children's readiness for further education.

Observations in several kindergartens in the Penajam District area of Penajam Paser Utara Regency, East Kalimantan Province, such as Handayani IV Kindergarten and TKIT Muslihah, have shown positive results from the implementation of the PBL learning model, including improved caring attitudes, enhanced socialization, and increased cooperation among children (Nisfa et al., 2022). Therefore, this study aims to explore the application and effectiveness of
PBL in fostering early childhood interpersonal intelligence in these specific kindergartens.

By investigating the implementation of PBL in Handayani IV Kindergarten and TKIT Muslihah, this research seeks to contribute to the understanding of how project-based learning can be utilized to develop interpersonal intelligence in early childhood education.

**RESEARCH METHOD**

This research is qualitative research with a descriptive approach. The focus of this research is on one object that is studied intensively as a case. This research was conducted in two kindergarten institutions located in Penajam District, Penajam Paser Utara Regency, namely Handayani IV Kindergarten and TKIT Muslihah.

The data sought and collected in this study relate to the implementation of Project Based Learning (PBL) in fostering early childhood interpersonal intelligence. Data sources are divided into two, namely primary data and secondary data. Data collection techniques were conducted through semi-structured interviews, non-participant observation, and documentation. Data analysis was conducted using interactive data analysis techniques developed by Milles, Huberman, and Saldana (Miles, M.B, Huberman, A.M, 2014). The data analysis process includes data collection, data presentation, data condensation, and conclusion drawing. To ensure data validity, observation persistence and data triangulation were used.

**RESULTS AND DISCUSSION**

**PBL Planning in Improving Early Childhood Interpersonal Intelligence**

PBL planning for improving early childhood interpersonal intelligence is a crucial process in designing effective teaching and learning activities. Before teachers begin the planning, they should consider these aspects: 1) community participation; learning planning should involve community participation to bridge any gaps between community expectations and school programs, 2) needs analysis; learning planning should be tailored to the characteristics of the school environment, 3) alignment with school vision and program; learning planning should align with the school’s vision and program in determining learning topics.

The steps of PBL planning in improving the interpersonal intelligence of early childhood conducted at two kindergarten institutions (Handayani IV Kindergarten in Penajam District and TKIT Muslihah in Penajam Paser Utara Regency), are summarized as follows:

1. Determining learning objectives
At this stage, teachers need to establish both general and specific learning objectives related to improving interpersonal intelligence.

2. Selecting a project topic
The chosen project topic should align with the learning objectives and have the potential to enhance interpersonal intelligence. It should be engaging and relevant to the students' needs.

3. Creating a project design
The project design should be clear and well-structured to help students understand the tasks and objectives effectively. This clarity enables students to develop their interpersonal intelligence by providing them with clear goals and appropriate context for the project.

4. Defining the roles of teachers and students
In PBL, teachers act as facilitators and mentors, while students take on the main role in project development. This dynamic is crucial for fostering interpersonal intelligence, as students learn to collaborate and communicate effectively with their peers and teachers.

5. Determining learning evaluation
Evaluation is essential to assess the extent to which learning objectives have been achieved and to gauge the effectiveness of PBL in enhancing students' interpersonal intelligence. Evaluation can be conducted through direct observation, tests, or formative assessments.

6. Developing learning plans and schedules
Careful preparation of learning plans and schedules is necessary to ensure that students can follow the project effectively and achieve the learning objectives within the allocated time.

7. Identifying resources
Adequate resources, such as learning materials, facilities, and equipment, need to be identified and prepared to support the implementation of PBL.

The findings regarding PBL planning for improving early childhood interpersonal intelligence can be discussed considering relevant theories and previous studies. First, involving community participation in learning planning aligns with the socio-constructivist theory, which emphasizes the importance of social interaction and collaboration in learning. That community involvement in educational programs positively impacts student engagement and learning outcomes (Rogoff et al., 2016).

Second, conducting a needs analysis aligns with the principles of differentiated instruction and learner-centered approaches. Previous studies
have highlighted the importance of needs analysis in designing effective educational interventions (Tomlinson, 2015).

Third, aligning learning planning with the school's vision and program ensures coherence and consistency in educational practices. Previous studies have emphasized the significance of curriculum alignment for effective teaching and learning (Waldron & McLeskey, 2010).

Fourth, the role of teachers as facilitators and students as active participants in PBL aligns with constructivist learning theories. By assuming the role of facilitators, teachers create an environment that promotes collaboration, problem-solving, and the development of interpersonal intelligence (Hung, 2015; Yeung, 2010). The studies have shown that student-centered instructional approaches, such as PBL, promote higher-order thinking skills and interpersonal competence.

Fifth, the use of various evaluation methods, such as direct observation, tests, and formative assessments, aligns with the principles of authentic assessment and formative assessment. Authentic assessment emphasizes the assessment of real-world tasks and the demonstration of skills in context. Formative assessment focuses on providing feedback and ongoing assessment to support student learning (Frey & Schmitt, 2007).

By considering these theories and previous studies, the findings of this research highlight the importance of incorporating established educational theories and research findings into the PBL learning planning process. This approach enhances the theoretical foundation and provides evidence-based support for the effectiveness of PBL in fostering early childhood interpersonal intelligence.

Implementation of PBL Learning in Improving Interpersonal Intelligence

Project Based Learning (PBL) is a learning approach that allows students to learn through projects that have specific goals and clear learning objectives. PBL can help improve students' interpersonal intelligence by involving them in activities that involve interaction and cooperation with others.

The following are some ways to implement PBL learning conducted at two kindergarten institutions (Handayani IV Kindergarten in Penajam District and TKIT Muslihah in Penajam Paser Utara Regency) to improve students' interpersonal intelligence:

1. Diverse group division
   Groups consisting of students with different backgrounds can help broaden students' perspectives and strengthen their interpersonal skills.

2. Assigning different roles in the group
Assigning different roles in the group, such as leader, facilitator, recorder, and scribe can help students strengthen their interpersonal skills and understand how to work in teams.

3. Encouraging group discussions
   Group discussions on topics or projects can help students learn from each other, listen to different perspectives, and build shared understanding.

4. Providing peer feedback
   Providing peer feedback can help students improve their interpersonal skills and build confidence.

5. Facilitating reflection and evaluation
   Reflection and evaluation can help students strengthen their interpersonal skills by considering how they work in groups and interact with others.

The findings regarding the implementation of PBL learning in improving students' interpersonal intelligence can be discussed with several relevant theories or previous studies. In the context of PBL learning, students can interact and work together with their group mates. In PBL learning, students work together in groups to complete relevant projects. Through this cooperation and interaction, students can share knowledge, build shared understanding, and develop interpersonal skills (Roes Singh & Chambers, 2011).

Several previous studies have examined the relationship between PBL and the development of students' interpersonal intelligence. These studies show that PBL can improve students' interpersonal skills, including the ability to communicate, work in teams, solve problems together, and appreciate others' perspectives (Hung, 2015). Through interaction and collaboration in PBL, students can develop interpersonal skills that are important in their social life.

By referring to these theories and previous studies, the findings of this study support the idea that the implementation of PBL learning can effectively improve students' interpersonal intelligence. Through group work, discussion, feedback, reflection and evaluation, students can develop their interpersonal skills and be ready to face social challenges in the future.

Evaluation of project-based learning (PBL) learning in improving Interpersonal intelligence

To evaluate PBL in improving interpersonal intelligence, it is necessary to conduct formative evaluation and summative evaluation. Formative evaluation is carried out during the learning process while summative evaluation is carried out after the learning is complete.
Here are some ways to evaluate PBL learning conducted at two kindergarten institutions (Handayani IV Kindergarten in Penajam District and TKIT Muslihah in Penajam Paser Utara Regency) in improving interpersonal intelligence:

1. **Formative Evaluation:**
   a. Observing students' participation in discussion and group cooperation
   b. Provide feedback to students on their ability to communicate, cooperate, and solve problems.
   c. Paying attention to students' progress in achieving predetermined learning objectives.

2. **Summative Evaluation:**
   a. Evaluate students' project results and their ability to apply interpersonal intelligence in the project.
   b. Provide questionnaires to students about their experience in PjBL learning and its effectiveness in improving their interpersonal intelligence.
   c. Conduct interviews with students to get feedback and suggestions on improvements for further.

In evaluating PBL, teachers consider several aspects, including: 1) the learning objectives that have been set and students' progress in achieving them, 2) relevance of the project to the interpersonal skills to be improved, and 3) effectiveness and efficiency of PBL implementation in improving students' interpersonal intelligence 4.4. Feedback from students, parents, and teachers about the advantages and disadvantages of PBL.

By conducting a comprehensive evaluation, teachers can assess the effectiveness of PBL in improving students' interpersonal intelligence. This will help teachers to take corrective measures and improve the quality of PBL learning to improve learning outcomes and student development.

The findings regarding the evaluation of Project Based Learning (PBL) in improving interpersonal intelligence can be discussed with relevant theories and previous studies. First, formative evaluation theory; this theory emphasizes the importance of evaluation conducted during the learning process to provide feedback to students and improve the quality of learning. In the formative evaluation of PBL learning, observing students' participation in discussion and group work, as well as providing feedback on their interpersonal skills, can help students improve these skills as the learning progresses (Nicol & Macfarlane-Dick, 2006).

Second, summative evaluation theory; this theory is concerned with the evaluation that takes place after the learning has been completed to assess
student achievement and the overall effectiveness of the learning. In the summative evaluation of PBL learning, the assessment of students' project results and their ability to apply interpersonal intelligence in the project can provide an overview of the extent to which PBL learning successfully improves students' interpersonal skills (Feng & Wang, 2019).

Several previous studies have examined the relationship between PBL learning evaluation and the development of students' interpersonal intelligence. These studies show that evaluations that involve observing students' participation in group discussions and cooperation, feedback on interpersonal skills, and assessment of students' project results can improve students' interpersonal skills (Aguayo et al., 2021; Feng & Wang, 2019). Such evaluations provide opportunities for students to develop interpersonal skills and improve the quality of their work in the context of PBL.

By referring to these theories and previous studies, the findings of this study support the idea that PBL learning evaluation that includes observation of student participation, feedback on interpersonal skills, assessment of student project results, and feedback from students, parents, and teachers can help improve students' interpersonal intelligence.

Here the design of PBL learning implementation in improving early childhood interpersonal intelligence at Handayani IV Kindergarten and TKIT Muslihah Penajam Paser Utara:

<table>
<thead>
<tr>
<th>PBL Implementation Design</th>
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<tbody>
<tr>
<td><strong>Planning</strong></td>
</tr>
<tr>
<td>determine learning objectives</td>
</tr>
<tr>
<td>determining the project topic</td>
</tr>
<tr>
<td>create a project design</td>
</tr>
<tr>
<td>determine the roles of teachers and students</td>
</tr>
<tr>
<td>determining the learning evaluation</td>
</tr>
<tr>
<td>develop an action learning plan</td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
</tr>
<tr>
<td>division of diverse groups</td>
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<tr>
<td>determining different roles in the group</td>
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<tr>
<td>assigning different roles in the group</td>
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<tr>
<td>encouraging group discussion</td>
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<tr>
<td>providing feedback from fellow students</td>
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<tr>
<td>facilitating reflection and evaluation</td>
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<tr>
<td><strong>Evaluation</strong></td>
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<tr>
<td>Formative Evaluation; observing, providing feedback, and noting the progress of the AUD through observation.</td>
</tr>
<tr>
<td>Summative Evaluation; evaluation of project results, questionnaires and conducting interviews</td>
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</table>
CONCLUSION

In conclusion, the planning and implementation of project-based learning (PBL) to improve interpersonal intelligence at Handayani IV Kindergarten and TKIT Muslihah in Penajam Paser Utara District involves several main steps. These steps include determining learning objectives, selecting project topics, designing projects, assigning roles to teachers and students, conducting learning evaluations, developing follow-up learning plans, and securing necessary resources. During the implementation of PBL, the division of diverse groups, assigning different roles in groups, encouraging group discussions, providing peer feedback, and facilitating reflection and evaluation are used to enhance interpersonal intelligence among students. These strategies aimed to encourage effective communication, teamwork, and problem-solving skills.

For evaluation purposes, formative evaluation is done by observing students' participation in group discussions and cooperation, providing feedback on their communication and problem-solving skills, and monitoring their progress towards learning objectives. Summative evaluation was conducted by assessing students' project results and their application of interpersonal intelligence skills, collecting feedback from students through questionnaires about their PBL experience and its impact on their interpersonal intelligence, and conducting interviews to collect input and suggestions for further improvement of PBL.

By following these steps and using appropriate evaluation measures, PBL has the potential to effectively enhance students' interpersonal intelligence, equipping them with the necessary skills to face future social challenges and succeed in their personal and professional lives.

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