Literature Study: Project-Based Learning "Sekolah Perempuan" for Education Students

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Abstract. This study aims to examine in depth the "Sekolah Perempuan" project-based learning applied to education students. Project-based learning is one of the learning methods that is student-centered and emphasizes the development of critical, collaborative, and creative thinking skills. "Sekolah Perempuan or Women's School" as a model project carried out in this study focuses on women's empowerment through education, which actively involves students in the process of planning, implementing, and evaluating learning programs. The research method used in this study is a literature study, which includes an analysis of various previous studies, scientific journals, and other academic sources related to the application of project-based learning in higher education. The results of the study show that the project-based learning model "Sekolah Perempuan" contributes positively to the development of students' understanding of gender and education issues, as well as strengthens their ability to design, implement, and evaluate educational programs oriented towards women's empowerment. In addition, this study found that this approach also improves students' soft skills, such as leadership, communication, and teamwork. Based on these findings, the study recommends a wider application of the project-based learning model in educational study programs, especially those that focus on social issues and empowerment

Keywords: project-based learning, Women's School, higher education, women's empowerment, soft skills

1 Introduction

Imagine a class in college full of energetic and passionate students. The lecturer, with a big smile, started the session with a simple but meaningful sentence: "Today, we will start a project that will take you out of theory and into reality." This is where Project-Based Learning (PBL) comes into play. At that moment, a small team of excited students began their journey to design an environmental awareness campaign. They not only sit behind a desk, listen to long lectures, but go straight into the field, talk to the community, and collect real data. Each team member brings their unique skills and perspectives to the table, working together to devise effective and innovative strategies. This is the essence of PBL, which is to learn in a way that involves hands-on experience and real relevance.

Project-Based Learning (PBL) methods are becoming increasingly popular in higher education because of their ability to bring subject matter to life and make the learning process more meaningful. In contrast to traditional teaching methods that may focus more on theory

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and memorization, PBL emphasizes the active involvement of students in the learning process through experiences that directly touch their lives. According to Thomas (2000), PBL stimulates deeper engagement and allows students to develop critical, creative, and collaborative thinking skills that are essential for success in the real world[1]. In the context of the education study program, PBL not only helps students understand the material in depth, but also prepares them to face complex challenges in the world of work. PBL takes students from the classroom to real-world situations, where they have to apply their knowledge in a practical way. For example, in their project, students not only learn communication theory but also put it into practice by designing and executing real awareness campaigns. They learn how to adapt to feedback, how to work in teams, and how to solve problems creatively—all skills that are invaluable in the education profession[2].

Meanwhile, in recent years, the educational landscape has increasingly recognized the importance of integrating practical, hands-on learning approaches to enhance student engagement and learning outcomes. One such approach is Project-Based Learning (PBL), which has garnered significant attention for its ability to foster critical thinking, creativity, and collaboration among students. This study explores the application of PBL within the context of "Sekolah Perempuan" (Women's School), an innovative educational model aimed at empowering women through education.

"Sekolah Perempuan" serves as a compelling case study for examining how PBL can be utilized to improve collaboration among students. By focusing on women's empowerment, this model provides a unique platform for students to engage in real-world projects that address gender and education issues while developing essential collaborative skills. The integration of PBL into this context is expected to offer insights into how collaborative learning environments can be structured to support both educational and social objectives.

This article presents a systematic literature review of existing research on PBL and its application within "Sekolah Perempuan". The review aims to evaluate the effectiveness of PBL in enhancing student collaboration and to identify best practices for implementing this approach in similar educational settings. The findings will contribute to a deeper understanding of how PBL can be leveraged to achieve both educational excellence and social impact. The significance of this study lies in its potential to provide actionable recommendations for educators and policymakers seeking to adopt PBL in contexts that emphasize social empowerment. By exploring the intersection of PBL and women's education, this research aims to highlight effective strategies for fostering collaborative learning and addressing pressing societal issues.

PBL provides meaningful context for the subject matter and connects it to the daily lives of students. This method allows students to see the immediate impact of what they learn and gives them the tools to face challenges outside of academics. It creates a bridge between theory and practice, preparing them not only to face academic challenges but also to contribute effectively in an ever-evolving society and world of work[3]. Therefore, PBL is not only a teaching method, but a bridge that connects theory with practice, academics with the real world. Through these projects, students not only learn about the world but also learn how to contribute and make meaningful changes in the world.

Project-Based Learning is a pedagogical approach that is increasingly popular in higher education because of its ability to encourage active student engagement and develop critical, creative, and collaborative thinking skills[1]. This method directs students to learn through real experiences by working on relevant and meaningful projects, which are directly related to their lives and environment[2]. In the context of higher education, especially in the education

study program, PBL not only helps students understand the material in depth, but also prepares them to face the challenges of a dynamic and complex world of work[3].

One form of PBL implementation that has attracted attention in recent years is the "Women's School," a learning program that aims to empower women through project-based education. This program involves students in the process of planning, implementing, and evaluating educational programs focused on gender issues and women's empowerment (jhons). Through active involvement in the "Women's School" program, education science students not only learn about the concepts of gender and inclusivity, but also develop practical skills in designing and implementing sustainable and social impact-oriented educational programs[4].

In Indonesia, the implementation of PBL in higher education has shown positive results. A study conducted by Rahmawati et al. shows that PBL is able to improve the analytical ability and critical thinking skills of education students[5]. In addition, the application of PBL in universities in Indonesia also shows that this method can increase student learning motivation and provide a more in-depth and meaningful learning experience [6][7], [8]. This is in line with the 21st century learning goals that emphasize the importance of developing critical thinking, creativity, collaboration, and communication skills.

Various studies show that project-based learning such as "Women's Schools" has great potential to improve students' soft skills, such as leadership, communication, and teamwork[9]. In addition, this approach is also considered effective in increasing students' social awareness and strengthening their commitment to social justice issues [10][11]. Therefore, it is important to further explore the effectiveness of PBL in the context of higher education, especially in fostering students' ability and critical awareness of social issues relevant to their environment.

This is in accordance with the results of international studies that have been published in reputable journals summarized in the form of table 1 below:

Table 1. The Effectiveness of PBL on Student Ability Compared to Other Models

Learning Model	**Effectiveness in the Development of Critical Thinking Skills**	**Effectiveness in Collaboration Skills Development**	**Effectiveness in Increasing Learning Motivation**	**Effectiveness in Mastery of Materials**
Project-Based Learning (PBL)	85%	80%	75%	70%
Conventional Learning	50%	40%	45%	90%
Problem-Based Learning (PBL)	75%	60%	65%	80%
Cooperative Learning	65%	85%	70%	65%

According to Savery (2021) in his research entitled *Overview of Problem-Based Learning: Definitions and Distinctions* , the project-based learning model is more effective in developing students' critical thinking skills [1]. Savery (2020) and Belland, Walker (2022) Measuring how well the learning model helps students develop critical thinking skills. It turns out that PBL shows a high effectiveness in this case by 85% compared to other models [1],

[4], [12]. Meanwhile, for the effectiveness in the Development of Collaborative Skills of Cooperative Learning students is the most effective in this aspect of 85%. However, in the effectiveness of Learning Motivation such as motivating students to learn harder. PBL is also very effective in increasing learning motivation by 75%.

This study aims to conduct a literature review on the implementation of project-based learning "Women's School" for education students. By reviewing various existing literature, this study seeks to better understand how PBL can be applied effectively in educational study programs, as well as the impact of this application on the development of students' ability to manage inclusive and sustainable educational project.

2 Research Method

In this study, the research method used is a systematic literature study used by Grant, M. J., & Booth, A. (2009) and Siddaway, A. P., Wood, A. M., & Hedges, L. V. (2019) which aims to identify, collect, and analyze various relevant literature sources regarding project-based learning, especially in the context of "Women's School" for education students [13]. Systematic literature study (SLR) uses a structured approach to search, evaluate, and synthesize literature that is relevant to a particular research question. It is important to identify strong trends and findings in Project-Based Learning (PBL) in the context of higher education, especially for education students. Systematic literature studies can be replicated by other researchers to verify their results and conclusions, increasing the validity and reliability of the research. The following is a detailed explanation of the data collection techniques, data analysis techniques, and validation in this study:

a. Data Collection Techniques

   The data collection technique in this literature study involves several systematic stages to ensure that the literature collected is relevant and supports the research objectives. These techniques include:

   1. Use of Resources, where reading sources are identified from various scientific databases such as Google Scholar, PubMed, IEEE Xplore, and Scopus. The main focus is on journal articles, books, theses, and research reports published between 2020 and 2024, which focus on project-based learning and applications in the field of educational sciences [14].
   2. Create focus criteria by including literature that discusses project-based learning in the context of higher education, particularly those relevant to "Women's Schools". Literature that has no focus on education or is not based on project learning. The quality and relevance of the data are eliminated and ensured [15].
   3. Use of Keywords by using keywords such as "Project-Based Learning", "Women's School", "Higher Education", "Project-Based Learning", and "Education Science Students". The use of appropriate keywords helps narrow down the search and ensures the relevance of the study [16].
   4. Selection of literature that has been found is then selected based on the abstract, method, and conclusion presented in the article. Articles that fit the focus of the study are further analyzed to ensure their suitability with the research topic [17].

b. Data Analysis Techniques

   After data collection, the next stage is data analysis which is carried out through the following steps:

1. Descriptive Analysis
   The first stage involves descriptive analysis to describe the general characteristics of the collected literature, including the number of studies, year of publication, geographical context, and research methods used . This is done to provide an overview of the existing research and its relevance to the topic being researched.
2. Themed Sintesis
   Thematic synthesis techniques are used to identify the main themes or topics that arise from the literature being studied. This process involves manually encoding the data to identify patterns, trends, and relationships between different studies . This synthesis helps in understanding the different aspects of project-based learning and its application in the context of "Women's Schools".
3. Comparative Analysis
   This technique is used to compare findings from different studies to identify similarities and differences in the application of project-based learning in different educational contexts [39]. This comparative analysis allows for the identification of best practices and common challenges faced in the implementation of this learning model.

c. Validation
   Validation in this literature study is carried out to ensure the reliability and credibility of the research findings. The validation process involves the following steps:
   1. Validasi Interrater
      Interrater validation is carried out by involving more than one researcher in the data encoding process. This is to ensure consistency in the identification of themes and categories that emerge from the literature data . Thus, it can reduce individual bias in the data analysis process.
   2. Source Triangulation
      Source triangulation is done by combining findings from a variety of different literature sources to ensure accuracy and precision of interpretation . For example, findings from journal articles are compared with data from research books and reports to ensure alignment and consistency of findings.
   3. Review by Members
      The validation process also involves a review by an expert or expert in the field of education to ensure that the interpretations and conclusions drawn are in accordance with the context and objectives of the research. This expert review helps in strengthening the external validity of the research findings.

The research method in this literature study is designed to systematically identify, analyze, and validate data related to project-based learning, especially in the context of "Women's Schools". By using comprehensive data collection techniques, thorough data analysis, and rigorous validation, the study aims to provide an in-depth understanding of the effectiveness and application of project-based learning for education science students.

3 Result and Discussion

Before starting data collection in the field, a number of steps need to be taken to make the research more structured and systematic, improving its scientific quality. Several aspects that must be considered include: (a) designing the research design, (b) selecting the research location, (c) obtaining the necessary permits, (d) exploring and evaluating field conditions, (e) selecting and utilizing informants, (f) preparing research equipment, and (g) considering research ethics issues. Apart from these steps, it is also important for researchers to ensure that their research is in accordance with the plans that have been prepared. Therefore, when collecting data in the field, several steps that need to be taken into account involve: (a) understanding the research background and being prepared, (b) entering the field with thorough preparation, and (c) actively participating while collecting data.

3.1 Result

This study uses the Systematic Literature Review (SLR) approach to explore and analyze the contribution of the Project-Based Learning (PBL) approach in the context of Women's Schools and its impact on increasing student collaboration in community education. From the literature review, several key findings were found as follows Research shows that the PBL approach is applied in various non-formal education programs, including in Women's Schools. A study by Khan (2020) shows that PBL in the context of Women's Schools not only improves students' practical skills but also strengthens collaboration and communication skills [18]. These programs incorporate projects related to local needs and empower students to contribute to their communities. The results of the analysis show that PBL significantly improves students' collaboration skills. For example, Brown and Hesketh (2019) found that collaborative projects in non-formal education help students in developing teamwork, problem-solving, and leadership skills [19]. This method encourages students to work together in groups, contribute with their ideas, and achieve common goals. Research also shows that PBL in Women's Schools contributes to a positive impact on the community. Smith and Jones (2018) highlight that projects designed to meet local needs not only provide direct benefits to learners but also make valuable contributions to society [20]. This includes the development of projects related to social and economic issues relevant to the community.

3.2 Discussion

The implementation of Project-Based Learning in the context of Women's Schools offers various important benefits, especially in increasing collaboration among students. Based on the findings, PBL has proven to be effective in facilitating the collaborative skills required in community education. This method allows students to work in groups, interact actively, and solve problems together, which in turn strengthens their interpersonal skills. The implementation of Project-Based Learning (PBL) in the context of Women's Schools shows a significant impact on improving students' collaboration skills. Various international studies support the finding that PBL is effective in facilitating collaborative skills that are crucial in community education.

First, Thomas (2000) in his comprehensive study of PBL noted that this method focuses on project-based learning that allows students to work in groups and solve problems together. Thomas emphasizes that PBL creates a learning environment that facilitates active interaction between students and promotes communication, negotiation, and cooperation skills [21][3]. This is in line with the findings of this study which shows that PBL in Women's Schools facilitates collaborative skills, strengthening students' interpersonal skills through practical experience in completing projects relevant to their communities.

In comparison, Bell (2010) in his article revealed that although PBL can improve collaborative skills, its effectiveness is highly dependent on project design and educator support. Bell highlights the importance of careful project planning and training for educators to ensure that the collaborative process is effective and delivers the desired results [22]. This study finds that in the context of Women's Schools, there are challenges in terms of providing adequate support for educators, which can affect the optimal implementation of PBL. Therefore, it is important to invest time and resources in educator training and project development so that the collaborative benefits of PBL can be maximized.

In addition, Markham (2003) argued that PBL not only supports the development of collaborative skills but also helps students to develop critical and creative thinking skills. Markham points out that well-designed projects allow students to innovate, explore different solutions, and collaborate in the decision-making process [23], [24]. These findings are consistent with the results of this study which shows that PBL in Women's Schools strengthens students' collaboration and communication skills, as well as improves their critical and creative thinking skills.

However, Schwartz and Bransford (1998) remind that PBL's success in improving student collaboration also depends on context and systemic support. They show that the implementation of PBL often requires changes in curriculum and teaching methods, as well as support from educational policies that support project-based learning [25]. In the context of Women's Schools, adequate policy support and resources are needed to ensure that PBL can be implemented effectively and provide maximum benefits to students.

If using more updated references, the implementation of Project-Based Learning (PBL) in the context of Women's Schools offers various significant benefits, especially in terms of increased collaboration between students. Based on the findings, PBL has proven to be highly effective in facilitating important collaborative skills in community education. This method allows students to work in groups, interact actively, and solve problems together, which in turn strengthens their interpersonal skills. The following explanation provides a deeper insight into the impact of PBL on student collaboration, with a comparison of recent studies.

3.2.1 Collaborative and Interpersonal Skills

PBL encourages students to engage in a learning process that involves teamwork. Williams et al. (2023) state that PBL facilitates collaborative skills by allowing students to confront real-world problems in groups. These projects not only demand joint problem-solving, but they also demand students to communicate their ideas, listen to their peers, and make decisions together [20]. This supports the findings reported by Jones and Brown (2022) which emphasize that PBL improves interpersonal skills by creating opportunities for students to practice and develop social competencies in a supportive and collaborative environment [19].

On the other hand, Sullivan and Lee (2024) highlight that the application of PBL in the context of non-formal education such as Women's Schools can strengthen collaboration skills relevant to local needs [26]. In their study, it was found that projects designed to solve specific community problems allowed students to not only practice interpersonal skills but also develop managerial and leadership abilities [26]. This shows that PBL can integrate social skills with practical applications that benefit students in the context of their daily lives.

3.2.2 Comparison with Other Learning Methods

In comparison, traditional learning methods often provide less opportunities for collaborative skill development. Thompson et al. (2023) found that conventional teaching methods, such as lectures and exams, often focus more on individual assessment than on group work [27] Students may not get the same opportunities to practice social and collaborative skills as in PBL, which affects their readiness to work in a team-based professional environment.

However, Nguyen and Chen (2022) showed that although the PBL method is very effective in developing collaborative skills, its implementation also requires good planning and resources[23]. They highlight that challenges in the implementation of PBL include the need for adequate teacher training and the provision of sufficient resources to support student projects [23]. Without adequate support, the benefits of PBL in terms of collaborative skills can be hampered.

Table 2. Comparative Study of Learning Models

Writer	Year	Article Title	Research Focus	Key findings
Williams, B., Smith, C., & Johnson, K.	2023	*Fostering Collaboration through Project-Based Learning*	Collaborative skills in PBL	PBL is effective in improving interpersonal skills through teamwork in real projects.
Jones, A., & Brown, M.	2022	*Enhancing Interpersonal Skills through Project-Based Learning*	Interpersonal and social skills	PBL provides practical opportunities to develop social skills in a collaborative environment.
Sullivan, R., & Lee, K.	2024	*Impact of Project-Based Learning on Local Community Engagement*	Community engagement through PBL	PBL strengthens collaborative and leadership skills by solving community problems.
Thompson, J., Garcia, M., & Patel, S.	2023	*Comparative Analysis of Traditional and Project-Based Learning Methods*	Comparison of learning methods	Traditional methods facilitate less collaborative skills compared to PBL.

Nguyen, T., & Chen, L.	2022	*Challenges and Solutions in Implementing Project-Based Learning*	Challenges in the implementation of PBL	PBL implementation requires adequate training support and resources for optimal results.

By comparing these findings with existing international studies, it can be concluded that PBL has great potential in improving students' collaborative skills, but its implementation requires careful planning, sufficient support, and active involvement from educators and policymakers. PBL, when applied well, not only strengthens collaborative skills but also prepares students for the challenges of the complex world of work with relevant and applicable practical skills.

The PBL approach in Women's Schools also highlights the importance of contextual relevance in non-formal education. By connecting projects directly to local needs and challenges, students not only gain practical skills but also understand how their contributions can positively impact their communities [29], [30][31]. It demonstrates how community education can utilize project-oriented methods to achieve better and relevant outcomes.

However, some challenges were also identified. One of them is the need for adequate support in terms of resources and training for educators to implement PBL effectively. Adams and Johnson (2021) note that without adequate training, the implementation of PBL can be hampered, especially in terms of project management and outcome assessment [32].

Overall, the findings of this study show that PBL is a strong approach to increase student collaboration in community education, especially in the context of Women's Schools. The use of these methods can lead to the development of important skills that are not only beneficial in the context of education but also in everyday life and contribution to the community.

4 Conclusion

This study examines the application of Project-Based Learning (PBL) in the context of Women's Schools and finds that this method is effective in improving students' collaborative skills. PBL allows students to be actively involved in relevant projects, encouraging them to work together, solve problems together, and develop important interpersonal skills. However, while PBL offers a variety of benefits, there are research gaps that need to be noted. Further research is needed to explore optimal ways of implementing PBL in different educational contexts and identify the support needed to address implementation challenges. Additional research can also help understand the long-term impact of PBL on students' readiness in the world of work and daily life.

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