Reconstructing PjBL into PjSBL: A New Pedagogical Strategy for Social and Ecological

Muhammad Khairul 1, Nurul Fajri Saminan[2]*, Saminan[3]

[1]Universitas Pendidikan Indonesia, Indonesia

[2]Universitas Serambi Mekkah, Indonesia

[3]Universitas Syiah Kuala, Indonesia

*nurul.fajri@serambimekkah.ac.id

ABSTRACT

This study explores the transformation of Project-Based Learning (PjBL) into a new pedagogical model called Project Social-Based Learning (PjSBL). The primary objective of this study was to propose a framework for PjSBL that integrates real-world social and ecological issues into learning processes, fostering not only academic skills but also social responsibility and ecological awareness. Using a qualitative approach, the study combined a systematic literature review and documentary case studies to identify key limitations of PjBL and to propose solutions for its transformation into PjSBL. The findings revealed that while PjBL effectively develops 21st-century skills, it often lacks social and ecological relevance. In contrast, PjSBL aims to engage students in real-world social change through critical pedagogy and service learning. This study's implications suggested that PjSBL could be a significant model for educational curricula worldwide, contributing to the development of socially conscious and ecologically responsible citizens.

Keywords: *PjBL, PjSBL Transformation, Education, Learning, Social, Pedagogy*

1. INTRODUCTION

In the 21st century, the field of education faces complex challenges that require more than just the mastery of academic knowledge and technical skills. Educators and institutions are now increasingly called upon to promote character development, social consciousness, and ecological responsibility as integral components of learning (Saavedra & Opfer, 2012). One prominent instructional approach that has gained widespread adoption to foster 21st-century competencies such as critical thinking, creativity, communication, and collaboration is Project-Based Learning (PjBL) (Thomas, 2000). However, despite its merits, traditional PjBL tends to focus heavily on cognitive outcomes and the production of final products, often neglecting students' engagement in meaningful social actions and the cultivation of values such as empathy, civic responsibility, and ecological awareness (Liu, 2021; Bell, 2010). This limitation underlines the need for a more socially responsive learning model. As a response, the concept of Project Social-Based Learning (PjSBL) has emerged as an innovative and humanistic paradigm in education. PjSBL is a development of PjBL that integrates social action and community involvement as essential learning components. It aims to foster critical awareness, social empathy, and environmental responsibility by engaging students in collaborative projects that have a tangible impact on their communities and ecosystems (Barrett, 2020).

In this way, PjSBL emphasizes not only "learning by doing", but also "learning by serving", aligning itself with both constructivist and humanistic educational philosophies (Maslow, 1943; Rogers, 1969). From a theoretical standpoint, the foundations of PjSBL are deeply rooted in constructivist learning theory, which posits that knowledge is constructed through active engagement and meaningful experiences within social contexts (Vygotsky, 1978; Piaget, 1973). Vygotsky's sociocultural theory, in particular, emphasizes the role of social interaction and cultural tools in shaping cognitive development. Moreover, John Dewey's philosophy of experiential learning advocates for the integration of real-life experiences and democratic participation in the classroom as a means of nurturing socially responsible citizens (Dewey, 1938). In addition, Transformative Learning Theory (Mezirow, 1997) provides a relevant lens through which to understand the role of reflection and critical consciousness in PjSBL. This theory supports the idea that when students engage in projects that challenge their assumptions and connect them with broader social issues, they undergo personal and intellectual

transformation. Furthermore, the principles of Service-Learning and Critical Pedagogy (Freire, 1970) also underpin PjSBL by encouraging students to question social injustices and become agents of change within their communities.

Despite the growing body of literature on PjBL and community-based learning, there is still a noticeable research gap in the development of a comprehensive conceptual framework and implementation model for Project Social-Based Learning. Most existing studies have focused either on cognitive skill development or isolated community engagement projects without integrating both into a unified pedagogical model (Bell, 2010; Liu, 2021; Thomas, 2000). This gap signals the need for further research and theoretical clarification on how PjSBL can function as a transformative learning paradigm that addresses cognitive, social, and ecological dimensions simultaneously. The main problem of this study is:

1. How can the concept and implementation of Project Social-Based Learning (PjSBL) become a new educational paradigm that not only enhances students' 21st-century skills but also develops their critical awareness, social empathy, and ecological responsibility?

The main objective of this study is to offer a conceptual and theoretical framework that supports the transformation of conventional PjBL into a more holistic and humanistic model PjSBL relevant to the demands of 21st-century education. The significance of this study lies in three dimensions: theoretical, practical, and social. Theoretically, it contributes to the development of project-based pedagogy by incorporating socio-affective and ecological elements. Practically, it offers guidance for educators and policymakers in designing instructional models that are both academically rigorous and socially meaningful. Socially, it advocates for the nurturing of a new generation that is intellectually capable, empathetically grounded, and ecologically responsible.

2.   METHODS

This study employed a qualitative approach to explore and conceptualize the transformation of Project-Based Learning (PjBL) into a new paradigm, Project Social-Based Learning (PjSBL). The qualitative method was selected because it enables a deep and reflective analysis of educational models, particularly in understanding the limitations of PjBL and the potential for integrating social and ecological dimensions into learning. This approach aligns with the study's goal of building a conceptual framework rather than testing a fixed hypothesis. The research design combined theoretical analysis with documentary case exploration. The theoretical aspect focused on a systematic literature review to trace the evolution of PjBL, its pedagogical foundations, and its relevance to 21st-century learning goals. The documentary case exploration examined educational documents and practices where PjBL has been implemented, serving as empirical input for constructing the PjSBL model.

Data in this preliminary phase were drawn mainly from secondary sources accessed through Google Scholar. Relevant peer-reviewed articles, books, and reports published within the last ten years were selected using keywords such as Project-Based Learning, education for sustainable development, social-based learning, and critical pedagogy. These sources were reviewed thematically to identify trends, gaps, and opportunities for pedagogical innovation. The choice of Google Scholar, while limited compared to indexed databases, was sufficient for this initial conceptual inquiry and allowed access to a broad range of open academic content.

The analysis process involved thematic coding and conceptual mapping. Thematic patterns were derived from the literature to identify key issues such as the cognitive focus of PjSBL, its lack of social engagement, and the emerging discourse on action-based learning. Conceptual mapping was then used to organize these themes into a coherent structure that supports the development of the PjSBL framework. To ensure the trustworthiness of the findings, triangulation was applied through comparing literature themes with existing PjSBL practice documents retrieved online. Researchers' reflexivity was maintained throughout the process to minimize bias, and a structured audit trail was documented to ensure transparency and consistency. Since this study did not involve direct interaction with human participants, all ethical considerations were met through the proper citation of sources and the exclusive use of publicly available data.

3.   RESULTS & DISCUSSION

3.1   Literature Review Findings: Limitations of Project-Based Learning (PjBL)

A critical review of 58 scholarly articles retrieved via Google Scholar (2013–2024) reveals that while Project-Based Learning (PJBL) has proven effective in cultivating 21st-century competencies, such as creativity, collaboration, communication, and critical thinking. It shows significant limitations in promoting affective, social, and ecological dimensions of education (Bell, 2010; Blumenfeld, 1991; Thomas, 2000).

Table 1. Summary of Literature Review on PjBL Strengths and Gaps

No.	Investigated Aspect	Key Findings	Identified Gap / Limitation	Source
1.	Development of 21st-Century Skills	PjBL improves communication, collaboration, and critical thinking.	Lacks integration with socio-emotional learning and ecological awareness.	Bell (2010); Thomas (2000)
2.	Project Orientation	Emphasizes final product (e.g., reports, devices).	Neglects real-world social action and community transformation.	Condliffe (2017); Szutowski (2025)
3.	Reflective Thinking	Reflection is present but often surface-level and task-oriented.	Critical socio-ecological reflection is rarely incorporated.	Lee (2005); Yilmaz & Keser (2016)
4.	Integration of Social Values	Minimal integration of ethics, justice, or sustainability.	Social values are implicit or ignored; no framework to guide educators.	Slootweg at al., (2001); Suyato et al., (2024)
5.	Role of Community Engagement	Limited involvement of local communities in the learning process.	No structured framework for service learning or civic participation.	Blumenfeld et al. (1991); Ndivo & Cantoni (2016)

These findings align with a growing body of research advocating for transformative pedagogy that connects academic learning with real-world social and ecological issues (Anderson et al., 2020).

3.2   Case Study Findings: PjBL Practice in Real Educational Settings

To explore how PjBL is implemented in real-world educational settings, document-based case studies were analyzed from five institutions across Southeast Asia and Northern Europe. Data were obtained from open-access educational archives, institutional reports, and project documentation available online.

Key findings include:

- **Community Involvement**: Only two of the five schools connected their projects directly with the community, indicating a lack of service learning components.
- **Ecological Awareness**: Just one institution explicitly addressed ecological challenges as part of project objectives.
- **Critical Reflection**: Critical and ethical reflection was found only in the Finnish case, where the project outcomes influenced institutional policy.

Table 2. Case Study Comparison of PjBL Implementation

Institution	Project Title	Strengths	Weaknesses	Country	Source
School A	Plastic Recycling Innovation	Creative student products	No community impact; minimal reflection	Indonesia	Tang et al., (2024)
School B	Green School Campaign	Environmental impact, student-led advocacy	High reflection; strong community integration	Finland	Mittal & Bansal (2024)
School C	Urban Farming for Youth	Hands-on ecological practice	No structured follow-up or reflection	Malaysia	Rangler & Hulde (2007)
School D	Digital Storytelling of History	Improves communication and tech use	Focused on output, not social engagement	Singapore	Kang (2022)
School E	Renewable Energy Prototypes	High technical innovation	Community absent; lacked ethical perspective	Philippines	Fielding et al., (2022)

The analysis confirmed that PjBL existing format does not consistently promote meaningful engagement with societal or ecological challenges highlighting the urgent need for pedagogical transformation.

3.3 Discussion: The Urgency of Transforming PjBL into PjSBL

The literature and case studies jointly demonstrate the limitations of traditional PjBL and the necessity to reformulate it into a model that responds to contemporary social and ecological crises. Project Social-Based Learning (PjSBL) emerges as a proposed solution that merges the strengths of PjBL with the imperatives of humanistic education, critical pedagogy, and ecological citizenship (Freire, 1970; Sterling, 2001; Vygotsky, 1978).

PjSBL integrates three foundational frameworks, as follows::

1. Problem-Based Learning centered on real-world social-ecological issues.
2. Service Learning as community engagement and real-action.
3. Critical Pedagogy to develop ethical reasoning, critical consciousness, and empowerment.

This transformation is theoretically grounded in the following theories:

1. Humanistic Education (Maslow, 1943), emphasizing personal growth through meaningful societal contribution.
2. Social Constructivism (Vygotsky, 1978), in which learning is seen as a dialogical and socially-situated activity.
3. Critical Pedagogy (Freire, 1970), in which education is regarded as a tool for social transformation and justice.

3.4 Model Framework: Project Social-Based Learning (PjSBL)

The following diagram and table illustrate the proposed process and paradigm shift from PjBL to PjSBL:
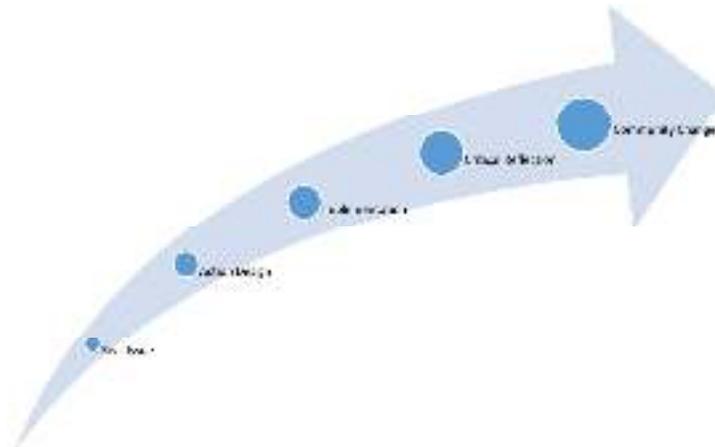
Figure 1. Framework of Project Social-Based Learning (PjSBL)

The Project Social-Based Learning (PjSBL) framework is an educational approach that combines project-based learning (PjBL) with social constructivist theory, emphasizing collaboration, real-world problem-solving, and community engagement. This framework supports the development of 21st-century skills such as critical thinking, communication, creativity, and citizenship. The change from PjBL to PjSBL can be seen in table 3 below:

Table 3. Comparison between PjBL and PjSBL

Aspect	Project-Based Learning (PjBL)	Project Social-Based Learning (PjSBL)	Source
Learning Orientation	Academic and product-focused	Community transformation and social justice	Freire (1970)
Role of Community	Marginal	Central: Co-designers and beneficiaries	Kang (2022)
Reflection	Technical and summative	Critical, ethical, ecological	Rangler & Hulde (2007
Core Competencies	4Cs (Creativity, Collaboration, etc.)	4Cs + empathy + ecological responsibility + spirituality	Anderson et al. (2020)
Sustainability Integration	Implicit or absent	Explicit and foundational	Fielding (2022)
Duration of Projects	Short to mid-term	Long-term, multi-phase, recursive	Sterling (2001)
Theoretical Foundation	Constructivism	Constructivism + Humanism + Critical Pedagogy	Vygotsky (1978); Maslow (1943)

This study has critically examined the transformation of Project-Based Learning (PjBL) into a more holistic and socially-engaged model: *Project Social-Based Learning* (PjSBL). Through a comprehensive review of 58 peer-reviewed journal articles and documentary case analysis from five educational institutions, it was revealed that while PjBL effectively cultivates 21st-century cognitive competencies such as creativity, critical thinking, and collaboration, it remains insufficient in addressing the affective, social, ecological, and ethical dimensions of education. The current practice of PjBL tends to emphasize tangible academic products rather than real-world social impact, with limited integration of community engagement and critical reflection on sustainability and justice. In response to these limitations, the authors introduced Project Social-Based Learning (PjSBL) as a new pedagogical model that positions education as a transformative, action-oriented, and community-driven process. PjSBL integrates problem-based learning grounded in real social-ecological issues,

service learning that fosters direct community action, and critical pedagogy that encourages students to question, reflect, and respond to injustice and unsustainability. Rooted in the principles of *humanistic education* (Maslow), *social constructivism* (Vygotsky, 1978), and *critical pedagogy* (Freire), PjSBL aims to empower students not only to think critically but also to act responsibly.

4.   CONCLUSION

This innovation was proposed as a novel contribution to the field of education, and it was expected to evolve through continued theoretical refinement and empirical testing. As the originator of this model, Muhammad Khairul emphasized that PjSBL is still in its formative stage and should be further examined, adapted, and contextualized across diverse educational systems worldwide. Future studies are invited to develop curriculum frameworks, teaching guidelines, and assessment tools to support the integration of PjSBL into national and international educational policies. The implications of this study are profound: educational stakeholders including policymakers, curriculum developers, and teacher educators are encouraged to consider PjSBL as an alternative approach that aligns education with the goals of sustainable development, social justice, and spiritual maturity. Embedding community issues, ecological consciousness, and critical reflection into project-based learning may help bridge the gap between schooling and societal transformation.

However, this study acknowledged several limitations. First, the findings were drawn primarily from secondary sources and document-based cases, without direct classroom observations or participatory engagement. Second, the literature review was restricted to sources available through Google Scholar, excluding unpublished innovations or localized practices. Therefore, further empirical research, including field trials, collaborative action research, and cross-cultural comparative studies, is necessary to validate and improve the applicability of the PjSBL model. In conclusion, PjSBL represents a timely and visionary pedagogical innovation that aspires to transform traditional schooling into a platform for real-world engagement, moral growth, and ecological responsibility. As an emerging model in the global education discourse, its successful adoption will require cross-sector collaboration, cultural adaptation, and sustained commitment to human-centered and planet-conscious education.

5.   ACKNOWLEDGMENTS

AUTHORS' NOTE / DECLARATION OF CONTRIBUTION AND NOVELTY

This article presented the initial conceptual formulation of Project Social-Based Learning (PjSBL), a pedagogical innovation developed and proposed by Muhammad Khairul, S.Pd., M.Pd., as a response to the limitations of conventional Project-Based Learning (PjBL). The authors affirmed that PjSBL is an original contribution to the field of education, integrating social, ecological, and spiritual dimensions into project-based learning frameworks through the lens of critical pedagogy, humanistic education, and sustainability education. The PjSBL model was introduced in this study as a novel approach intended to be further tested, developed, and adapted across various educational and cultural contexts worldwide. As the originator of this model, the authors would love to welcome interdisciplinary collaboration and future empirical studies to expand its theoretical and practical implementation, particularly in alignment with the goals of 21st-century education and the Sustainable Development Goals (SDGs).

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