

Teachers' Actions and Challenges Hindering the Practice of Project-Based Learning in Public Schools of Zanzibar

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Publication Date: 2025/09/23

Abstract: This study examines the actions and challenges hindering the implementation of Project-Based Learning (PBL) in public secondary schools in Urban West Zanzibar. The study followed a pragmatic philosophy and used a mixed-methods approach. A total of 291 respondents were involved from eight public secondary schools. Participants included teachers, students, school heads, committee members, and District Education Officers. Data were collected through questionnaires, interviews, and focus group discussions. Quantitative data were analyzed using descriptive statistics. Qualitative data were analyzed through thematic analysis. Findings reveal that while teachers generally support PBL and some actively engage in collaborative lesson planning, challenges persist, including limited administrative support, insufficient resources, assessment difficulties, large class sizes, and inadequate professional development. Despite these barriers, evidence from recent pilot programs indicates growing potential for successful PBL integration. The study concludes with evidence-based recommendations to enhance teacher capacity, resource allocation, stakeholder engagement, and systemic support to foster effective, student-centered learning environments aligned with 21st-century education goals.

Keywords: Teachers' Actions, Challenges, Project-Based Learning, Public Schools.

How to Cite: Balkis Makame Haji; Dr. Shadrack Mwakalinga (2025) Teachers' Actions and Challenges Hindering the Practice of Project-Based Learning in Public Schools of Zanzibar. *International Journal of Innovative Science and Research Technology*, 10(9), 1270-1275. <https://doi.org/10.38124/ijisrt/25sep886>

I. INTRODUCTION

The global education landscape is undergoing a profound transformation, driven by the need to align teaching and learning with the demands of the 21st century. In this context, Project-Based Learning (PBL) has emerged as a student-centered instructional strategy that emphasizes active learning, critical thinking, creativity, and collaboration. Unlike traditional approaches that rely heavily on rote memorization and passive learning, PBL engages students in meaningful, real-world projects that foster deeper understanding and skill acquisition (Guo et al., 2022; Chen & Yang, 2023). Meta-analyses and global studies consistently show that when effectively implemented, PBL improves academic performance, increases student motivation, and cultivates competencies essential for lifelong learning and the modern workforce (OECD, 2023; World Bank, 2022).

However, the success of PBL hinges significantly on teachers' attitudes and actions. Teachers' attitudes—encompassing cognitive, affective, and behavioral dimensions—determine their willingness and ability to adopt and sustain innovative pedagogies like PBL in their

classrooms (Ajzen, 2020; Eagly & Chaiken, 2021). Positive attitudes often translate into deeper commitment and meaningful integration of PBL, while negative perceptions can result in resistance or superficial adoption (Almulla & Alraqqad, 2023). Several factors influence these attitudes, including professional training, prior experience, institutional support, and personal beliefs (Han et al., 2022; UNESCO, 2023).

Across East Africa, countries like Kenya and Uganda have reported notable successes in piloting and scaling up PBL as part of broader curriculum reforms. Kenya's 2023 Education Report highlighted a 32% improvement in student engagement following PBL integration, while Uganda documented significant improvements in students' problem-solving skills (MoE Kenya, 2023; UNEB, 2022). Tanzania Mainland has also recognized PBL's value in its 2021–2026 Education Sector Development Plan, with evidence showing better learning outcomes in STEM subjects (URT, 2021; Kafyulilo & Kitta, 2023). Yet, the wider adoption of PBL remains challenged by systemic issues such as large class sizes and examination-oriented teaching cultures.

In Zanzibar, while the government has expressed commitment to educational innovation, the practice of PBL in public secondary schools remains sporadic and underdeveloped. According to the 2023 Zanzibar Education Sector Analysis, although 72% of teachers support PBL in principle, only 31% actively implement it in their classrooms. Key barriers include inadequate training—only 28% of teachers have received any form of PBL instruction—limited teaching resources, and a misalignment between the examination system and the competencies promoted by PBL (MoEVT, 2023; Zanzibar Education Quality Report, 2023). Cultural norms that favor teacher-centered methods further complicate adoption, despite clear policy directives supporting learner-centered approaches (Salminen, 2023).

Nonetheless, there are promising signs of change. A 2022–2023 PBL pilot program in Zanzibar revealed notable improvements in critical thinking and student engagement, with a significant shift in teacher attitudes following targeted mentoring and support (MoEVT, 2024). These findings suggest that with appropriate interventions, the barriers to PBL implementation can be addressed, paving the way for more dynamic and effective teaching practices.

Despite these developments, limited research exists on the specific challenges that teachers in Zanzibar face in implementing PBL, and even less is known about their attitudes toward this instructional method. While studies from other regions provide valuable insights, the Zanzibar context remains underexplored. This gap makes it difficult to design effective strategies to promote PBL in the region.

Therefore, this term paper aims to examine the actions and challenges that hinder the practice of PBL among secondary school teachers in public schools in Zanzibar. Specifically, it investigates teachers' attitudes toward PBL, the personal and institutional factors influencing its implementation, and the systemic challenges that continue to limit its adoption. By identifying these barriers and exploring the perspectives of teachers on the ground, this study seeks to provide evidence-based recommendations that align with Zanzibar's 2023–2027 education quality improvement agenda. Ultimately, it aspires to support the broader goal of fostering student-centered learning environments that equip Zanzibar's youth with the skills needed for academic and professional success in the 21st century.

II. THEORETICAL FRAMEWORK

This study was guided by Constructivism, which is a broad and complex learning theory that emphasizes the idea that learners actively construct their knowledge based on personal experiences, social interactions, and reflection. This approach is primarily influenced by the works of Jean Piaget and Lev Vygotsky, who argued that learning is not a passive process of absorbing information, but rather an active process of meaning-making (Piaget, 1972; Vygotsky, 1978). Vygotsky (1978) particularly highlighted the importance of social interaction, noting that engaging with peers and teachers helps learners develop deeper and more nuanced understandings. In essence, constructivism posits that knowledge is built through both experience and reflection,

shaping an individual's understanding of the world around them.

Constructivism is highly relevant to a study on teachers' actions and challenges hindering the practice of Project-Based Learning (PBL) in public schools of Zanzibar because it provides the theoretical foundation for PBL, emphasizing that learners actively construct knowledge through experience, inquiry, and collaboration. This theory highlights the critical role of teachers as facilitators who guide students in making sense of real-world problems rather than merely delivering content. Understanding constructivism helps in examining how teachers' beliefs, instructional practices, and classroom environments align—or conflict—with PBL principles, thereby shedding light on the attitudinal and structural barriers that impact its effective implementation.

III. METHODOLOGY

The study was conducted in the Urban West Region of Zanzibar. The Pragmatism philosophy, which focuses on using the most effective methodological approach for the research problem, was adopted as it provides a flexible and practical framework for understanding the research problem (Kaushik & Walsh, 2019). A mixed research approach, which integrates both qualitative and quantitative data, was used. The targeted population consisted of all stakeholders involved in public secondary education across 8 public schools in the Urban West Region of Zanzibar, including teachers, students, heads of schools, school committee members, and District Education Officers (DEOs). The sample size for this study was 291 respondents. Data collection was conducted using questionnaires, interviews, and focus group discussions. Descriptive statistics in terms of frequency and percentages were used to analyze quantitative data while qualitative data were analyzed by using thematic analysis. Ethical considerations were strictly adhered to, including securing ethical approval and maintaining participant confidentiality throughout the study, ensuring that the research was conducted responsibly and ethically (Taherdoost, 2016).

IV. FINDINGS AND DISCUSSION

This section presents teachers' experiences regarding the implementation of PBL and the challenges encountered in public secondary schools in Urban West Zanzibar. The findings reflect not only the extent of PBL practices but also highlight systemic barriers such as time constraints, class size, resource availability, collaboration, and institutional support.

Table 1 Teachers' Actions and Challenges Hindering the Practice of Project-Based Learning in Public Schools of Zanzibar
(n = 65)

Statements	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree	
	f	%	f	%	f	%	f	%	f	%
I often use PBL strategies in my classroom.	24	36.9	21	32.3	5	7.7	9	13.8	6	9.2
I lack sufficient time to prepare and implement PBL activities.	10	15.4	14	21.5	5	7.7	26	40.0	10	15.4
I receive support from the school administration to implement PBL.	19	29.2	20	30.8	7	10.8	12	18.5	7	10.8
I have access to resources needed for successful PBL implementation.	21	32.3	24	36.9	5	7.7	10	15.4	5	7.7
Large class sizes make it difficult to conduct PBL effectively.	7	10.8	13	20.0	4	6.2	28	43.1	13	20.0
I collaborate with other teachers to plan and deliver PBL lessons.	27	41.5	22	33.8	5	7.7	6	9.2	5	7.7
My school schedule allows flexibility for PBL activities.	20	30.8	23	35.4	6	9.2	9	13.8	7	10.8
I face challenges assessing student performance in PBL.	14	21.5	18	27.7	5	7.7	19	29.2	9	13.8
I have faced resistance from students or parents when using PBL.	6	9.2	10	15.4	3	4.6	28	43.1	18	27.7
Lack of professional development opportunities hinders my use of PBL.										

Source: Filed Data (2025)

NB: f = Frequency and % = Percent,

➤ Frequent Use of PBL Strategies in the Classroom

The data shows that 36.9% of teachers strongly agreed and 32.3% agreed that they often use PBL strategies in their teaching, totaling 69.2% who actively engage in such practices. A smaller proportion, 7.7%, were undecided, suggesting a degree of uncertainty or inconsistency in implementation. Conversely, 13.8% disagreed and 9.2% strongly disagreed, indicating that over one-fifth of respondents rarely or never use PBL. These results suggest that while the majority have embraced PBL to varying extents, a notable portion of educators remain detached from its consistent application, possibly due to contextual limitations or personal pedagogical preferences.

Qualitative data complements these findings.

In an interview a Head of School stated the following:

"We encourage our teachers to use PBL because it promotes critical thinking. I've seen teachers integrate it across subjects, especially in science and civics."

A District Education Officer reinforced the importance of consistent application:

"There has been noticeable improvement in learner engagement in schools where PBL is regularly applied. However, not all teachers are confident yet."

These insights are consistent with findings by Aksela and Haatainen (2019), who revealed that teachers perceive PBL as highly beneficial for enhancing student motivation and fostering collaborative learning. However, discrepancies in implementation persist, as noted by Condliffe et al. (2017), who found significant inconsistencies in how educators' structure and assess PBL, often due to varying levels of professional development and institutional support. While many teachers recognize its advantages, challenges such as role adjustments and classroom management shifts may hinder uniform adoption, explaining why some educators remain hesitant despite the broader trend toward PBL integration.

➤ Lack of Sufficient Time for PBL Preparation and Implementation

Only 15.4% of respondents strongly agreed and 21.5% agreed that insufficient time is a barrier to implementing PBL, amounting to 36.9% overall. Meanwhile, 7.7% were undecided. In contrast, 40% disagreed and 15.4% strongly disagreed, totaling 55.4% who did not view time constraints as a major impediment. These findings imply that while time management may pose challenges for some, the majority do not consider it a significant hindrance to PBL integration. This could reflect varying school environments, lesson planning efficiencies, or teacher confidence in balancing traditional and project-based methods.

The mixed perceptions of time constraints resonate with studies such as Bunju (2020), who found that some teachers viewed PBL as time-consuming and a hindrance to syllabus coverage, while others adapted effectively. Similarly, Yang et al. (2021) noted that inadequate planning time was a barrier for some educators, though continuous institutional support and peer collaboration helped mitigate these challenges. This suggests that while time limitations are a concern for a subset of teachers, many develop strategies to integrate PBL without compromising curricular demands, highlighting the role of support systems in facilitating smoother implementation.

➤ Support from School Administration for PBL Implementation

Approximately 29.2% of teachers strongly agreed and 30.8% agreed that they receive administrative support, making a total of 60% who feel supported. However, 10.8% were undecided, while 18.5% disagreed, and another 10.8% strongly disagreed, indicating that 29.3% did not perceive such support. The distribution points to a mixed institutional response, where a majority benefit from leadership backing, yet nearly one-third operate without consistent encouragement or facilitation from school management. This suggests a need for more uniform administrative engagement to create enabling conditions for PBL.

A Head of School in an interview reinforced the importance of administrative encouragement:

“We have conducted internal workshops to help teachers implement PBL effectively. Leadership support is crucial for success.”

The importance of administrative support is underscored by Condliffe et al. (2017), who observed that school and district-level factors strongly influence PBL adoption, particularly the availability of training and leadership advocacy. Similarly, Yang et al. (2021) emphasized that continuous institutional backing and mentoring were key enablers in overcoming implementation barriers. However, Haatainen and Aksela (2021) noted that inadequate pedagogical support and misalignment with curriculum demands often stem from inconsistent administrative engagement, reinforcing the need for stronger leadership involvement to ensure equitable PBL integration across classrooms.

➤ Access to Resources for Successful PBL Implementation

A total of 32.3% of teachers strongly agreed and 36.9% agreed that they have access to necessary resources, with a combined total of 69.2%. Only 7.7% were undecided, while 15.4% disagreed and 7.7% strongly disagreed, totaling 23.1% who reported inadequate access. These figures indicate that although most teachers feel resourced enough to deliver PBL, a considerable minority still lack the essential materials or tools. Ensuring wider resource distribution could improve both the quality and frequency of PBL in classrooms.

Resource limitations have been widely cited as a barrier in studies such as Pertiwi and Nurhayati (2024), where teachers reported insufficient materials to support student projects. Aldabbus (2018) further highlighted that the lack of teaching facilities and assessment tools impeded effective PBL execution. Conversely, Maritasari et al. (2022) demonstrated that when resources, such as mobile learning tools, were integrated with PBL, pedagogical outcomes improved significantly. This suggests that while many schools provide adequate resources, disparities in access persist, and targeted investments could enhance PBL's effectiveness for all educators.

➤ Difficulty Conducting PBL Due to Large Class Sizes

Only 10.8% of respondents strongly agreed and 20% agreed that large class sizes impede effective PBL, accounting for 30.8% in agreement. A small group of 6.2% remained undecided. On the contrary, 43.1% disagreed and 20% strongly disagreed, totaling 63.1% who did not consider class size a significant barrier. This suggests that although overcrowding is often cited as a challenge in educational contexts, many teachers in this study do not perceive it as detrimental to PBL. It is possible that effective classroom management techniques or flexible project grouping mitigate the issue.

In a focus group discussion, a student acknowledged the challenge but appreciated clarity in instruction:

“Sometimes it's hard to contribute because there are too many of us in a group. But when the teacher gives clear instructions, it works.”

This finding contrasts with Bunju (2020), who identified large class sizes as a key barrier for some teachers, particularly in fostering creativity and individualized attention. However, Almulla (2020) found that PBL's collaborative nature could mitigate class size challenges by promoting group-based learning and peer support. Additionally, Markula and Aksela (2022) noted that while classroom management adjustments were necessary, teachers successfully leveraged technology and structured group work to maintain engagement. Thus, while class size remains a concern for some, many educators adapt through strategic pedagogical approaches, reducing its perceived impact on PBL success.

➤ Collaboration with Other Teachers in Planning and Delivering PBL

The data reveals strong collaborative tendencies among teachers, with 41.5% strongly agreeing and 33.8% agreeing that they work with colleagues to plan and deliver PBL lessons. This results in a 75.3% total agreement rate. Only 7.7% were undecided, while 9.2% disagreed and another 7.7% strongly disagreed. These results point to a healthy culture of teamwork and professional collaboration, which is critical in sustaining innovative teaching methods such as PBL. Peer support may also play a role in sharing ideas and reducing the workload involved in project planning.

This finding aligns with the work of Yang et al. (2021), who emphasized that continuous institutional support and peer collaboration were key enablers in overcoming PBL implementation obstacles. Similarly, Haatainen and Aksela (2021) revealed that teachers perceived PBL as beneficial in fostering collaboration, though they also noted challenges in aligning it with curriculum demands. The strong collaborative tendencies observed in the current study suggest that shared planning and delivery of PBL lessons may mitigate some of these challenges, reinforcing the idea that teamwork enhances instructional innovation.

➤ Flexibility in the School Schedule for PBL Activities

Findings show that 30.8% of teachers strongly agreed and 35.4% agreed that their school schedules are flexible enough to accommodate PBL, giving a combined agreement of 66.2%. Meanwhile, 9.2% were undecided. In contrast, 13.8% disagreed and 10.8% strongly disagreed, indicating that 24.6% found scheduling to be a constraint. The data suggests that while a majority feel their timetables allow space for project-based work, nearly a quarter experience limitations, which could affect the depth and frequency of PBL implementation. Timetable restructuring could enhance adaptability in such contexts.

A District Education Officer noted the following in an interview:

“Schools that have embraced flexible scheduling report better outcomes in project implementation.”

This challenge is echoed in the study by Pertiwi and Nurhayati (2024), who found that insufficient time to complete project tasks was a major hindrance to PBL implementation. Similarly, Condliffe et al. (2017) noted that structural barriers, including rigid schedules, complicated PBL adoption. The current findings suggest that while many schools have made progress in adapting their timetables, further flexibility could help address the constraints faced by a significant minority of teachers, ensuring more consistent and effective PBL integration.

➤ *Challenges in Assessing Student Performance in PBL*

A total of 21.5% of teachers strongly agreed and 27.7% agreed that assessing student performance in PBL is challenging, amounting to 49.2% overall. Another 7.7% were undecided, while 29.2% disagreed and 13.8% strongly disagreed, totaling 43% who did not view assessment as a challenge. This near-even split highlights a significant point of tension in PBL practices. Assessing collaborative, process-based learning remains a complex task for many educators, indicating a need for professional development and clearer guidelines for PBL evaluation.

The difficulties in PBL assessment are well-documented in existing literature. Aldabbus (2018) found that teachers struggled with proper assessment methods and monitoring student progress in PBL. Similarly, Haatainen and Aksela (2021) reported inconsistencies in assessment strategies and reflective practices, underscoring the need for more structured evaluation frameworks. These studies support the current findings, suggesting that while some educators have adapted to PBL assessment, many still require additional training and resources to effectively measure student learning in project-based contexts.

➤ *Resistance from Students or Parents Toward PBL*

Only 9.2% of teachers strongly agreed and 15.4% agreed that they have faced resistance from students or parents, totaling 24.6%. A small 4.6% were undecided, while a significant 43.1% disagreed and 27.7% strongly disagreed, representing 70.8% who have not encountered such resistance. These results are encouraging, suggesting that PBL is generally accepted by the broader school community. The limited opposition may stem from unfamiliarity with the method or concerns about its effectiveness, but overall acceptance signals potential for further growth in its usage.

This finding contrasts somewhat with Bunju's (2020) study, where some teachers perceived PBL as a hindrance to syllabus coverage, potentially leading to skepticism among stakeholders. However, Aksela and Haatainen (2019) revealed that teachers viewed PBL as highly beneficial in fostering student engagement and collaboration, which may explain the broader acceptance observed in the current study. The minimal resistance reported suggests that as PBL becomes more familiar, concerns about its effectiveness may diminish, paving the way for wider adoption.

➤ *Lack of Professional Development Opportunities for PBL*

According to the findings, 12.3% of respondents strongly agreed and 21.5% agreed that lack of professional development hinders their use of PBL, totaling 33.8%. An

additional 9.2% were undecided. However, 38.5% disagreed and 18.5% strongly disagreed, representing 57% who did not view it as a major issue. The responses indicate that while some teachers feel underprepared due to limited training opportunities, a majority believe they have sufficient background or access to knowledge. Still, targeted training could help bridge the skill gap and improve overall implementation.

This aligns with multiple studies, including Bunju (2020) and Condliffe et al. (2017), which identified insufficient professional development as a key barrier to PBL implementation. However, Yang et al. (2021) noted that with continuous institutional support and practice opportunities, teachers' willingness to adopt PBL improved significantly. The current findings suggest that while many educators feel adequately prepared, targeted professional development could further enhance PBL implementation, particularly for those who still face challenges due to limited training.

V. CONCLUSION

This study reveals both encouraging practices and notable obstacles. While many educators demonstrate a strong commitment to student-centered approaches and benefit from collaborative environments and supportive schedules, the findings also highlight challenges such as inconsistent administrative backing, unequal resource distribution, assessment difficulties, and insufficient professional development. These structural and systemic issues, although not universally experienced, hinder the full and consistent application of PBL. Therefore, while the foundation for effective PBL exists, its sustainable and equitable implementation depends on strengthened institutional support and targeted policy interventions.

RECOMMENDATIONS

Several key recommendations are proposed to strengthen the implementation of PBL in public secondary schools in Urban West Zanzibar. These include enhancing administrative support through clear frameworks and leadership engagement, improving access to teaching resources with a focus on under-resourced schools, and expanding professional development through ongoing training and mentorship. It is also vital to refine assessment tools suited to PBL's collaborative nature, adopt flexible school schedules, and promote inter-teacher collaboration to reduce workload and improve lesson quality. Addressing time management challenges, engaging stakeholders like parents and students, and conducting continuous research and monitoring will further ensure that PBL becomes a sustainable and impactful approach to teaching and learning.

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