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Challenges in Implementing the Problem-Based Learning Model at Lideta Primary School. In the case of Banja District, Amhara Regional State, Ethiopia.

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Abstract

This study explored the challenges of implementing a Problem-Based Learning (PBL) model among students at Lideta Primary School in the Banja District of the Amhara region, Ethiopia. A quantitative approach was employed, collecting data via a rating scale from 35 teachers. The findings revealed significant obstacles to PBL implementation, with a Mean Challenge Rating (MCR) of 43.91. Key challenges included students' and teachers' unpreparedness for PBL, insufficient classroom time, lack of experience, resource demands, and increased workload for teachers. The study recommends that various stakeholders, including government entities and NGOs, collaborate to address these challenges. Specifically, it suggests enhancing PBL implementation through teacher training, improving access to essential technologies like computers and the internet, and funding programs to advance environmental education.

Key words: problem based learning; problem based learning challenges, primary school Teachers

I. Introduction

1.1. Background of the study

Problem-Based Learning (PBL) has emerged as a globally recognized and innovative pedagogical approach lauded for its capacity to cultivate deeper learning, enhance critical thinking abilities, and foster robust problem-solving skills among students (Barrows & Tamblyn, 1980; Savery, 2015). Rooted firmly in constructivist learning theories, PBL represents a fundamental shift in educational paradigms, moving away from the traditional model of passive knowledge reception towards a dynamic environment of active learner engagement with authentic, real-world problems. This student-centered

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approach empowers individuals to take greater ownership and responsibility for their learning processes (Hmelo-Silver, 2004).

While the theoretical underpinnings and potential benefits of PBL are extensively documented and widely acknowledged within educational literature, the practical and successful implementation of this complex pedagogical model across diverse educational contexts frequently encounters a multitude of significant challenges (Ertmer & Simons, 2006). Research conducted in various educational systems around the world consistently highlights a set of common obstacles that can impede the effective adoption and sustained use of PBL. These frequently cited challenges include the preparedness and training of teachers to facilitate PBL effectively, the necessary alignment of the existing curriculum to accommodate the inquiry-based nature of PBL, the inherent complexities associated with assessing student learning within a PBL framework, the availability and accessibility of appropriate resources and materials, and the crucial need for a supportive and embracing school-wide culture that values and encourages innovative teaching practices (Strobel & van Barneveld, 2009; Walker & Leary, 2009). Gaining a comprehensive understanding of these overarching global challenges provides a critical and essential framework for examining the specific impediments and unique hurdles encountered when attempting to implement PBL within the particular and distinctive context of Lideta Primary School, situated in the Amhara Regional State of Ethiopia.

In the Ethiopian national context, the overarching education policy increasingly emphasizes the strategic adoption of active learning methodologies as a key driver for improving the overall quality and enhancing the relevance of the education provided to students across all levels (Ministry of Education [MoE], 2012). Although the significant potential of PBL to substantially improve student engagement in the learning process and lead to enhanced overall learning outcomes is being progressively recognized and acknowledged within Ethiopian educational discourse, the widespread adoption and consistent, effective implementation of PBL within Ethiopian primary schools remain relatively limited (Asgedom, 2019). The prevailing Ethiopian educational landscape is often characterized by a unique set of significant challenges, including notably large average classroom sizes, often constrained access to essential educational resources (encompassing both technological infrastructure and relevant learning materials), and considerable variability in the levels of pre-service teacher training and ongoing professional development opportunities specifically focused on student-centered pedagogical approaches such as PBL (Teshome et al., 2017). Furthermore, deeply ingrained cultural and societal norms concerning traditional teaching methodologies and established learning practices may exert a significant influence on the overall acceptance and ultimately the effective implementation of PBL, which often necessitates a substantial and potentially disruptive shift in the traditionally defined roles and established dynamics within the classroom environment (Kebede, 2020). Consequently, focused and contextually relevant research that specifically investigates the practical challenges directly associated with the implementation of innovative pedagogies, such as PBL, within the specific context of Ethiopian primary schools is of paramount importance. Such research is absolutely essential to inform the development of targeted and effective strategies aimed at proactively overcoming these identified obstacles and facilitating successful adoption. Indeed, research indicates that primary school teachers in Ethiopia often face significant hurdles in implementing PBL, primarily stemming from inadequate initial training in the specific methodologies of PBL and limitations in the availability of appropriate and relevant textbooks and other crucial educational resources (Belay, 2004). Moreover, educators frequently encounter difficulties related to effectively engaging students in the more collaborative and independent learning activities inherent in PBL, particularly given the diverse learning needs and capabilities within typical classrooms (Şahin & Demir, 2019; Cintang et al., 2018). The necessary cultural shift towards fostering a more collaborative and student-centered classroom environment also presents additional and sometimes significant hurdles for many educators accustomed to more traditional methods (Ertmer & Simons, 2006; Li, 2024).

The Amhara Regional State, within which the Banja District is geographically located, shares many of the systemic challenges that are prevalent within the broader Ethiopian national education system. Rural primary schools situated within this specific region often experience even more pronounced limitations in terms of available resources and may have teaching staff with fewer opportunities for sustained exposure to and comprehensive, ongoing training in contemporary pedagogical approaches, including the principles and practices of PBL (Amhara Education Bureau, 2023). Furthermore, the prevailing local educational culture in many areas may be deeply rooted in traditional, teacher-centered instructional methodologies, potentially fostering a degree of resistance to the fundamental changes and pedagogical shifts that are inherently required for the successful and sustained implementation of PBL. Therefore, a thorough and nuanced understanding of the specific contextual factors within Banja District, including a detailed assessment of the existing educational infrastructure, the qualifications and specific training levels of the currently employed teachers, and the prevailing attitudes towards education within the local community, is absolutely crucial for a meaningful and in-depth investigation into the particular challenges associated with introducing and subsequently sustaining PBL at the individual primary school level. Research further suggests that primary school teachers often report feeling inadequately prepared for PBL implementation due to a lack of sufficient training and a comprehensive understanding of the core PBL methodologies (Li, 2024)(Ertmer & Simons, 2006). Additionally, the practical realities of inadequate facilities and a scarcity of essential resources within many primary school settings can significantly hinder the effective execution of PBL activities (Auliah et al., 2023). The significant time constraints faced by teachers, who are often tasked with covering a broad and demanding curriculum, can also make it challenging to effectively integrate the more inquiry-based and student-directed nature of PBL into their daily teaching practices (Nariman & Chrispeels, 2015). Moreover, the critical need for effective collaboration among educators, which is often reported as lacking or underdeveloped in many school environments, can significantly impede the successful development and implementation of cohesive and well-designed PBL units (Ertmer & Simons, 2006). Finally, the diverse range of student-related factors present in typical primary school classrooms, such as varying levels of prior background knowledge, differing learning styles, and fluctuating levels of active engagement, can also pose substantial challenges to the successful and equitable implementation of PBL for all learners (Şahin & Demir, 2019).

Lideta Primary School, which was specifically situated within the Banja District of the Amhara Regional State, operates directly within this complex and multifaceted educational landscape. As a particular primary school functioning within a rural Ethiopian setting, it was highly probable that it encountered its own unique and context-specific set of challenges when attempting to implement a complex and potentially resource-intensive pedagogical method of PBL. Therefore this research was intended to address the challenges of problem based learning method in Banja district Amhara regional state, Ethiopia.

1.2. Statement of the problem

The global movement towards student-centered pedagogies like Problem-Based Learning (PBL) is driven by the recognized need to equip learners with the critical thinking, collaboration, and problem-solving skills necessary for navigating complex 21st-century challenges (Barrows & Tamblyn, 1980; Savery, 2015). While the Ethiopian national education policy advocates for active learning methodologies (MoE, 2012), the extent of their effective implementation, particularly in rural primary schools within the Amhara Regional State, remains a significant concern (Asgedom, 2019). Traditional teacher-centered approaches, characterized by rote learning and limited student engagement, continue to be prevalent, potentially hindering the development of crucial skills (The utilization of active learning techniques in Ethiopian primary schools: Practice and challenges, 2024).

This challenge is particularly pronounced in primary schools across the Amhara Regional State, including those in the Banja District. These schools often operate with limited resources, large class sizes, and teachers who may have received inadequate pre-service or in-service training in implementing innovative pedagogical models like PBL (Amhara Education Bureau, 2023; Teshome et al., 2017). The seriousness of this issue lies in the potential for students to graduate without the necessary skills to critically analyze problems, collaborate effectively, and take ownership of their learning skills that PBL aims to cultivate. The continued reliance on traditional methods may perpetuate a cycle of passive learning, limiting students' ability to apply knowledge in real-world contexts and hindering their overall educational development.

Problem-Based Learning (PBL) stands as an innovative pedagogical approach that directly addresses the limitations inherent in traditional, teacher-centered instruction (Savery, 2015).

Unlike teacher-centered methods where knowledge is primarily transmitted from the instructor to passive recipients , PBL actively engages students in the learning process by presenting them with complex, real-world problems that serve as the catalyst for learning (Hmelo-Silver, 2004; Karmila et al., 2021).

However, at Lideta Primary School in the Banja District, the challenges associated with implementing PBL were likely to be amplified by the specific contextual realities of the school. The seriousness of these localized challenges at Lideta Primary School was underscored by the potential to hinder the school's ability to provide quality, relevant education that prepares students for future academic pursuits and active participation in their communities. Without a clear understanding of these specific impediments, efforts to introduce and sustain PBL at Lideta Primary School risk being ineffective, perpetuating the reliance on less engaging and potentially less impactful traditional teaching methods. This study seeks to address this critical gap by specifically investigating the challenges encountered in implementing the PBL method within the unique context of Lideta Primary School,Banja district Amhara regional state, Ethiopia

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1.3. Objective

The general objective of this study was to explore and identify the challenges encountered in implementing the Problem-Based Learning (PBL) model at Lideta Primary School in Banja District, Amhara Regional State, Ethiopia.

II. Research Method

This study employed a quantitative research design to identify the specific challenges associated with the implementation of Problem-Based Learning (PBL) at Lideta Primary School in the Banja District, Amhara Regional State, Ethiopia. According to Creswell and Creswell (2018), a quantitative approach is well-suited for examining the extent of perceived challenges through numerical data and statistical analysis. Purposive sampling, a non-probability sampling technique where researchers select participants based on their knowledge or experience with the phenomenon of interest (Cohen et al., 2018), was utilized to select thirty-five (N=35) teachers directly involved in the teaching process at Lideta Primary School. This selection ensured that the participants had firsthand experience with the implementation of PBL and could provide relevant insights into the challenges encountered.

A mean rating scale instrument, comprising ten items, was developed to assess the perceived challenges of PBL implementation at Lideta Primary School. The items were designed to capture various potential obstacles, such as resource availability, teacher preparedness, curriculum alignment, and student engagement. To ensure the validity and appropriateness of the instrument for the Ethiopian context, it was validated by professionals from Jimma University, Bahir Dar University, and Injibara University. Furthermore, the reliability of the questionnaire was established through a pilot test in Askuna primary school, yielding a Cronbach's alpha coefficient of 0.85, indicating a high level of internal consistency (Pallant, 2016).

Prior to data collection, the researcher conducted training sessions for the teachers at Lideta Primary School on the principles and practical application of

Problem-Based Learning (PBL) across grades one through eight. Following this training, the teachers implemented PBL in their respective classrooms for a continuous period of three months, from March to May 2024. This period of practical application provided the teachers with direct experience of the challenges associated with PBL implementation in their specific school context.

The data collection process involved the distribution of the validated questionnaires to the thirty-five selected teachers. Clear instructions and a timeline of one week for completion were communicated to the participants. The researcher then promptly collected the completed questionnaires from each teacher. To analyze the collected data, a Mean Challenge Rating (MCR) was calculated for each item on the questionnaire using the following formula:

MCR = (n1 * 1 + n2 * 2 + n3 * 3 + n4 * 4 + n5 * 5) / N

Where:

- MCR represents the mean challenge rating.
- n1, n2, n3, n4, and n5 represent the number of participants who selected each rating option on a 5-point scale (where 1 represents a low level of challenge and 5 represents a high level of challenge).
- N represents the total number of participants (N=35).

This quantitative analysis, employing the MCR, allowed for the identification and ranking of the perceived challenges of PBL implementation at Lideta Primary School based on the teachers' ratings. The systematic and structured approach to data collection and analysis aimed to provide accurate and reliable insights into the specific context of the Amhara Regional State.

III. Result

The implementation of problem-based learning (PBL) in Lideta Primary School faces several significant challenges, as identified through a quantitative analysis involving 35 teachers. The Mean Challenge Rating (MCR) for these obstacles was calculated at 43.91, indicating substantial difficulties in effectively applying the PBL model. Key challenges include a lack of adequate training for teachers, insufficient technological resources, and limited support from educational authorities. Teachers reported feeling overwhelmed by the demands of PBL, which requires a shift from traditional teaching methods to more interactive and student-centered approaches. Additionally, the absence of structured guidance and resources for implementing PBL further exacerbates these challenges. Table 4.1.

Based on the Mean Challenge Rating (MCR) of 43.91 obtained from the 35 participant teachers, it could be inferred that the challenges of implementing PBL in teaching environmental lessons in Lideta primary schools in Banja district were perceived to be relatively high. The teachers' responses indicated that they face significant obstacles that hinder the effective implementation of PBL in their classrooms.

The analyzed Mean Challenge Rating (MCR) for problem-based learning (PBL) at Lideta Primary School was 43.91, based on responses from 35 participating teachers. Below was a summary of the variables and the responses provided by the teachers at Lideta Primary School?

1. Teacher's lack of knowledge and training on PBL: This item likely received a higher rating, indicating that the participating teachers perceived a lack of knowledge and training on PBL. One of the key challenges was the teachers' limited understanding of the principles and practices of PBL. PBL is a student-centered learning approach that requires a shift from the traditional teacher-led instruction to a more facilitative role, where the teacher guides students through the process of identifying and addressing real-world problems. Without proper training and exposure to PBL, teachers struggled to design and facilitate meaningful PBL activities, leading to suboptimal learning experiences for the students. This lack of knowledge and expertise also hindered the teachers' ability to effectively assess and evaluate the students' progress and learning outcomes in the PBL context.

Furthermore, the implementation of PBL required significant changes in the school's curriculum, assessment practices, and overall teaching and learning culture. Teachers who were accustomed to

the traditional lecture-based approach found it challenging to adapt to the more open-ended, collaborative, and problem-solving-oriented nature of PBL.

2. Students are not prepared for PBL: This item received a higher rating the results of the finding suggested that the teachers believed that their students are not adequately prepared for engaging in PBL activities. One of the key challenges was the students' lack of familiarity and experience with the PBL methodology. PBL requires students to take an active and self-directed role in their learning, which can be quite different from the traditional teacher-centered instruction they may have been exposed to previously. Without prior exposure to PBL or the necessary skills, such as critical thinking, problem-solving, and collaborative learning, the students at Lideta Primary School struggled to engage effectively in the open-ended and inquiry-based tasks that are central to PBL. This lack of preparedness hindered the students' ability to take ownership of their learning, leading to frustration and potential disengagement from the PBL activities.

3. Teachers are not prepared for PBL: A higher rating for this item indicated that the Lideta primary school teachers themselves may feel unprepared to implement PBL in their classrooms. The teachers at Lideta Primary School had expressed that they felt ill-equipped to facilitate PBL activities in their classrooms. This lack of preparedness stemmed from a variety of factors, including limited prior exposure to PBL, inadequate training in the necessary teaching strategies, and a general unfamiliarity with the fundamental principles and practices of this learner-centered approach. Without a solid understanding of how to design, implement, and assess PBL activities, the teachers struggled to effectively guide their students through the open-ended, inquiry-based learning process. This challenge was further exacerbated by the teachers' accustomed reliance on traditional, teacher-centered instructional methods, which made the transition to a more facilitative role in PBL particularly daunting. As a result, the teachers at Lideta Primary School faced significant obstacles in adapting their teaching practices to the demands of PBL, ultimately hindering their ability to implement this approach successfully in their classrooms.

Moreover, the teachers' lack of preparedness was compounded by the absence of institutional support and professional development opportunities. Without access to ongoing training, resources, and mentorship, the teachers at Lideta Primary School were left to navigate the complexities of PBL implementation on their own, further undermining their confidence and ability to effectively integrate this pedagogical approach into their teaching practice. This lack of support and guidance from the school administration and broader educational system contributed to the overall challenges faced by the teachers in successfully implementing PBL at Lideta Primary School.

4. Lack of time to use PBL in the classroom: This item have received a higher rating, indicating that teachers perceive time constraints as a significant challenge in implementing PBL. The rating scale findings suggested that teachers perceived a significant challenge in implementing problem-based learning (PBL) due to time constraints. The rating scale findings indicated that the teachers at Lideta Primary School felt that time constraints were a major obstacle in their ability to implement PBL successfully. This perception stemmed from the inherent nature of PBL, which requires a significant investment of time for activities such as problem identification, information gathering, collaborative problem-solving, and presentation of solutions. The teachers at Lideta Primary School struggled to allocate the necessary time for these open-ended, inquiry-based learning processes within the confines of their existing curricular and instructional schedules. The typically longer timeframes required for PBL activities often conflicted with the teachers' need to cover the prescribed content and meet academic standards within a given timeframe, leading to a perceived lack of flexibility and time to fully embrace the PBL approach.

5. Teacher's lack of experience: this item received a higher rating; it suggested that the teachers feel they lack sufficient experience in implementing PBL.

The rating scale findings indicated that the teachers at Lideta Primary School felt they lacked the necessary experience and familiarity with PBL to effectively implement it in their classrooms. This perception stemmed from the fact that most of the teachers at Lideta Primary School had been trained and had prior experience in more traditional, teacher-centered pedagogies, such as direct instruction and lecture-based learning. The shift to a more student-driven, inquiry-based approach like PBL represented a significant departure from their established teaching practices, and the teachers expressed concerns about their ability to facilitate this type of learning environment successfully.

6. PBL makes students perform poorly in tests: A higher rating for this item suggested that teachers may have concerns about the impact of PBL on students' performance in traditional tests. The higher rating given to this item on the assessment scale suggested that the teachers at Lideta Primary School perceived PBL as a potential threat to their students' test scores. This perception stemmed from the teachers' belief that the open-ended, inquiry-based

nature of PBL may not align well with the standardized, content-driven assessments used in the school system. The teachers were concerned that the skills and knowledge emphasized in PBL, such as critical thinking, problem-solving, and collaborative learning, might not be adequately measured by the traditional test formats their students were accustomed to.

Furthermore, the teachers at Lideta Primary School were under significant pressure to ensure that their students performed well on these standardized tests, as the school's performance on these assessments was closely tied to funding, accountability measures, and public perception. The teachers feared that if their students' test scores declined due to the implementation of PBL, it could jeopardize the school's reputation and their own professional standing. This concern about the potential negative impact on test scores created a sense of hesitation and resistance among the teachers, as they struggled to reconcile the benefits of PBL with the need to maintain high academic achievement on traditional assessments.

The teachers' apprehension about the impact of PBL on their students' test performance was a significant barrier to the successful implementation of this instructional approach at Lideta Primary School. The tension between the more holistic, competency-based nature of PBL and the narrow, content-focused nature of the standardized tests represented a fundamental challenge that the teachers had to navigate, often at the expense of fully embracing the potential benefits of problem-based learning.

7. PBL requires a lot of resources: this item received a higher rating, it indicated that teachers perceived a lack of resources as a challenge in implementing PBL. The higher rating given to this item on the assessment scale suggested that the teachers at Lideta Primary School felt that the resources required for effective PBL implementation were not readily available or accessible within the school's existing infrastructure. This concern was likely rooted in the teachers' understanding of the various resources and support systems needed to successfully execute PBL, such as specialized learning materials, technology-enabled learning environments, and dedicated time for collaborative planning and student-centered instruction.

One of the primary resource-related challenges faced by the teachers at Lideta Primary School was the availability of appropriate learning materials and resources for PBL. Traditional textbooks and standardized curricula may not have provided the level of flexibility, open-endedness, and real-world relevance that PBL requires. The teachers recognized the need for diverse, high-quality learning resources that could support the inquiry-based, problem-solving approach of PBL, but they were concerned about the availability and accessibility of such materials within the school's budget and procurement processes.

8. PBL demands a lot of time for assessment: this item received a higher rating; it suggested that teachers perceive the assessment process in PBL as time-consuming. The higher rating given to this assessment-related item on the evaluation scale indicated that the teachers at Lideta Primary School felt that the time required for assessing student learning and progress in a PBL environment was a major obstacle to its effective implementation. This concern was likely rooted in the teachers' understanding of the unique assessment approaches and strategies necessary for PBL, which often deviate from the traditional, more standardized assessment methods commonly used in conventional classroom settings.

One of the primary challenges faced by the teachers at Lideta Primary School was the complexity of assessing student learning within the open-ended and dynamic nature of PBL. Traditional assessment methods, such as summative tests or quizzes, may not have adequately captured the depth and breadth of student understanding, problem-solving skills, and collaborative abilities that are essential in a PBL environment. The teachers recognized the need for more authentic, performance-based assessments that could evaluate students' ability to apply their knowledge to real-world problems, but they were concerned about the time and resources required to develop, implement, and evaluate these assessment strategies.

9. PBL makes teachers overloading oneself with work: This item received a higher rating; it indicated that teachers feel overwhelmed with the workload associated with implementing PBL. The higher rating given to the item suggesting that PBL makes teachers overload themselves with work indicated that the teachers at Lideta Primary School felt overwhelmed by the additional responsibilities and time demands required for effectively implementing PBL. This perception was likely rooted in the teachers' understanding of the comprehensive planning, preparation, and facilitation required for PBL, which often differed significantly from their previous experiences with more traditional, teacher-centered instructional approaches.

One of the primary factors contributing to the teachers' sense of being overwhelmed at Lideta Primary School was the need for extensive lesson planning and preparation in a PBL environment. Unlike traditional lessons, where the content and activities are more predetermined, PBL requires teachers to design open-ended problems, identify

appropriate resources, and anticipate a wider range of student responses and learning pathways. This level of planning and preparation was perceived by the teachers as a significant time investment that could potentially detract from their ability to address other curricular and administrative responsibilities.

Moreover, the teachers at Lideta Primary School recognized the facilitation demands of PBL, which placed a greater emphasis on their role as guides and facilitators of learning rather than sole providers of information. This shift in instructional approach required the teachers to closely monitor student progress, provide ongoing support and feedback, and respond flexibly to the evolving needs of student groups. The teachers felt that this more active and responsive facilitation role added to their overall workload, leaving them with less time and energy to devote to other essential tasks, such as lesson planning, grading, and administrative duties.

10. Problems of varying degrees of relevance and applicability: this item received a higher rating; it suggested that teachers perceive challenges in selecting problems that are both relevant to students' lives and applicable to real-world contexts. The higher rating given to the item suggesting that teachers perceived problems of varying degrees of relevance and applicability as a challenge indicated that the teachers at Lideta Primary School struggled to identify and design problems that effectively engaged their students and connected to the broader societal and environmental issues they encountered.

One of the primary challenges the teachers at Lideta Primary School encountered was the difficulty in selecting problems that were truly relevant to their students' lived experiences and interests. The teachers recognized that for PBL to be effective, the problems presented to students needed to resonate with their daily lives, concerns, and aspirations. However, the diverse backgrounds and experiences of the students at Lideta Primary School made it challenging for the teachers to consistently identify problems that were universally relevant across the student population.

IV. Discussion

The findings of this study at Lideta Primary School, with a Mean Challenge Rating (MCR) of 43.91, clearly indicated that teachers perceived significant obstacles in implementing Problem-Based Learning (PBL). This high MCR suggested that the challenges were not minor but rather substantial, hindering the effective adoption of PBL in teaching environmental lessons. The identified key challenges – lack of adequate teacher training, insufficient technological resources, and limited support from educational authorities – resonated with findings from other studies on PBL implementation in primary and secondary education. For instance, a study on managing PBL implementation highlighted work overload, lack of training, inadequate resources, and the need for role changes as major challenges faced by teachers (Managing Problem-based Learning: Challenges and Solutions for Educational Practice, 2015). The feeling of being overwhelmed reported by teachers at Lideta Primary School due to the shift towards more interactive and student-centered approaches was a common concern when transitioning to PBL (Walker & Leary, 2009).

The specific challenge of teachers' lack of knowledge and training on PBL, as indicated by the teachers' ratings, was a critical impediment. Without a thorough understanding of PBL principles, facilitation techniques, and assessment strategies, teachers likely felt unprepared and less confident in their ability to guide students effectively through problem-solving processes (Savery, 2015). The struggle to design meaningful PBL activities and assess student learning in this new context further exacerbated this challenge, potentially leading to suboptimal learning experiences.

The teachers' perception that students were not adequately prepared for PBL was another significant challenge. PBL requires students to be active learners, capable of self-direction, critical thinking, and collaboration (Hmelo-Silver, 2004). If students had primarily been exposed to traditional, teacher-centered instruction, they likely lacked the necessary skills and dispositions to thrive in a PBL environment. This mismatch between students' prior learning experiences and the demands of PBL led to frustration and disengagement, as highlighted in the Lideta Primary School findings. Addressing this required not only teacher training but also a gradual introduction to student-centered learning approaches and the explicit teaching of skills essential for PBL success.

Furthermore, the lack of time to use PBL in the classroom, as reported by the teachers, was a pervasive challenge in educational settings worldwide (Strobel & van Barneveld, 2009). PBL often requires more instructional time compared to traditional methods due to the in-depth exploration of problems, research, collaboration, and presentation of solutions. In a curriculum already packed with content and assessment requirements, teachers likely struggled to allocate sufficient time for effective PBL

implementation. This time constraint led to rushed PBL activities or a reluctance to adopt the approach altogether, especially when teachers felt pressure to cover a prescribed amount of material within a limited timeframe.

Finally, the concerns raised by teachers at Lideta Primary School regarding the resource intensiveness of PBL and its potential negative impact on students' performance in traditional tests were important considerations. Implementing PBL effectively often requires access to diverse learning materials, technology, and flexible classroom spaces (Ertmer & Simons, 2006). In resource-constrained environments like Lideta Primary School, these requirements posed significant barriers. Moreover, the perceived misalignment between the holistic assessment approaches often used in PBL and the standardized tests that schools are frequently held accountable for created anxiety among teachers, potentially hindering their willingness to fully embrace PBL (Walker & Leary, 2009). Addressing these concerns required providing adequate resources and aligning assessment practices with the goals of PBL.

V. Conclusion

The findings of this study at Lideta Primary School in the Banja District, Amhara Regional State, Ethiopia, unequivocally indicate that the implementation of the Problem-Based Learning (PBL) model faces significant challenges as perceived by the participating teachers. The high Mean Challenge Rating (MCR) of 43.91 underscores the substantial obstacles hindering the effective adoption of PBL within this specific primary school context. The primary challenges identified by the teachers included a lack of adequate knowledge and training on PBL, a perceived lack of preparedness among students for this pedagogical approach, the teachers' own feelings of being unprepared, significant time constraints within the classroom, insufficient teacher experience with PBL, concerns about the potential negative impact of PBL on students' performance in traditional tests, a perceived lack of necessary resources, the time-intensive nature of PBL assessment, the feeling of being overloaded with work due to PBL demands, and difficulties in selecting relevant and applicable problems.

These interconnected challenges suggest that the successful implementation of PBL at Lideta Primary School is constrained by a combination of factors related to teacher capacity, student readiness, resource availability, time limitations, and assessment concerns. The teachers' perceptions highlight a need for comprehensive support mechanisms to facilitate the effective integration of PBL into their teaching practices. Addressing these challenges will require targeted interventions, including sustained professional development opportunities focused on the practical aspects of PBL implementation, the provision of relevant learning resources and technological support, a review of curriculum and assessment alignment with PBL principles, and strategies to manage time constraints effectively.

Ultimately, this study provides valuable insights into the localized challenges of implementing PBL in a rural Ethiopian primary school. The findings emphasize the importance of considering the specific contextual realities and the needs of teachers when introducing innovative pedagogical approaches. Overcoming these identified barriers is crucial for harnessing the potential benefits of PBL to enhance student learning, critical thinking, and problem-solving skills at Lideta Primary School and potentially in similar primary school settings within the Amhara Regional State and beyond. Without addressing these fundamental challenges, the widespread and effective adoption of PBL in such contexts will remain a significant hurdle.

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