

AZƏRBAYCANDA LAYİHƏ ƏSASLI ÖYRƏNMƏ: TƏCRÜBƏLƏR VƏ ÇAĞIRIŞLAR

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ANNOTASIYA

Layihə əsaslı öyrənmə şagirdlərin fəallığını, müstəqilliyini və tənqidi düşünmə bacarıqlarını inkişaf etdirmək məqsədilə geniş şəkildə istifadə olunan innovativ yanaşmadır. Lakin onun Azərbaycanın ibtidai təhsilində tətbiqi hələ də kifayət qədər araşdırılmayıb. Bu araşdırmanın məqsədi layihə əsaslı öyrənmə metodunun qabaqcıl məktəblərdə tətbiqini, qarşılaşılan çətinlikləri və mümkün həll yollarını öyrənməkdir. Keyfiyyətə əsaslanan tədqiqat yanaşması çərçivəsində müəllimlər, koordinatorlar və məktəb rəhbərləri ilə yarı-strukturlaşdırılmış müsahibələr aparılıb. Nəticələr şagirdlərin maraqlarına uyğun qısamüddətli layihələr və müəllimlər üçün təlimlər kimi strategiyaların effektiv olduğunu göstərir. Bu araşdırma layihə əsaslı öyrənmə təcrübələrinin təkmilləşdirilməsi üçün əhəmiyyətli təkliflər təqdim edir.

Açar sözlər: Layihə əsaslı öyrənmə, ibtidai təhsil, şagird fəallığı, interaktiv strategiyalar, tədris metodikası.

PROJECT-BASED LEARNING IN AZERBAIJAN: PRACTICES AND CHALLENGES

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ABSTRACT

Project-Based Learning (PBL) is widely used as an innovative approach to enhance student engagement, autonomy, and critical thinking skills. However, its application in primary education in Azerbaijan remains underexplored. This study investigates PBL practices, challenges, and solutions in pioneering schools that adopted PBL. Semi-structured interviews were conducted with teachers, coordinators, and school principals using a qualitative research approach. Findings reveal that strategies such as short-term projects tailored to student interests and teacher training are effective. This research provides valuable recommendations for improving PBL practices.

Keywords: Project-Based Learning, primary education, student engagement, interactive strategies, teaching methodology.

Background: Project-Based Learning (PBL) has emerged as an innovative teaching approach designed to foster student engagement, autonomy, and critical thinking skills. Despite its global popularity, the implementation of PBL in primary education within Azerbaijan remains underexplored. This study focuses on the PBL practices in the schools, which are the pioneering institutions to adopt the mentioned method in Azerbaijan, with a particular emphasis on English-medium classes.

Purpose: The purpose of this case study was to investigate how PBL is applied in primary education in Azerbaijan, identify the challenges encountered by teachers and students during its implementation, and propose strategies to overcome these challenges. The research also aimed to assess the effectiveness of these strategies in enhancing collaboration, communication, and student engagement.

Methods: A qualitative research design was employed, incorporating classroom observations, semi-structured interviews with teachers and administrators, and document analysis. The sample included three PBL teachers, two of three coordinators, and the school principal of Landau School, focusing on third- and fourth-grade students. Data were analysed thematically to extract key patterns and insights.

Findings: The study revealed that PBL promotes a student-centred, collaborative learning environment. However, challenges such as time management, inconsistent lesson planning, low student motivation, and group formation difficulties were identified. Strategies such as short-term projects, frequent regrouping of students, integration of technology, and teacher training were highlighted as effective solutions. The findings emphasize the importance of aligning PBL activities with student interests and providing adequate support for teachers through training and resources.

Significance: This research contributes to the limited literature on PBL in Azerbaijan and offers practical insights for educators and policymakers. The development of a teacher's handbook based on the findings further underscores the study's applicability, providing

actionable strategies to enhance PBL practices in primary education.

INTRODUCTION

The contemporary educational landscape demands innovative approaches that equip students with 21st-century skills such as critical thinking, problem-solving, collaboration, and creativity. Project-Based Learning (PBL) has emerged as one such approach, offering a student-centred, inquiry-based framework for learning. Unlike traditional teaching methods, which often prioritize rote memorization and passive learning, PBL engages students in exploring complex, real-world problems, culminating in the creation of meaningful products or solutions. This approach fosters active participation, autonomy, and collaboration, essential skills for success in a globalized world (Thomas, 2000; Bell, 2010).

In Azerbaijan, the transition from traditional Soviet-influenced education system to modern, global standards has been a gradual process. Despite increasing interest in innovative pedagogies, there is limited empirical research on the implementation and outcomes of PBL in Azerbaijani schools. The private schools stand out as pioneers, having integrated PBL as a core teaching method in its English-medium primary classes since 2019. The schools aim to provide students with a learning environment that mirrors global standards by encouraging autonomy, teamwork, and creativity.

The purpose of this study is to examine the application of PBL in primary education in schools, focusing on its practices, challenges, and the strategies employed to overcome them. Specifically, the research investigates how teachers facilitate group and pair work, the challenges they encounter in fostering student collaboration and engagement, and the strategies implemented to address these issues. Additionally, the study contributes to bridging the gap in literature on PBL in the Azerbaijani context, offering insights that can inform educational practices and policies across the region.

The significance of this research lies in its potential to provide actionable strategies for educators and administrators in Azerbaijan. By exploring the nuances of PBL implementation in a local context, this study aims to support the broader adoption of this pedagogical approach, ultimately enhancing the quality of primary education and aligning it with international standards.

This paper is structured as follows: the literature review outlines the theoretical foundations of PBL, its features, and common challenges; the methodology section details the research design and data collection processes; the findings and discussion present insights from schools; and the conclusion offers recommendations for future research and practice.

LITERATURE REVIEW

1. Introduction to Project-Based Learning

Project-Based Learning is an innovative, student-centred instructional approach designed to equip learners with 21st-century skills such as critical thinking, problem-solving, creativity, and teamwork (Bell, 2010). It contrasts with traditional teacher-centred methods by emphasizing student autonomy and collaborative learning to address real-world problems. According to Almulla (2020), PBL creates an environment where learners actively engage with their interests and needs through authentic activities, fostering motivation and practical application of knowledge.

John Dewey's philosophy of experiential learning underpins the theoretical foundation of PBL, emphasizing the importance of learning through doing (Dewey, 1938). Similarly, William Heard Kilpatrick's project method advocates centring educational content around student-driven projects (Kilpatrick, 1918).

2. Features, Components, and Outcomes of PBL

The defining features of PBL include its focus on authentic, real-world problems; its reliance on collaboration; and its culmination in tangible final products. These features make

PBL a comprehensive learning approach that aligns with global educational goals. When effectively implemented, PBL leads to significant positive outcomes, including enhanced academic performance, improved communication skills, greater collaboration, and the development of critical thinking abilities (Bell, 2010; Fragoulis, 2019).

3. Challenges in PBL Implementation

- *Student-Related Challenges:* Some schoolchildren struggled with group collaboration and communication, leading to unequal participation. For example, students frequently preferred working with friends or same-gender peers, which required teachers to intervene and maintain balanced group dynamics (Carmen et al., 2020). Additionally, low motivation among a few students resulted in passive participation, such as copying information from the internet without analysis or meaningful engagement (Almulla, 2020).

- *Teacher-Related Challenges:* Teachers encountered difficulties in managing time effectively, especially when students required extra guidance to complete projects within allocated timeframes (Kalabzova, 2015). Designing engaging and relevant lesson plans was another issue, as the pre-designed term plans often limited flexibility. For instance, teachers reported that some activities in the term plans did not align well with students' interests, leading to disengagement (Bell, 2010).

- *Institutional Challenges:* According to the interviews, the school administration faced organizational challenges, such as providing adequate teacher training and resources. While schools offered free training and access to technological tools like individual computers, the preparation of authentic and engaging resources remained a time-intensive task for teachers (Almulla, 2020).

4. Strategies for Effective PBL Implementation

To address these challenges, research has identified several effective strategies employed at the schools:

- *Student-Centred Strategies:* Teachers allowed

students to select from multiple project topics to increase engagement (Bell, 2010). For example, during projects on environmental sustainability, students chose between topics like deforestation, endangered species, and ecosystem protection.

- *Teacher Development:* The administration provided training programs to enhance teachers' PBL facilitation skills (Almulla, 2020). Incentives such as promotions and acknowledgment on a "success board" further motivated teachers to excel in their roles.

- *Classroom Practices:* Frequent regrouping of students and maintaining gender balance in groups helped foster collaboration and reduce bias (Carmen et al., 2020). Additionally, the use of short-term projects and breaking down long-term tasks into smaller, manageable parts ensured that students remained focused and productive.

The literature also underscores the importance of using diverse and authentic resources to enrich the PBL experience. Digital storytelling, for instance, was identified as an effective tool for engaging students and enabling creative.

5. Gaps in the Literature

It is also important to highlight one point that there is a significant gap in the existing literature: the lack of studies on PBL in primary schools within Azerbaijan. Most research focuses on secondary or higher education settings (Bell, 2010; Almulla, 2020), leaving the challenges and strategies for younger learners largely unexplored. Furthermore, limited attention has been given to the cultural and institutional factors that influence PBL implementation in non-Western contexts. By addressing these gaps, this study contributes valuable insights into the practical application of PBL in Azerbaijan, serving as a model for similar contexts.

6. Conclusion of Literature Review

This literature review demonstrates the theoretical and practical relevance of PBL, its core features, and the challenges associated with its implementation. By integrating findings from global research and this research, it provides a comprehensive foundation for understanding

the nuances of PBL. The next sections will delve deeper into the methodology, findings, and implications of this study, offering actionable recommendations for educators and policymakers.

METHODOLOGY

Introduction

This study employed a qualitative research design to explore the implementation of Project-Based Learning (PBL) in primary education in Azerbaijan. The qualitative approach was chosen for its ability to capture the depth and complexity of participants' experiences and perspectives. By focusing on the context-specific nuances of PBL, this methodology provides insights into the challenges and strategies associated with its application.

Research Design

The study adopted an interpretive paradigm, which emphasizes understanding phenomena through participants' meanings and experiences. This approach allowed the researchers to investigate how teachers and administrators perceive and practice PBL. Data were collected using a combination of semi-structured interviews, classroom observations, and document analysis, ensuring a comprehensive understanding of the topic.

Research Sample and Participants

A non-probability, convenience sampling method was used to select participants due to their accessibility and relevance to the study's objectives. The study sampled two schools that had established Project-Based Learning (PBL) practices. Schools were selected based on their active implementation of PBL and willingness to participate in the study.

The sample included:

- *Three PBL teachers from grades 3 and 4*, chosen based on their experience with PBL and their availability for participation.

- *Two coordinators overseeing PBL implementation*, as this was the only two coordinators responsible for curriculum design and teacher support across the sampled schools.

• *The principals of the schools*, who provided insights into administrative challenges and institutional support for PBL.

Data Collection Methods

Multiple data collection methods were employed to enhance the credibility and depth of the findings:

• *Document Analysis*: Lesson plans, term plans, and worksheets related to PBL were analysed to understand how PBL principles were integrated into teaching materials. For instance, lesson plans included detailed objectives, activities, and resources designed to facilitate group and pair work.

• *Classroom Observations*: Observations were conducted in two third-grade and two fourth-grade classes, focusing on classroom interactions, group dynamics, and the facilitation of PBL activities. Observers took the role of passive participants to avoid influencing classroom behaviour. Observations highlighted aspects such as time management, resource utilization, and student participation.

• *Semi-Structured Interviews*: Semi-structured interviews were conducted with teachers, the coordinators, and the principal (since two schools have one principle, but each school has one coordinator) to gather in-depth insights into their experiences with PBL. Questions addressed teaching strategies, challenges, and the perceived effectiveness of PBL. For example, teachers shared their strategies for allowing students to choose project topics, which improved engagement and collaboration.

Data Analysis

Thematic content analysis was used to analyse the data collected from multiple sources, including interviews, classroom observations, and document analysis. The process involved:

• Interviews:

— Transcribing interview recordings and field notes.

— Coding responses to identify recurring themes and patterns.

— Grouping the codes into broader categories such as “Challenges,” “Strategies,” and “Outcomes.”

— Interpreting findings in relation to the research questions and existing literature.

• Classroom Observations:

— Reviewing observation notes to identify key behaviours and interactions related to PBL.

— Categorizing observations based on engagement levels, teacher facilitation, and student collaboration.

— Comparing observed practices with interview responses to triangulate findings.

• Document Analysis:

— Examining lesson plans, project guidelines, and term plans.

— Identifying recurring instructional strategies and challenges in PBL implementation.

— Comparing written materials with actual classroom observations to assess consistency.

This systematic approach ensured that the findings were grounded in the data while providing actionable insights.

Trustworthiness of the Study

To ensure the trustworthiness of the findings, the study adhered to the following strategies:

• *Triangulation*: Data were collected from multiple sources (documents, observations, and interviews) to corroborate findings.

• *Member Checks*: Participants reviewed summaries of their interview responses to verify accuracy and credibility.

• *Dependability*: Detailed documentation of the research process, including reflective journals, allowed for an audit trail that ensures transparency.

Ethical Considerations

Ethical principles were also upheld throughout the research. Participants provided informed consent, and their identities were anonymized to ensure confidentiality. The collected data were used solely for academic purposes, and participants were assured of their right to withdraw at any time.

Limitations

The study was limited to two schools and English-medium classes. The findings may not be generalizable to all schools in Azerbaijan due to the specific context and sample size. Furthermore, the research was conducted within

a limited timeframe, restricting the scope of data collection.

FINDINGS

The findings from this study provide a comprehensive understanding of the implementation of Project-Based Learning (PBL) in the schools. Data collected from document analysis, classroom observations, and interviews with teachers, the coordinators, and the principals revealed key insights into the structure, facilitation, and outcomes of PBL, as well as the challenges faced and strategies employed to address them.

1. Document Analysis

Analysis of lesson plans, term plans, and worksheets provided a detailed overview of how PBL was structured and implemented in the curriculum. Table 1 summarizes the documents analysed, including term plans for the third and fourth grades and specific lesson plans on topics like “Mean, Rude, or Bully” and “Global Goals: Life on Land”.

To ensure alignment between planned instruction and actual classroom practice, these documents were compared with classroom observations. This allowed for an assessment of how lesson plans were implemented in real teaching settings and whether teachers adapted materials during instruction.

These documents highlighted the integration of collaborative tasks and authentic activities into lesson plans, demonstrating alignment with the principles of PBL. For example, lesson

plans incorporated group projects, open-ended inquiry-based tasks, and real-world problem-solving activities, which reflect core PBL methodologies. Additionally, the use of student-led discussions and formative assessments reinforced student engagement and critical thinking.

However, inconsistencies between lesson plans and classroom implementation were observed due to varying teacher interpretations. While lesson plans emphasized student autonomy and peer collaboration, classroom observations revealed that some teachers maintained a more teacher-centred approach, occasionally limiting student-led exploration. Furthermore, some planned group activities were modified or shortened due to time constraints and classroom management challenges, reducing the intended impact of PBL strategies. These discrepancies indicate the need for further teacher training to ensure more consistent implementation of PBL principles.

Data collection for this study was conducted in May 2022, covering one full academic term. This timeframe allowed for an in-depth analysis of how PBL strategies were planned and executed in classroom settings.

2. Observations

Classroom observations provided valuable insights into PBL facilitation, student participation, and classroom dynamics. The observed lessons followed a structured format, beginning with lead-in activities such as open-ended questions or videos, followed by research, group discussions, and student presentations.

Table 1 Documents Analysed in the Study

Documents	Key Data Analysed
Term Plan for Grade 3 (2021–2022)	Topics and lesson objectives were identified.
Term Plan for Grade 4 (2021–2022)	Topics and lesson objectives were identified.
Lesson Plan: “Mean, Rude, or Bully”	Detailed objectives, activities, resources, grouping, and differentiation strategies.
Lesson Plan: “Global Goals”	Similar detailed lesson structures emphasizing group discussions and project creation.

Table 2 Classroom Activity Time Allocation

Activity	Allocated Time
Lead-In	5 minutes
Vocabulary	3 minutes
Exploring	6 minutes
Research	25 minutes
Presentation (per group)	10 minutes/group

- *PBL Structure:* The lesson plans included well-defined objectives, engaging lead-ins, and collaborative tasks. While the lessons emphasized pair and group work, the absence of field trips (planned in the lesson plans) due to pandemic restrictions in 2022 was a notable deviation.

- *Student Participation:* While most students demonstrated enthusiasm and engagement, some struggled with collaboration, preferring to work with friends or exhibiting low participation levels. Teachers actively intervened to address these issues by changing group dynamics and providing individual support.

- *Resources:* The school provided individual computers, audio-visual materials, and worksheets to support PBL activities. Teachers utilized diverse resources to create an engaging learning environment, though they noted challenges in sourcing authentic materials.

3. Interviews

Interviews with teachers, the coordinators, and the principal revealed both the strengths and challenges of PBL. Thematic analysis of the interviews identified four major themes:

- *PBL in the schools:* PBL has been a core teaching method in primary classes since 2019, supported by training programs for teachers. These trainings equipped educators with the skills needed to facilitate a student-centred and collaborative learning environment.

- *Differences from Traditional Approaches:* Participants highlighted that PBL fosters autonomy, teamwork, and critical thinking,

distinguishing it from traditional methods. As one teacher noted, “Students learn group working, sharing, and collaboration skills more effectively through PBL.

Challenges in PBL Implementation

Several challenges were observed during the implementation of Project-Based Learning (PBL). One key issue was time management, as some students struggled to complete projects within the allocated timeframe. This often resulted in rushed work or unfinished tasks, affecting the overall quality of learning outcomes.

Another challenge was low student participation, with certain students remaining passive during group activities. In many cases, group work was dominated by more confident students, while others contributed minimally. Teachers found it difficult to ensure equal engagement from all students.

An additional concern was flexibility in lesson planning. While PBL encourages adaptability, teachers occasionally modified pre-designed plans to accommodate classroom needs. However, this sometimes led to discrepancies in content delivery, where different classes covered topics at varying depths or followed different instructional approaches. This lack of standardization made it difficult to measure student progress consistently.

Finally, there was limited student involvement in topic selection. In cases where students were not given choices, engagement levels were lower. Activities that did not align with student interests often resulted in reduced motivation and participation.

Strategies to Address These Challenges

To mitigate these challenges, teachers implemented several strategies to enhance the effectiveness of PBL. One effective approach was giving students the opportunity to choose from multiple project topics. This strategy significantly increased engagement by allowing learners to explore subjects that aligned with their interests.

Another solution was the use of short-term projects and breaking down long-term projects into smaller, manageable tasks. This helped address time management issues by ensuring

that students could complete their work in phases rather than struggling with large-scale assignments.

Teachers also closely monitored student progress and provided regular feedback to encourage active participation. By offering guidance throughout the learning process, they ensured that all students contributed meaningfully to group tasks.

Lastly, to promote collaboration, teachers incorporated participation and teamwork into grading criteria. This encouraged students to engage more actively in group projects, as their involvement directly impacted their overall performance.

Summary of Findings

The findings suggest that while PBL promotes collaboration, autonomy, and critical thinking, its effectiveness is influenced by contextual factors such as student engagement, resource availability, and teacher preparedness. Table 3 provides a concise summary of participant perspectives, challenges, and strategies employed.

DISCUSSION

The discussion section interprets the findings of this study, aligning them with the research objectives and existing literature. This section examines how the challenges and strategies identified in the study contribute to the broader understanding of PBL implementation. Additionally, it explores the implications for educators, school administrators, and policymakers in Azerbaijan, offering recommendations for improving PBL practices.

The findings reveal that time management, student participation, and teacher adaptability significantly influence PBL effectiveness. These results align with studies by Bell (2010) and Almulla (2020), which highlight the importance of structured yet flexible project planning. However, unlike previous research in Western contexts, this study identifies institutional constraints and limited teacher training as key barriers in Azerbaijan, emphasizing the need for localized PBL support strategies.

By situating the findings within the existing body of research, this discussion provides a context-specific analysis of PBL in Azerbaijan. The implications of these findings suggest that teacher training, curriculum adaptation, and administrative support are essential for successful PBL integration.

1. PBL's Contribution to Learning in Azerbaijan

This study highlighted the transformative potential of PBL in Azerbaijani primary education. In these schools, PBL fostered a collaborative and student-centred learning environment, allowing students to develop essential 21st-century skills, such as critical thinking, problem-solving, and teamwork. These findings are consistent with global research on PBL (Bell, 2010; Thomas, 2000), which emphasizes its ability to bridge academic learning with real-world application. The use of technology and diverse resources at those schools further enhanced the learning experience, aligning with Almulla's (2020) assertion that PBL is an innovative and engaging teaching approach.

Table 3 Challenges and Strategies in PBL Implementation

Challenges	Strategies
Time Management	Short-term projects, task breakdown
Low Participation	Monitoring, feedback, participation grading
Flexibility in Lesson Planning	Collaborative planning among teachers
Lack of Student Interest	Offering topic choices, aligning activities

2. Challenges in PBL Implementation

The challenges identified in this study reflect common issues documented in PBL literature. For example:

- *Time Management:* The teachers struggled to ensure that students completed projects within the allocated time. The mentioned issue aligns with findings by Kalabzova (2015), who noted that PBL demands meticulous planning and time allocation.

- *Student Engagement and Collaboration:* Low participation by certain students and difficulties in group dynamics were significant barriers. These challenges resonate with Carmen et al. (2020), who identified collaboration and communication as critical issues in PBL classrooms.

- *Resource Preparation:* While the schools provided technological support, teachers reported challenges in preparing authentic and engaging materials. This observation is consistent with research emphasizing the need for adequate teacher training and resource availability to support PBL.

3. Strategies for Overcoming Challenges

The schools employed several innovative strategies to address these challenges:

- *Student-Centered Practices:* Allowing students to choose project topics significantly enhanced engagement and motivation. This strategy aligns with the principles of PBL, where student autonomy plays a central role.

- *Flexible Project Design:* Short-term projects and task breakdowns helped mitigate time management issues, supporting findings by Fragoulis (2019), who recommended using smaller, manageable projects for younger learners.

- *Teacher Development:* The schools' training programs and incentives for teachers contributed to their ability to facilitate PBL effectively. This finding underscores the importance of professional development in enabling teachers to adopt new pedagogical methods.

4. Comparison with Traditional Teaching Methods

The study highlighted the distinct advantages of PBL over traditional teaching methods. Teach-

ers and administrators emphasized that PBL fosters student autonomy, collaboration, and real-world problem-solving skills, contrasting with the more passive, memorization-based nature of traditional approaches. Interview findings revealed that teachers found PBL more effective in helping students develop 21st-century skills, as it encourages independent research, teamwork, and creative thinking.

The school principal highlighted that PBL has been a core teaching approach since 2019, emphasizing the importance of structured teacher training programs to support its effective implementation. Additionally, the PBL coordinator at Ganjlik campus explained that lesson plan consistency and topic selection were ongoing challenges, requiring collaborative planning among teachers to maintain engagement and structure Project-Based Learning. These findings align with global research that positions PBL as a superior method for preparing students for real-world challenges (Bell, 2010; Almulla, 2020).

5. Cultural and Contextual Considerations

The study's focus on Azerbaijan adds a unique perspective to the PBL literature. While much of the existing research is based in Western educational contexts, this study underscores the adaptability of PBL to non-Western settings. However, the findings also highlight the importance of tailoring PBL to local contexts, including cultural preferences, institutional resources, and teacher readiness.

Cultural preferences played a significant role, as students in Azerbaijan often prefer structured, teacher-guided instruction, making the shift to a student-centred PBL approach challenging. Some teachers noted that parents expect traditional teaching methods, which can create resistance to fully implementing PBL.

In terms of institutional resources, while schools provided technological tools such as computers and projectors, access to customized PBL materials and teacher training remained limited. Teachers often had to adapt Western PBL models without sufficient localized resources, leading to inconsistencies in implementation.

Teacher readiness varied significantly. Some teachers embraced PBL and integrated it effectively into their lessons, while others found it difficult to balance curriculum requirements with the flexibility of PBL. Training programs were identified as crucial in ensuring that teachers felt confident in designing and facilitating PBL lessons Project-Based Learning.

6. Implications for Policy and Practice

The insights from the schools have significant implications for the broader adoption of PBL in Azerbaijan:

- *Policy Recommendations:* Educational policymakers should prioritize teacher training and resource provision to support PBL implementation. Incentive programs similar to those in the schools could motivate educators to embrace innovative teaching methods.

- *Practical Recommendations:* Schools should adopt flexible PBL models that accommodate local challenges, such as limited time and varying student motivation levels. Encouraging student participation in project planning can also enhance engagement and ownership of learning.

7. Limitations and Directions for Future Research

This study was limited to two schools, focusing on English-medium classes. Future research could expand to include a broader range of schools and subjects, exploring the scalability of PBL in diverse educational settings. Additionally, longitudinal studies could provide deeper insights into the long-term impacts of PBL on student outcomes in Azerbaijan.

CONCLUSION and RECOMMENDATIONS

Conclusion

This study explored the implementation of Project-Based Learning in Primary schools in Azerbaijan, highlighting its contributions, challenges, and strategies for success. The findings revealed that PBL fosters a collaborative, student-centred environment that enhances critical thinking, communication, and problem-solving skills. Teachers acted as facilitators, guiding students through well-structured, authentic

activities aligned with real-world contexts. Students, in turn, demonstrated active participation, autonomy, and creativity, contributing to meaningful project outcomes.

However, the study also uncovered challenges, including time management, low student engagement in some cases, and inconsistencies in lesson planning. Institutional limitations, such as the need for extensive teacher training and resource preparation, further complicated the implementation process. Despite these obstacles, the schools employed effective strategies such as short-term projects, flexible task breakdowns, and the integration of student choices to enhance motivation and engagement.

This research contributes to the limited literature on PBL in Azerbaijan, offering insights into its practical application in primary education. By addressing the unique challenges faced in this context, the study provides a foundation for the broader adoption of PBL in Azerbaijani schools.

Recommendations

1. For Educators:

- *Enhance Student Engagement:* Teachers should provide students with options for project topics, aligning activities with their interests and real-world issues. For example, the students were motivated when they chose topics like deforestation or endangered species.

- *Utilize Diverse Resources:* Incorporate digital tools, audio-visual materials, and authentic tasks to enrich the learning experience. Teachers should also collaborate to share engaging lesson plans and materials.

- *Strengthen Group Dynamics:* Teachers should employ strategies such as rotating group members and maintaining gender balance to foster effective collaboration.

2. For School Administrators:

- *Provide Professional Development:* Regular training sessions should be organized to equip teachers with the skills needed to facilitate PBL effectively. Schools' practice of offering free training and acknowledging successful teachers can serve as a model.

- *Ensure Resource Availability:* Schools must

allocate sufficient resources, including access to technology and authentic materials, to support PBL activities.

- *Monitor and Support Teachers:* School leadership should provide consistent support through feedback and mentorship, ensuring that teachers are confident in applying PBL principles.

3. For Policymakers:

- *Promote PBL Adoption:* Develop policies encouraging the integration of PBL into the national curriculum, emphasizing its alignment with 21st-century educational goals.

- *Support Research and Development:* Allocate funding for studies that explore the effectiveness of PBL in diverse educational settings, focusing on long-term impacts on student outcomes.

- *Provide Financial Incentives:* Establish grants or subsidies for schools implementing innovative teaching methods like PBL, ensuring equitable access to resources across institutions.

4. For Future Research:

- *Expand Scope:* Investigate the application of PBL in different regions and school types across Azerbaijan, including public schools and non-English-medium classes.

- *Evaluate Long-Term Impact:* Conduct longitudinal studies to assess the sustained effects of PBL on student learning, career readiness, and personal development.

- *Explore Teacher Perspectives:* Further research could delve into teachers' experiences with PBL training and its influence on their instructional practices.

By addressing these recommendations, stakeholders can build on the successes in primary classes to expand and refine PBL practices across Azerbaijan. This approach holds significant potential for transforming primary education, fostering a generation of learners equipped for the challenges of a rapidly changing world.

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