ISSN 2663-8169 Vol. 7, Issue 3: 81-86, DOI: 10.25236/IJNDE.2025.070313

Integrative Development of Language Proficiency and Thinking Quality: Strategic Construction of Project-Based Learning in Primary School English Education

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Abstract: *Based on the requirements of the English Curriculum Standards for Compulsory Education (2022 Edition), this study explores strategic frameworks and practical pathways for fostering the integrative development of language proficiency and thinking quality in primary school English teaching. Through project-based learning (PBL), students engage in authentic tasks that facilitate the deep integration of linguistic competence and cognitive development. The paper begins by analyzing the current pedagogical landscape, where an overemphasis on linguistic form often overshadows the cultivation of thinking skills, resulting in underdeveloped higher-order thinking abilities. Grounded in constructivist learning theory, deep learning theory, and core competency-oriented education, this paper propose three design principles for PBL—authenticity, integration, and hierarchy—and illustrate their implementation through case studies such as "Designing an English Menu for a Campus Food Festival." The study concludes by highlighting the value of PBL in synergizing language and thinking development, while suggesting future research directions, including cross-grade applicability, enhanced teacher training, and individualized student support.*

Keywords: *Primary school English education; Project-based learning (PBL); Language proficiency; Thinking quality; Integrative development*

1. Introduction

The English Curriculum Standards for Compulsory Education (2022 Edition) explicitly states that English education should "develop language proficiency, cultivate cultural awareness, enhance thinking quality, and improve learning capacity." Language proficiency is defined as "the ability to apply linguistic and non-linguistic knowledge and strategies in context-specific thematic language activities," while thinking quality encompasses "logical, critical, and innovative thinking [1]". The standards advocate an "integration of learning, thinking, application, and creation" to holistically advance students' core competencies.

Project-based learning (PBL), as an inquiry-driven pedagogical approach anchored in authentic problem-solving, aligns closely with the principles of the new curriculum. Xia [2] emphasizes that PBL facilitates the "reconstruction of core knowledge" and "creative problem-solving," enabling the internalization and transfer of learning competencies. In primary school English education, PBL integrates linguistic practice with cognitive tasks, serving as an effective vehicle for the synergistic development of language proficiency and thinking quality. For instance, when designing a bilingual guidebook for a "Campus Cultural Festival" (a product-oriented project), students not only employ target language structures to describe scenarios but also optimize tour routes through logical analysis, thereby intertwining language expression and critical thinking.

However, current primary English teaching practices still exhibit a tendency to prioritize linguistic form over cognitive development. Wen [3], in Constructing the Theoretical System of the Production-Oriented Approach, reveals that approximately 67% of foreign language classroom activities in China remain decontextualized mechanical drills, depriving students of opportunities to apply language in real communicative contexts. Cheng [4], in Task-Based Language Teaching, critiques traditional grammar-translation methods for fragmenting language knowledge and confining classroom activities to superficial "form-focused drills," which hinder the cultivation of critical

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thinking. Gong [5], in Reconstructing the Objectives of Basic English Education, further highlights a severe "disconnect between learning and application," noting that students typically require seven years of study to achieve basic communicative competence. Such "lower-order thinking dominance" contradicts the curriculum's mandate to "promote intellectual growth through English education" (MOE, 2022). PBL offers innovative solutions to these challenges by bridging the gap between language acquisition and cognitive advancement.

2. Theoretical foundations for the synergistic development of language proficiency and thinking quality

2.1 The interplay between language proficiency and thinking quality

Language proficiency and thinking quality share a dynamic, interdependent relationship. Language serves as the external expression of thought, while thinking quality provides the cognitive foundation for linguistic competence. Vygotsky's sociocultural theory (1978) posits that language and thought are mutually constitutive: linguistic development propels cognitive advancement, and refined thinking, in turn, enriches language use. This theoretical framework offers critical support for the synergy between language and cognition. In language learning, students must not only master vocabulary and grammar but also articulate complex ideas, analyze problems, and devise solutions, thereby fostering logical, critical, and innovative thinking. Consequently, primary English education should transcend mechanical drills of linguistic forms and prioritize the integrative development of language and cognition.

2.2 Theoretical underpinnings of project-based learning (PBL)

PBL, as a student-centered pedagogical model, draws theoretical support from constructivism, deep learning theory, and core competency-oriented education.

2.2.1 Constructivist learning theory

Constructivism emphasizes that knowledge is actively constructed by learners through engagement with authentic contexts. In PBL, students acquire language skills and cognitive abilities by solving real-world problems. For example, when designing an English promotional poster for traditional Chinese festivals, students not only learn festival-related vocabulary and sentence structures but also analyze cultural connotations to create innovative designs, thereby deepening both linguistic and cognitive development (Xia Xuemei, 2018). Constructivism thus underpins PBL by advocating active inquiry in authentic settings to merge language practice with cognitive engagement.

2.2.2 Deep learning theory

Deep learning theory prioritizes inquiry-driven approaches to cultivate higher-order thinking skills. PBL challenges students with complex tasks that require analysis, evaluation, and creativity, thereby nurturing advanced cognitive abilities. This theory provides methodological guidance for PBL, emphasizing problem-solving and critical exploration as pathways to intellectual growth.

2.2.3 Core competency orientation

The English Curriculum Standards for Compulsory Education (2022 Edition) underscores the imperative to "develop language proficiency, cultivate cultural awareness, enhance thinking quality, and improve learning capacity," advocating an "integration of learning, thinking, application, and creation" to advance students' holistic competencies (MOE, 2022). PBL aligns with this vision by integrating language practice with cognitive tasks, enabling students to apply language in real-world problem-solving scenarios. Core competency orientation thus sets the strategic direction for PBL, positioning the synergy between language and thinking as a cornerstone of holistic education.

The synergistic development of language proficiency and thinking quality stands as a pivotal objective in primary English education. Grounded in constructivism, deep learning theory, and core competency principles, PBL offers both theoretical validation and practical pathways to achieve this goal.

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3. Strategic construction of project-based learning in primary school English education

3.1 Design principles for project-based learning

The design of project-based learning (PBL) should adhere to the following principles to ensure the synergistic development of language proficiency and thinking quality:

3.1.1 Authenticity principle

Project themes must align with students' lived experiences to ignite engagement. For instance, topics like "Campus Cultural Festival" or "Holiday Celebrations" allow students to apply English in authentic contexts, enhancing both practical utility and learning motivation [2]. Driven by real-world problems, students refine language skills and cognitive abilities through problem-solving.

3.1.2 Integration principle

Projects should integrate linguistic knowledge with cognitive training to avoid the "learning-application divide." By merging language tasks (e.g., vocabulary practice) with cognitive tasks (e.g., problem analysis), students holistically develop language proficiency and thinking quality.

3.1.3 Hierarchy principle

Tasks must scaffold from simple to complex, progressively elevating thinking quality. Hierarchical designs enable students to systematically cultivate higher-order thinking skills (e.g., analysis, evaluation) throughout the project.

3.2 Implementation pathways for PBL

3.2.1 Theme selection and problem-driven design

Themes rooted in students'daily lives—such as "Campus Cultural Festival"—stimulate intrinsic motivation. Authentic questions like "How to introduce Chinese festivals in English to foreign friends" drive students to synergize language use and cognitive engagement (MOE, 2022). For example, in a "Campus Cultural Festival" project, students describe campus landmarks in English while logically optimizing tour routes, merging linguistic expression with logical reasoning.

3.2.2 Task design and cognitive integration

Linguistic and cognitive tasks should intertwine. In the "Campus Cultural Festival" project, students compile a bilingual guidebook (language task) while analyzing campus layouts to design optimal routes (cognitive task), fostering higher-order thinking through practice (Xia Xuemei, 2018). Similarly, a "Traditional Chinese Festivals" project requires learners to master cultural vocabulary and design creative posters by analyzing cultural symbolism, deepening both language and cognitive development.

3.2.3 Collaborative inquiry and outcome presentation

Group work cultivates teamwork and communication skills. For instance, students collaboratively design bilingual guidebooks and present outcomes through exhibitions, refining both language fluency and logical reasoning.

3.3 Teacher roles and support strategies

In PBL frameworks, teachers transition from knowledge transmitters to facilitators, resource providers, and evaluators—a shift critical to fostering language-thinking synergy. This transformation aligns with the Compulsory Education Curriculum Plan (2022), which positions teachers as "learning designers" and advocates the "integration of learning and application."

3.3.1 Facilitator

Teachers guide deeper thinking through questioning and feedback. For example, during the "Campus Cultural Festival" project, prompts like "How to balance accessibility and interest in the tour route?" stimulate analytical and creative problem-solving.

3.3.2 Resource provider

Teachers supply scaffolding resources, such as campus maps, poster templates, or multimedia materials (e.g., festival-related videos), to support task completion. These resources bridge language

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practice and cognitive growth.

3.3.3 Evaluator

Teachers implement multi-dimensional assessments. Formative evaluations track participation and collaboration, while summative evaluations assess linguistic accuracy and logical coherence (MOE, 2022). For instance, in the "Traditional Festivals" project, formative feedback might focus on group dynamics, whereas summative criteria could evaluate poster creativity and cultural depth.

4. Practical case study of project-based learning in primary school English education

Drawing on the theoretical framework of project-based learning (PBL), this chapter presents a systematic implementation pathway for synergizing language proficiency and thinking quality through the case study "English Menu Design for Campus Food Festival." The project aligns with the English Curriculum Standards for Compulsory Education (2022 Edition), which emphasizes "applying language to solve problems in authentic contexts" (MOE, 2022). It integrates a "dual-core driven" model—using the language system as the vehicle and higher-order thinking development as the kernel—through three phases: theme association, task decomposition, and cognitive iteration. As an extension of the PEP Primary English curriculum (Unit 7 "My Food"), the project follows the pedagogical logic of the Production-Oriented Approach (POA), employing a closed-loop system of "backward design, tiered scaffolding, and dynamic feedback" to structure PBL instruction.

4.1 Project background and objectives

In a fourth-grade English classroom, we designed and implemented the "English Menu Design for Campus Food Festival" project based on PEP Primary English (Grade 4, Unit 7 "My Food"). The project aimed to develop students' higher-order thinking skills through authentic tasks, fostering the integrative growth of language proficiency and thinking quality.

4.2 Implementation process

4.2.1 Language tasks

Learning Objectives: Master core vocabulary (e.g., hamburger, salad, juice) and sentence structures (e.g., "I like...") from Unit 7.

Activities: Students collaborated in groups to collect food festival information and describe food features in English (e.g., "I like hamburgers because they are delicious."). Teachers provided scaffolding resources such as vocabulary lists, sentence templates, and exemplars to support accurate expression.

4.2.2 Cognitive tasks

Learning Objectives: Cultivate logical and innovative thinking through menu design and nutritional analysis.

Activities: Groups designed healthy and appealing menus by evaluating nutritional value and popularity. Teachers guided critical thinking through questions like, "Why is this menu healthy? How can we enhance its appeal?"

4.2.3 Collaborative inquiry and outcome presentation

Collaboration: Students divided roles to collect information, design menus, and create bilingual posters.

Presentation: Groups showcased posters featuring food descriptions and recommendations (e.g., "Welcome to our food festival! We offer hamburgers, salads, and juice—healthy and delicious!").

4.3 Outcomes and reflections

4.3.1 Student performance

Language Proficiency: Students accurately applied Unit 7 vocabulary and structures, demonstrating fluent expression.

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Thinking Quality: Logical analysis and creative problem-solving were evident in well-structured menu designs.

4.3.2 Teacher reflections

PBL's task-driven approach effectively boosted student engagement and motivation.

The project achieved its goal of synergizing language and cognitive development through authentic practice.

4.4 Evaluation mechanism for integrative development

4.4.1 Evaluation methods

Formative Assessment: Teachers observed and recorded students' participation, collaboration, and cognitive engagement. Probing questions (e.g., "Why is this menu healthy?") revealed students' thought processes.

Summative Assessment: Evaluated through project outcomes (e.g., posters, oral presentations), focusing on the integration of language proficiency and thinking quality.

4.4.2 Evaluation dimensions and rubric design

Design an evaluation rubric to assess students' performance across linguistic and cognitive dimensions, as shown in figure 1.

Dimension	Criteria	Description	Score (1-5)
Language Proficiency	Vocabulary Application	Accuracy and diversity in using core vocabulary from Unit 7 (e.g., *hamburger, salad, juice*).	1: No use of core vocabulary; 5: Accurate and varied usage.
	Grammatical Accuracy	Correct use of sentence structures (e.g., "I like...").	1: Frequent errors; 5: Flawless grammar.
	Fluency	Coherence and naturalness in describing food features and recommendations.	1: Disjointed expression; 5: Fluent and natural delivery.
Thinking Quality	Logical Coherence	Rationale and clarity in menu design (e.g., nutritional balance, layout logic).	1: Illogical design; 5: Well-structured and logical.
	Critical Analysis	Evaluation of menu healthiness and appeal.	1: No evaluation; 5: Comprehensive analysis and informed decisions.
	Creativity	Originality and innovation in menu presentation.	1: Lacks creativity; 5: Novel and imaginative design.

Figure 1. Evaluation rubric

Through the "English Menu Design for Campus Food Festival" project, we observed the transformative potential of PBL in primary English education. Driven by authentic tasks, students not only enhanced their language proficiency but also cultivated higher-order thinking skills. This case study offers actionable insights for synergizing language and cognitive development in primary school English pedagogy.

5. Conclusion

Project-Based Learning (PBL) offers an effective pathway for fostering the synergistic development of language proficiency and thinking quality in primary school English education. Through authentic problem-driven tasks, collaborative inquiry, and scaffolded project design, students cultivate higher-order thinking skills while engaging in meaningful language practice, achieving deep integration of linguistic and cognitive development.

Future research could further explore the adaptability of PBL across lower, middle, and upper primary grades, tailoring project tasks to students' cognitive characteristics and language proficiency at

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different stages. For instance, game- and activity-centric projects may suit lower grades, while upper grades could tackle more challenging inquiry-based tasks. Additionally, enhancing teachers' capacity in designing and implementing PBL is critical. Professional development programs—such as workshops and case study seminars—should equip educators with PBL design principles, implementation strategies, and evaluation methodologies. Furthermore, addressing individual differences among students is essential. Research should prioritize personalized scaffolding strategies, such as tiered task design and personalized feedback, to accommodate diverse learning needs and ensure the holistic advancement of language proficiency and thinking quality for every learner.

Acknowledgement

Funding Statement: This work was supported by the Hunan Provincial Philosophy and Social Science Planning Fund Project: Research on Innovation in Primary English Education (Grant No. 22WLH35).

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