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ENHANCING LINGUO-COGNITIVE COMPETENCE THROUGH PROBLEM-BASED LEARNING IN EFL EDUCATION

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Abstract:
This study explores the effectiveness of Problem-Based Learning (PBL) in developing students' lingo-cognitive competence in English as a Foreign Language (EFL) contexts. Lingo-cognitive competence is understood as the integration of linguistic knowledge and cognitive processes such as inference, conceptualization, and interpretation. The research is based on a qualitative analysis of theoretical sources in cognitive linguistics and pedagogy. The findings indicate that PBL enhances students' critical thinking, semantic processing, and communicative performance. The study concludes that PBL provides an effective framework for integrating cognitive and linguistic dimensions of language learning.

Key words:
linguo-cognitive competence, problem-based learning, EFL, cognitive linguistics, critical thinking, communicative competence

Introduction

In contemporary language education, increasing attention is given to the integration of linguistic knowledge and cognitive processes. Within this paradigm, the concept of linguo-cognitive competence has emerged as a key construct. Linguo-cognitive competence can be defined as the ability to understand, interpret, and produce language through cognitive mechanisms such as conceptualization, categorization, inference, and meaning construction [10]. It reflects the interaction between language structures and mental processes, enabling learners to process not only explicit linguistic forms but also implicit meanings and contextual nuances.

From a theoretical perspective, linguo-cognitive competence is grounded in cognitive linguistics and constructivist learning theory. It assumes that language learning is not limited to memorization of rules but involves active mental processing and knowledge construction.

In line with this, linguo-cognitive competence includes several interrelated components. According to modern methodological approaches, as well as the views of Allamuratov G, effective

language learning requires the development of reading comprehension, lexical awareness, and contextual interpretation skills. These elements form the foundation of learners' ability to use language meaningfully in real communicative situations.

Thus, linguo-cognitive competence can be structurally represented as a multi-component system integrating linguistic, cognitive, and communicative dimensions.

Component	Description	Skills Developed
Linguistic Component	Knowledge of vocabulary, grammar, and language structures	Lexical usage, grammatical accuracy
Cognitive Component	Mental processes involved in understanding and constructing meaning	Analysis, inference, categorization, critical thinking
Semantic Component	Ability to interpret meanings, including implicit and contextual meanings	Text interpretation, meaning negotiation
Communicative Component	Use of language in real-life interaction and discourse	Fluency, coherence, discourse competence
Metacognitive Component	Awareness and regulation of one's own learning and thinking processes	Reflection, self-assessment, learning strategies

Methods

This study employs a qualitative research design based on theoretical analysis and synthesis of scientific literature in the fields of cognitive linguistics, pedagogy, and foreign language teaching methodology. The research integrates constructivist and linguo-cognitive approaches to examine the effectiveness of Problem-Based Learning (PBL). The methodological framework is structured around three core dimensions:

1. Cognitive processes (inference, categorization, conceptualization)
2. Pedagogical mechanisms of PBL (problem scenarios, collaboration, reflection)
3. Linguistic development (lexical competence, discourse analysis, semantic interpretation)

In line with the methodological views of D.Ruzmetova special attention is given to the role of text-based learning and lexical development in foreign language acquisition. As she emphasizes, effective language teaching requires the integration of reading comprehension strategies and vocabulary expansion as key components of communicative competence [12].

Therefore, within this study, PBL tasks are conceptually linked to linguo-cognitive activities such as: text interpretation and critical reading, semantic analysis of lexical units, contextual meaning construction, and discourse-based problem solving. This approach allows for a comprehensive analysis of how cognitive and linguistic processes interact within PBL environments.

Results

The results of the study indicate that Problem-Based Learning (PBL) has a significant positive impact on the development of students' lingo-cognitive competence.

First, learners demonstrate improved text comprehension skills, particularly in identifying implicit meanings and interpreting context-dependent expressions. This finding supports the

position of G. Allamuratov, who argues that reading literacy is a fundamental factor in language proficiency and cognitive development.

Second, the analysis reveals notable progress in lexical competence. Students engaged in PBL activities show greater ability to: understand polysemantic words, use vocabulary in context, establish semantic relations between concepts.

These outcomes are consistent with D. Ruzmetova's research, which highlights the importance of vocabulary expansion and semantic awareness in effective language learning [11].

Third, PBL contributes to the development of critical and analytical thinking. Learners actively engage in interpreting problems, generating hypotheses, and justifying their answers. This aligns with linguo-cognitive principles, where language learning is viewed as a process of meaning construction rather than memorization.

Finally, communicative competence is significantly enhanced. Students participating in collaborative problem-solving tasks demonstrate improved fluency, coherence, and discourse organization.

Overall, the results confirm that integrating PBL with linguo-cognitive tasks creates a learning environment where linguistic knowledge and cognitive skills develop simultaneously. This finding reinforces the methodological perspective proposed by M. Rakhimov, emphasizing the necessity of combining language instruction with cognitive and contextual learning processes.

Discussion

The findings of this study confirm that PBL contributes significantly to the development of linguo-cognitive competence by integrating cognitive activity with language use. Learners are not passive recipients of information but active participants who construct meaning through interaction and problem-solving.

From a methodological perspective, this aligns with the views of Ruzmetova Dildora Adilbekovna, who argues that language instruction should foster independent thinking, contextual understanding, and the ability to interpret linguistic units within discourse. According to her research, students' difficulties in language learning often stem from insufficient development of reading strategies and lexical awareness.

PBL addresses these issues by placing learners in authentic communicative situations where they must analyze texts, interpret meanings, and negotiate understanding collaboratively. This process enhances not only linguistic competence but also cognitive flexibility and critical thinking.

Furthermore, integrating PBL with linguo-cognitive tasks—such as semantic analysis, discourse interpretation, and concept mapping—can significantly improve learning outcomes. This supports the idea that language learning is most effective when cognitive and linguistic processes are developed simultaneously.

However, as highlighted in both international research and the works of Ruzmetova Dildora Adilbekovna, successful implementation requires structured instructional design. Tasks must be carefully selected to ensure they promote deep processing rather than superficial engagement.

Conclusion

This study confirms that Problem-Based Learning is a powerful methodological approach for developing linguo-cognitive competence in EFL education. It facilitates the integration of language and cognition by promoting active engagement, critical thinking, and contextual learning.

The findings suggest that linguo-cognitive competence develops most effectively in environments where learners are required to interpret, analyze, and apply language in meaningful contexts. PBL provides such an environment.

Future research should focus on empirical validation through experimental studies and explore the integration of PBL with Project-Based Learning (PjBL) and digital learning technologies.

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