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# ENHANCING LINGUO-COGNITIVE COMPETENCE OF PSYCHOLOGY STUDENTS THROUGH TPACK-BASED ESP INSTRUCTIONAL FRAMEWORK

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## Abstract

The growing demand for specialized English proficiency in psychology education necessitates a strategic shift toward linguo-cognitive competence development. This study explores the integration of a TPACK (Technological Pedagogical Content Knowledge) framework within English for Specific Purposes (ESP) instruction to enhance the linguistic and cognitive capabilities of undergraduate psychology students. Drawing on cognitive linguistics and applied pedagogical models, the study outlines the theoretical rationale, methodological implementation, and empirical outcomes of a classroom-based intervention. The findings suggest that targeted ESP instruction, when aligned with TPACK principles, fosters deeper conceptual understanding, language proficiency, and professional discourse engagement among learners, especially within developing contexts like Uzbekistan, where modernization of higher education is a national priority.

**Keywords:** Linguo-cognitive competence, TPACK model, psychology, foreign language, digital pedagogy, methodology, integration.

## Introduction

Recent advancements in psycholinguistics and language pedagogy underscore the significance of linguo-cognitive competence in higher education, particularly for disciplines like psychology, where precise terminological usage and critical thinking are paramount. Traditional ESP instruction often emphasizes lexical and



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grammatical accuracy while overlooking the cognitive dimensions of language acquisition, resulting in superficial learning and limited communicative competence.

Uzbekistan, undergoing rapid educational reforms under the “Third Renaissance” agenda, has prioritized competence-based curricula, especially in foreign language education. According to the Ministry of Higher Education, Science and Innovation of Uzbekistan (2022), universities must ensure the development of interdisciplinary and communicative competencies, including those aligned with international standards. However, several studies indicate that ESP teaching in psychology departments still relies heavily on memorization and translation-based methods, with limited integration of cognitive strategies or digital technologies.

This study posits that a TPACK-oriented approach—one that integrates technological tools, pedagogical strategies, and subject-specific content—can address these limitations by enhancing both the linguistic and cognitive faculties of psychology students.

## **Methods**

The study employed a mixed-methods design conducted over one academic semester at a state university in Uzbekistan. Participants included 120 second-year psychology undergraduates, randomly divided into experimental and control groups. The experimental group received ESP instruction via the TPACK-based model, incorporating digital concept maps, terminology-based semantic webs, and interactive discourse analysis tools such as online forums, visual dictionaries, and AI-powered feedback applications. Instructional materials were designed collaboratively by ESP instructors and psychology faculty to ensure subject relevance and alignment with national curriculum standards. Data collection involved pre- and post-intervention tests measuring linguistic accuracy, terminological acquisition, and performance on cognitive language tasks such as metaphor interpretation, classification exercises, and problem-solving scenarios in English. Qualitative data were gathered through structured classroom observations, focus group discussions, and reflective journals maintained by students.



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## Results

Quantitative analysis revealed significant improvement in the experimental group compared to the control group ( $p < 0.01$ ). Post-intervention tests showed a 28% average increase in the accurate use of psychology-specific terminology and a 22% improvement in constructing coherent arguments using discipline-relevant language. Participants exposed to the TPACK model demonstrated enhanced retention of key psychological concepts, evidenced by improved scores on definition recall, conceptual mapping, and short essay writing. Cognitive gains were particularly noticeable in metaphor comprehension and classification activities. Reflective journals indicated increased learner engagement, a sense of ownership over learning, and frequent use of metacognitive strategies such as self-questioning and summarization.

## Discussion

The integration of linguo-cognitive and ESP instruction through the TPACK model proves beneficial for developing complex academic and professional competencies among psychology students. The combination of cognitive linguistics—focusing on metaphor, conceptual frames, and mental schemata—and educational technology enables deeper internalization of abstract psychological concepts, fostering critical thinking, discipline-specific literacy, and reflective learning. In the context of Uzbekistan, this approach is especially pertinent. Despite widespread policy support for digitalization and competence-based education, there is a notable gap in teacher preparedness, particularly in using technology for meaningful language instruction. This highlights the urgent need for faculty development programs and curriculum redesign to embed such approaches more systematically.

## Conclusion

The study confirms the efficacy of TPACK-based ESP instruction in enhancing linguo-cognitive competence among psychology students in Uzbekistan. The model not only improves language proficiency but also facilitates deeper conceptual understanding and interdisciplinary communication. Future research



should explore scalability across other disciplines and further refine the integration of cognitive strategies with digital pedagogies.

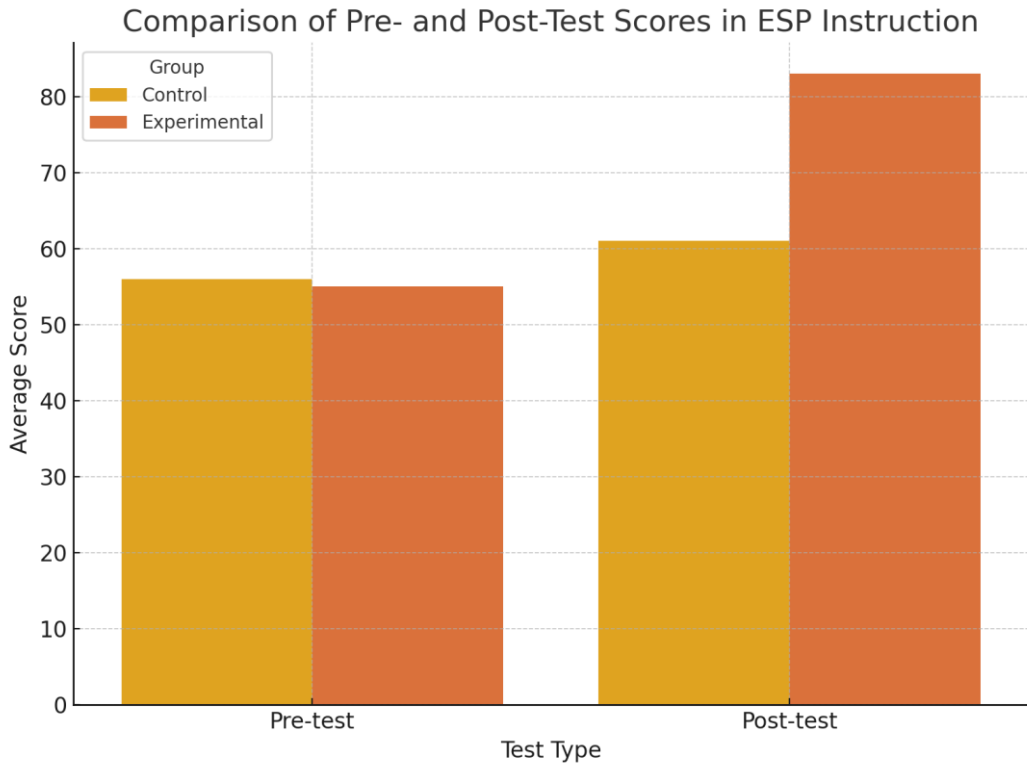


Figure 1. Comparison of Pre- and Post-Test Scores

This bar chart illustrates the improvement in test scores between the experimental and control groups following the ESP intervention.

Table 1. Linguo-Cognitive Competence Assessment Results

Metric	Control Group	Experimental Group
Terminology Accuracy (%)	62	84
Conceptual Mapping Score	5.4	8.7
Discourse Coherence Rating	3.2	4.5
Metaphor Interpretation (Tasks Completed)	12	19



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## **References**

1. Lakoff, G., & Johnson, M. (2003). *Metaphors We Live By*. University of Chicago Press.
2. Tomasello, M. (2009). *Constructing a Language: A Usage-Based Theory of Language Acquisition*. Harvard University Press.
3. Kubryakova, E. S. (2012). *Yazyk i znanie: Na puti polucheniya znaniy o yazyke*. Editorial URSS.
4. Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: 5. A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017–1054.
6. Popova, Z. D., & Sternin, I. A. (2007). *Kognitivnaya lingvistika*. AST.
7. Sultonova, S. (2021). Cognitive approaches in teaching English for specific purposes. *Journal of Foreign Language Research*, 2(3), 45–52.
8. Tursunov, M. (2022). The role of cognitive linguistics in ESP for psychology students. *Uzbek Journal of Language Learning*, 1(1), 33–41.
9. Ministry of Higher Education, Science and Innovation. (2022). *National Higher Education Reform Strategy 2022–2026*. Tashkent.
10. UzTES. (2023). *Teacher Readiness Survey Report on Technology-Enhanced Language Instruction in Uzbekistan*. Ministry of Preschool and School Education.
11. Allamuratov, G. O. (2025). PSIXOLOGIYA YO ‘NALISHI TALABALARINING LINGVOKOGNITIV KOMPETENSIYASINI RIVOJLANTIRISH JARAYONIDAGI QIYINCHILIKLAR VA ULARNI BARTARAF ETISH IMKONIYATLARI. *Педагогика и психология в современном мире: теоретические и практические исследования*, 4(9), 125-127.
12. Allamuratov, G. O. (2025). PSIXOLOGIYA YO ‘NALISHI TALABALARINING LINGVOKOGNITIV KOMPETENSIYASINI TPACK MODELI ASOSIDA RIVOJLANTIRISH METODIKASI. *Педагогика и психология в современном мире: теоретические и практические исследования*, 4(9), 128-130.
13. Allamuratov, G. O. (2025). PSIXOLOGIYA YO ‘NALISHI TALABALARINING LINGVOKOGNITIV KOMPETENSIYASINI TPACK



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MODELI ASOSIDA RIVOJLANTIRISH METODIKASI. Педагогика и психология в современном мире: теоретические и практические исследования, 4(9), 128-130.

14. Allamuratov, G. (2025). A System of Exercises Aimed at Developing Linguocognitive Competence in Future Psychologists. *MAKTABGACHA VA MAKTAB TA'LIMI JURNALI*, 3(4).

15. Allamuratov, G. (2025). A System of Exercises Aimed at Developing Linguocognitive Competence in Future Psychologists. *MAKTABGACHA VA MAKTAB TA'LIMI JURNALI*, 3(4).