EUROPEAN CONFERENCE

Conference Proceedings

IX International Science Conference
«The use of modern technologies in higher education institutions»

October 27-29, 2025
Rotterdam, Netherlands

THE USE OF MODERN TECHNOLOGIES IN HIGHER EDUCATION INSTITUTIONS

Abstracts of IX International Scientific and Practical Conference

Rotterdam, Netherlands
(October 27-29, 2025)

UDC 01.1

ISBN – 979-8-90070-297-1

The IX International scientific and practical conference «The use of modern technologies in higher education institutions», October 27-29, 2025, Rotterdam, Netherlands, 171 p.

The recommended citation for this publication is: Yurkevych Y.O., Valentiuk N.O., Skliaruk B.L. Effectiveness of various systems of main tillage under winter barley in the of the Ukraine Steppe conditions. Abstracts of VIII International Scientific and Practical Conference. Rotterdam, Netherlands. Pp. 8-10.

URL: https://eu-conf.com/en/events/the-use-of-modern-technologies-in-higher-education-institutions/

Перспективним напрямом подальших наукових розвідок є аналіз досвіду взаємодії громадськості та силових структур у країнах НАТО, а також вивчення ролі цифрових платформ у забезпеченні прозорості та ефективності комунікацій у сфері безпеки.

Список літератури:

1. Baillie, L., Dion, E., Leroux-Martin, P., Platz, I., Taylor, W. B., & Trenkov-Wermuth, C. (2024). The Future of the Security Sector in Ukraine. United States Institute of Peace. ISBN 978-1-60127-945-3. United States Institute of Peace

2. Kovalova, O. V., Korniienko, M. V., & Pavliutin, Y. V. (2020). The Role of Public Organizations in Ensuring National Security of Ukraine. *Cuestiones Políticas*, 37(65), 136–155. https://produccioncientificaluz.org/index.php/cuestiones/article/view/33300

3. Krivosheev D., Marzouk M., Hvidemose D. Public Security Needs and Perceptions in Ukraine EU's SSR Aid Programming for Ukraine. 2009. 42 p. file:///Users/tettet/Downloads/Public_Security_Needs_and_Perceptions_in_Ukraine.pdf

4. Schmüser, J., Wöhler, N., Sri Ramulu, H., Stransky, C., Wermke, D., & Acar, Y. (2022). "Please help share!": Security and Privacy Advice on Twitter during the 2022 Russian Invasion of Ukraine. *arXiv*. https://arxiv.org/abs/2208.11581

5. Stepanenko, V., & Stewart, S. (2025). 'Who, if not us?': civic activism and defence in wartime Ukraine. *Innovation: The European Journal of Social Science Research*, 38(1), 152–168. https://doi.org/10.1080/13511610.2025.2467214

6. The invisible army of Ukrainian volunteers: 'Without them, the country's defense and society would have suffered enormous losses', *Le Monde,* Paris, 2025. https://www.lemonde.fr/en/international/article/2025/04/06/the-invisible-army-of-ukrainian-volunteers-without-them-the-country-s-defense-and-society-would-have-suffered-enormous-losses_6739885_4.html?utm_source=chatgpt.com

7. Ye, J., Jindal, N., Pierri, F., & Luceri, L. (2023). Online Networks of Support in Distressed Environments: Solidarity and Mobilization during the Russian Invasion of Ukraine. *arXiv*. https://arxiv.org/abs/2304.04327

STRUCTURING COGNITIVE GROWTH: BLOOM'S TAXONOMY AS A FRAMEWORK FOR PRE-SERVICE ESL TEACHER PREPARATION

Gladushyna Raisa
PhD in Psychology, Associate Professor, Associate Professor of the English Language and Communication Department, Borys Grinchenko Kyiv Metropolitan University, Ukraine

Introduction. In recent decades, the importance of developing cognitive sensitivity among pre-service teachers has been greatly highlighted. Within the context of English as a Foreign Language (EFL) education, this focus is especially critical, as future teachers must navigate complex linguistic, cultural, and cognitive dimensions of classroom practice. To effectively prepare pre-service EFL teachers for the multifaceted nature of language teaching, it is essential to provide a conceptual framework that promotes reflective thinking, metacognitive awareness, and higher-order reasoning. Bloom's Taxonomy, originally proposed by Benjamin Bloom and colleagues [1] and later revised by Anderson and Krathwohl [2], offers such a framework for structuring cognitive development and instructional design.

The taxonomy's hierarchical model, from remembering and understanding to analyzing, evaluating, and creating, proposes a systematic way to categorize learning objectives and design teaching activities that move from basic to advanced thinking skills. In teacher education, Bloom's framework not only guides curriculum planning but also helps develop critical thinking, lesson versatility, and reflective practice. These are essential skills for effective EFL teaching. Using these cognitive levels, pre-service teachers can promote communicative competence and learner independence in diverse classrooms.

Theoretically, employing Bloom's Taxonomy in EFL teacher preparation aligns with constructivist and cognitive learning paradigms, which view knowledge as actively constructed through experience, reflection, and interaction. Practically, it provides a scaffold for designing instructional strategies, assessment tools, and reflective tasks that encourage pre-service teachers to engage with complex linguistic and pedagogical concepts. Integrating Bloom's framework into EFL teacher education enhances the cognitive accuracy of teacher preparation programs. This framework authorizes future educators to design lessons that sustain higher-order thinking in their language learners.

This paper explores the theoretical underpinnings and practical applications of Bloom's Taxonomy as a framework for structuring cognitive growth in pre-service EFL teacher education. Specifically, it examines how taxonomy can inform curriculum design, foster reflective and analytical thinking, and support the development of pedagogical expertise. The study aims to contribute to a deeper understanding of how structured cognitive frameworks can bridge the gap between theory and practice in language teacher education.

Literature review. Bloom's Taxonomy has served as one of the most dominant frameworks for categorizing educational objectives and promoting structured cognitive development. The taxonomy defines six hierarchical levels of cognition, namely: remembering, understanding, applying, analyzing, evaluating, and creating. Each level represents a qualitatively different mode of thinking. The theoretical foundation of Bloom's model draws upon constructivist and cognitive learning theories, which together emphasize the progression from lower- to higher-order cognitive processes through guided instruction and reflection.

In teacher education, Bloom's taxonomy functions as more than a classification system; it serves as a metacognitive framework that encourages future educators to plan, monitor, and evaluate their instructional decisions. As Krathwohl [3] notes, the taxonomy's enduring relevance lies in its adaptability across educational contexts, enabling teachers to design learning experiences that gradually build cognitive complexity. In the context of language education, this progression lines up closely with communicative and task-based learning paradigms, where learners move from surface-level linguistic knowledge toward meaningful language use and creative expression.

Research in teacher education always underlines the importance of developing cognitive awareness and reflective thinking among pre-service teachers [4]. Bloom's Taxonomy has been widely adopted in teacher preparation programs to structure learning outcomes, guide lesson planning, and support reflective practice [5]. Studies show that exposure to Bloom's framework empowers pre-service teachers to articulate clearer instructional objectives, differentiate learning activities, and organize assessment strategies with intended cognitive goals [6].

Moreover, Bloom's model serves as a cognitive scaffold for promoting metacognition, the ability to think about one's own thinking. In pre-service teacher programs, metacognitive training, including Bloom's levels, encourages teachers to reflect critically on their pedagogical choices and classroom practices. Empirical studies [2] and more recent applications in teacher training [7] demonstrate that integrating Bloom's taxonomy into course design enhances pre-service teachers' ability to move from procedural understanding to analytical and creative pedagogical reasoning.

In the domain of EFL education, Bloom's Taxonomy has been applied to the design of language learning tasks, assessment rubrics, and reflective teaching practices [8]. The process of Language learning involves multiple cognitive layers, from vocabulary recall to cultural knowledge for effective communication. According to Ellis [9], Bloom's hierarchical structure thus parallels the progression of foreign language acquisition (FLA), where learners transition from receptive to productive and strategic language use. For pre-service EFL teachers, familiarity with Bloom's taxonomy provides both a conceptual and practical tool for designing cognitively engaging lessons. Furthermore, reflective tasks based on Bloom's levels have been found to deepen pre-service teachers' pedagogical reasoning and self-efficacy in lesson design [10].

Despite its established theoretical value, the practical integration of Bloom's Taxonomy into EFL teacher education requires intentional pedagogical design.

Richards [11] argues that effective teacher preparation depends on bridging the gap between theoretical frameworks and classroom realities. Integrating Bloom's taxonomy across coursework, teaching practicums, and reflective portfolios allows pre-service teachers to apply cognitive principles to authentic teaching scenarios. This structured approach supports the transition from knowledge acquisition to pedagogical competence and innovation. Shulman [12] identified this process as the development of pedagogical content knowledge (PCK).

When pre-service EFL teachers use Bloom's taxonomy to analyze teaching materials, design communicative activities, and evaluate learner outcomes, they engage in a recursive process of cognitive and pedagogical growth. Thus, Bloom's framework not only emphasizes their instructional planning but also fosters the higher-order thinking skills necessary for adaptive, reflective, and effective language teaching.

The literature shows that Bloom's Taxonomy provides a strong theoretical foundation for structuring cognitive development and a practical framework for enhancing instructional design and reflective practice in teacher education. In the specific context of pre-service EFL teacher preparation, it supports the cultivation of metacognition, critical reflection, and pedagogical creativity, essential competences for navigating the complexities of language teaching in diverse educational contexts. However, while prior research has established the taxonomy's general benefits, more focused inquiry is needed into its systematic application in EFL teacher training programs.

Results and Discussion. Surveys, lesson plans, reflections, and interviews revealed that integrating Bloom's Taxonomy into pre-service EFL teacher preparation significantly increased participants' understanding of cognitive learning processes and improved their ability to design cognitively challenging instruction. During the Practical English and Translation Course, participants demonstrated measurable growth in conceptual knowledge of Bloom's hierarchy and its theoretical basis, lesson design and microteaching, and reflective and metacognitive awareness in evaluating teaching practice.

Analysis of lesson plans and microteaching performances revealed a clear progression from lower-order to higher-order objectives. Early lesson drafts predominantly focused on ***remembering*** and ***understanding*** outcomes (e.g., vocabulary recall, grammar identification). By the later stages, lesson objectives included ***analyzing***, ***evaluating***, and ***creating*** tasks, including peer text analysis, communicative debates, and creative writing projects.

The study's results declare that Bloom's Taxonomy is an effective framework for structuring cognitive and pedagogical growth in pre-service ESL teacher education. Participants not only deepened their theoretical understanding of mental processes but also demonstrated noticeable improvements in lesson design, classroom interaction, and reflective capacity.

These findings contribute to ongoing scholarship in teacher cognition, illustrating how cognitive theory can be applied through structured practice. They also suggest that systematic incorporation of Bloom's framework in teacher education programs can

strengthen the intellectual and pedagogical foundations of future EFL educators, equipping them to cultivate higher-order thinking in their own learners.

This study aimed to examine how Bloom's Taxonomy can serve as a structured framework for promoting cognitive and pedagogical growth among pre-service EFL teachers. By integrating theoretical study with practice through lesson planning, microteaching, and reflection, the research demonstrated that Bloom's hierarchical model is not merely a tool for curriculum design but a powerful scaffold for developing teacher cognition, reflective practice, and instructional creativity.

Qualitative analyses revealed that participants progressed from a surface-level understanding of Bloom's categories to a deeper, integrated awareness of how cognitive processes support effective language instruction. This transformation was evident in participants' ability to design lessons that targeted higher-order thinking, their reflective engagement with pedagogical decisions, and their growing capacity to view teaching as a cognitive, metacognitive, and creative act.

Theoretically, the findings reinforce Bloom's Taxonomy as a cognitive developmental model that extends beyond learner outcomes to encompass teacher cognition, featuring its function as a mental model that shapes how teachers conceptualize knowledge, learning, and instruction. Moreover, the study advocates the idea that pre-service teachers build cognitive complexity through guided reflection, collaboration, and application. Bloom's framework thus serves as a theoretical bridge, linking cognitive psychology with professional teacher learning.

From a practical standpoint, the study accentuates the value of performing Bloom's Taxonomy within EFL teacher preparation programs. Teacher education curricula should systematically introduce Bloom's Taxonomy not only as a planning tool but as a reflective cognitive model. Linking Bloom's levels to course objectives, practicum activities, and assessment rubrics can promote coherence between theoretical learning and classroom practice. Structured reflection tasks help pre-service teachers personalize cognitive hierarchies and assess the depth of their instructional practices. Reflection guided by Bloom's categories encourages metacognitive growth and the development of pedagogical expertise. Using Bloom's Taxonomy as a shared framework for instructor feedback can formalize discussions of cognitive challenge, helping pre-service teachers identify whether classroom tasks promote higher-order thinking. Engagement with Bloom's framework supports the development of a reflective teacher identity grounded in intentional, cognitively informed practice, which is an essential attribute for effective and autonomous EFL educators.

Conclusions. This study maintains that Bloom's Taxonomy remains a vital and multifunctional concept for 21st-century teacher education. When applied in pre-service EFL contexts, it serves not only as an organizational tool for learning objectives but as a catalyst for cognitive transformation and pedagogical sophistication. By engaging with Bloom's hierarchical model, pre-service teachers learn to think critically about their students' learning and their own teaching, thereby embodying the reflective, analytical, and creative dispositions vital for effective language education. Thus, the integration of Bloom's Taxonomy into teacher education represents a significant step toward cultivating thinking teachers, professionals equipped to further higher-order