**RESEARCH ARTICLE**

# Topical Issues of Foreign Language Instruction in Non-Philological Higher Education Programs

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### Abstract

The rapid development of science and technology worldwide, along with humanity's experience of the age of electronic technologies, necessitates adaptation to the digital era. The widespread implementation of electronic devices in scientific research and in the production sectors of national economies has led to the expansion of international socio-economic, political, and cultural relations in these regions. As a result, the integration of electronic tools into the educational process in accordance with pedagogical and psychological approaches ensures the effectiveness of integrating foreign language instruction with professional disciplines for students of non-philological higher education institutions, in line with contemporary demands. Taking into account the field of study and specialization in the provision of subject-specific educational materials, and proposing appropriate learning strategies harmonized with electronic technologies, has become one of the pressing issues in preparing higher education students as highly qualified specialists in their professional fields.

### KEYWORDS

Electronic devices, integration, pedagogical-psychological approach, STEM, TBL, CLIL methods.

## INTRODUCTION

In global practice, the education systems of developed countries, based on the requirements for improving the IT sector, have proposed a number of methods and approaches for teaching foreign languages to students of non-philological specialties in higher education institutions. These approaches have been successfully implemented in practice. In particular, higher education institutions in the United States, Canada, the United Kingdom, Russia, Iran, Japan, and Germany pay special attention to developing the professional English vocabulary of future specialists in IT fields through programs such as Science, Technology, Engineering, and Mathematics (STEM), Content and Language Integrated Learning (CLIL), and English as a Medium of Instruction (EMI). The main objective of these programs is to enhance students'

professional lexical competence through authentic field-related texts and exercises based on these texts, as well as to develop language skills through optimal variants of creativity-based tasks. In the training of future specialists in higher education institutions of the country, significant attention has been given to improving the methodology of teaching professional English based on international experience. A regulatory framework has been established and several decisions have been adopted in this regard. In his speeches on increasing the effectiveness of the system for training and retraining specialists in non-philological fields and ensuring that state institutions and sectoral organizations are provided with qualified IT specialists, the President of the Republic of Uzbekistan, Shavkat Mirziyoyev, emphasized: "One of the

most important factors in the fundamental improvement of the economy is information and digital technologies. Therefore, our future is directly connected with ICT and the specialists who rely on them".

The consistent reforms taking place in the education sector of our republic include the modernization of the national personnel training system for information technologies and computer engineering fields, as well as the improvement of mechanisms for supplying the national labor market with qualified IT specialists in accordance with modern requirements. In order to implement these state initiatives and proposals, 19 educational programs aimed at teaching young people interested in the IT field have been developed by project coordinators in our country. Qualified specialists are being trained in the following areas:

– programming;

– computer graphics;

– fundamentals of robotics;

– mobile and web applications.

Among the projects aimed at training IT specialists, the "One Million Coders" project occupies an important place. This large-scale initiative was launched in Uzbekistan in November 2019. The project is implemented by the Ministry for the Development of Information Technologies and Communications of the Republic of Uzbekistan with the support of the Dubai Future Foundation of the United Arab Emirates, in cooperation with the IT Academy, the Inha University in Tashkent under the IT Park, and the specialized school named after Muhammad al-Khwarizmi for advanced studies in information technologies. For distance learning in programming, the [www.uzbekcoders.uz] (http://www.uzbekcoders.uz) portal was launched, and educational programs have been introduced in four IT areas: Front-End, Full-Stack, Android programming, and Data Analysis.

Why is English necessary for an IT specialist? Today, knowledge of foreign languages, especially English, among students studying IT-related fields in higher education institutions of the republic is considered one of the key factors ensuring success in their future professional careers. English is widely regarded as the primary language of programming and opens opportunities for programmers to utilize network capabilities and create various digital products such as bots and applications. Most programming resources available on the Internet online courses, textbooks, documentation, and forums—are in English. Therefore, the inability to understand English prevents programmers from accessing valuable information.

In the era of globalization, international programming projects involve collaboration among teams from different countries, where English serves as the primary means of communication and plays a crucial role in ensuring the success of international projects. Teaching a foreign language through interdisciplinary integration not only enhances students' professional vocabulary but also prepares them for professional communication by enabling them to:

– perform operational functions in computer systems efficiently;

– read, understand, and analyze professional audio-visual learning materials;

– comprehend and interpret programming instructions written in English;

– express positive or critical opinions related to their professional field;

– communicate directly with foreign specialists;

– improve their literacy in writing formal and informal correspondence with foreign companies;

– continue their postgraduate or doctoral studies in foreign universities.

The integration of professional competence with language proficiency has led to the emergence of a field in methodology known as professional linguodidactics. The theoretical foundations of professional linguodidactics have been extensively discussed by scholars such as A. K. Krupchenko, N. V. Likhacheva, and L. V. Khvedchenya, who also developed its fundamental principles. According to Krupchenko, professional linguodidactics emerged as a result of objective social demand and developed through the exchange of knowledge and experience among representatives of different professional fields.

The author emphasizes that language materials presented from the perspective of linguistic competence in the development of students' written and oral communication should include lexical, grammatical, semantic, and phonetic information. These elements are recognized as essential

factors in the creation of effective communication in a foreign language. Professional linguodidactics is considered an integrated discipline that includes the mechanisms of language acquisition and the methods of managing these processes. Linguodidactics represents the theory of language teaching, combining linguistics and methodology, and includes the structural components of the foreign language teaching process as well as the application of interactive approaches.

The development of professional competencies among students studying IT-related fields should be organized on the basis of interdisciplinary integration. The acquisition of lexical units should be implemented through exercises and tasks designed according to receptive and productive learning principles. This approach is justified by the fact that the professional competence of future specialists requires not only professional knowledge, skills, and personal qualities, but also proficiency in foreign languages and the ability to effectively apply computer technologies in their professional activities.

According to V. M. Pastoyev, the main characteristic of professionally oriented teaching methodology in technical universities lies in the specific nature of the industry and the characteristics of future professional specialization. Students studying technical disciplines in higher education institutions—such as Computer Engineering, ICT Services, Methods of Teaching Informatics, and Artificial Intelligence—are directly involved in activities related to systematizing information, ensuring cybersecurity, providing IT services, and developing or coding web and mobile applications. These processes are closely connected with the use of English, since the primary language of most software and operating systems is English.

Programming commands, instructions, and user manuals for electronic devices are predominantly written in English. Consequently, the lack of sufficient language proficiency among students studying these fields creates certain difficulties in preparing them for professional communication. To overcome these challenges, teaching foreign languages through authentic professional texts and tasks based on such texts is considered an effective solution. In this regard, the CLIL (Content and Language Integrated Learning) approach serves as one of the most effective tools for foreign language teaching. This modern teaching methodology focuses on communicative competence and emphasizes the practical importance of the target language. The primary objective of the program is to strengthen language learning by integrating language with subject content and by promoting the

development of skills that enable young people to actively participate in social and economic life.

CLIL is one of the most interesting and widely used approaches in foreign language teaching. The term CLIL was introduced in 1994 by David Marsh. Each year, CLIL is becoming increasingly popular in educational institutions around the world. Its advantages compared to other programs demonstrate the growing demand for such an approach in modern educational environments. In non-philological higher education institutions, CLIL is widely used in interdisciplinary language teaching due to its numerous advantages:

– it provides students with greater opportunities for effective communication;

– it broadens intercultural knowledge;

– it introduces students to English equivalents of professional terminology;

– it develops critical thinking and creativity;

– it increases students' motivation and self-confidence;

– it improves language proficiency and natural speaking skills;

– it does not require additional classroom hours.

In our opinion, when teaching through the CLIL approach, it is important to create a safe psychological environment in the classroom. In selecting teaching materials, the instructor should consider both the availability of resources and their relevance to the students' professional specialization.

## CONCLUSION

In conclusion, regardless of the methods and tools used, the optimal strategies for language teaching should ensure the integration of language learning with professional disciplines.

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