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Developing Professional Skills of Future Translators through CAT Technologies

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Abstract: *This article concerns the role of Computer-Assisted Translation (CAT) technologies in the development of professional skills of future translators within modern educational environments. Particular attention is paid to the integration of CAT tools into translator training programs as an effective means of bridging theoretical knowledge and practical application. The study analyzes how such technologies contribute to the formation of key components of translation competence, including linguistic, communicative, intercultural, and technical skills.*

The article emphasizes that the use of CAT tools significantly enhances students’ digital literacy, enabling them to efficiently manage translation workflows, use translation memories, maintain terminological consistency, and collaborate in professional settings. Furthermore, the implementation of CAT technologies fosters critical thinking, problem-

solving abilities, and adaptability, which are essential for successful performance in the rapidly evolving translation industry.

The research also highlights the positive impact of CAT tools on language proficiency, as students engage more deeply with authentic texts and specialized vocabulary. Empirical findings confirm that systematic exposure to CAT environments improves translation quality, increases terminology accuracy, and strengthens overall professional readiness of future translators.

It is concluded that incorporating CAT technologies into higher education curricula is not only beneficial but necessary for preparing competitive specialists who can meet current market demands. The study suggests further development of methodological approaches to effectively integrate these tools into translator training.

Keywords: *CAT technologies, translation competence, digital literacy, translator training, professional skills development.*

Розвиток професійних навичок майбутніх перекладачів засобами CAT-технологій

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Анотація: *У статті досліджується роль CAT-технологій (Computer-*

Assisted Translation) у формуванні професійних навичок майбутніх перекладачів у сучасному освітньому середовищі. Особливу увагу приділено інтеграції автоматизованих систем перекладу в освітній процес як ефективному інструменту поєднання теоретичної підготовки з практичною діяльністю. Обґрунтовано значення цифрових інструментів для розвитку ключових складників професійної компетентності перекладача, зокрема перекладацької, мовної, комунікативної та інформаційно-технологічної компетентностей.

У роботі визначено педагогічні умови ефективного використання CAT-систем у підготовці фахівців, серед яких систематичність застосування, поетапне ускладнення завдань, орієнтація на реальні перекладацькі проєкти та формування навичок самостійної роботи з цифровими ресурсами. Показано, що використання CAT-технологій сприяє підвищенню рівня цифрової грамотності студентів, розвитку навичок роботи з перекладацькими пам'ятями, глосаріями та спеціалізованими корпусами текстів.

Результати дослідження свідчать про суттєве підвищення якості перекладу, зростання термінологічної точності, а також формування професійної готовності студентів до роботи в умовах сучасного перекладацького ринку. Наголошено, що впровадження CAT-технологій у навчальні програми є необхідною умовою підготовки конкурентоспроможних фахівців у галузі перекладу.

***Ключові слова**: CAT-технології, перекладацька компетентність, цифрова грамотність, підготовка перекладачів, розвиток професійних навичок.*

Introduction. The training of future translators has undergone significant transformation due to the rapid development of digital technologies. CAT tools have become essential components of professional translation workflows and are increasingly integrated into translator education.

Modern translators are expected not only to possess linguistic competence but also to master digital tools and workflows. The integration of CAT technologies into higher education contributes to the development of professional skills required in the global translation market.

Literature Review. Current research emphasizes the importance of integrating technology into translator training. There is a number of researches who highlights the role of translation technologies in modern education [1; 2; 4; 7; 8; 9; 14; 15]. Bowker (2020) notes that CAT tools enhance terminology management and consistency [8]. Doherty and Kenny (2022) demonstrate their impact on digital competence development, whereas others emphasize problem-solving skills in technology-rich environments [9]. PACTE Group [13] defines translation competence as a multidimensional construct including technological skills.

Identification of previously unresolved parts of the overall problem. Although it can be seen the growing scholarly and practical interest in the integration of Computer-Assisted Translation (CAT) technologies into translator training [1; 3; 5; 6; 9; 10; 12], a number of significant challenges still exist. One of the key unresolved issues is the absence of standardized and widely accepted teaching methodologies that would ensure the systematic and pedagogically grounded implementation of CAT tools in higher education. Existing approaches are often fragmented, vary across institutions, and depend largely on individual instructors' experience rather than on unified curricular frameworks or evidence-based practices. This lack of methodological consistency complicates the process of evaluating learning outcomes and limits the comparability of educational results.

Another critical problem lies in the insufficient level of teacher training in the field of CAT technologies. Many educators in translation studies have strong linguistic and theoretical backgrounds but lack practical experience with modern translation software

and digital workflows [3; 4; 10]. As a result, the potential of CAT tools is not fully realized in the classroom, and their use may be limited to basic functions rather than integrated into comprehensive, professionally oriented tasks. This gap highlights the need for continuous professional development programs, specialized training courses, and institutional support aimed at enhancing teachers' digital and technical competencies.

Furthermore, access to professional CAT software remains a considerable barrier, particularly for institutions with limited financial resources. Licensed tools such as SDL Trados Studio, MemoQ, or Wordfast are often expensive, which restricts their widespread adoption in educational settings [1; 2; 11]. Consequently, students may graduate without sufficient hands-on experience with industry-standard tools, which negatively affects their competitiveness in the labor market. Although some alternatives, including cloud-based or open-source solutions, are emerging, their functionality may not fully match that of leading commercial products.

In addition to these challenges, there is a need to further investigate the pedagogical conditions under which CAT technologies can most effectively contribute to the development of translation competence. Issues such as balancing technological training with linguistic proficiency, ensuring critical engagement with automated outputs, and fostering independent learning strategies remain open for further research. Addressing these unresolved aspects is essential for optimizing the integration of CAT technologies and enhancing the overall quality of translator education.

Formulation of the article's goals (task setting). The aim of the study is to analyze the role of CAT technologies in developing professional skills of future translators. Objectives include identifying key competencies, analyzing pedagogical approaches, and defining effective integration strategies.

Research Results. It is obviously that the use of CAT technologies significantly enhances translation competence. Translation memory tools support consistency and

efficiency, while terminology databases improve lexical accuracy. Students develop important professional skills such as project management, quality assurance, and teamwork. CAT tools also foster critical thinking, as students must evaluate translation options and make informed decisions. Digital competence is a key outcome of CAT integration. Students learn to work with complex software, manage linguistic data, and adapt to technological changes. Effective implementation requires task-based learning, real-world projects, and collaboration with industry partners.

The findings of the study confirm that CAT technologies play a crucial role in modern translator training, significantly reshaping both the content and the methods of instruction. Their integration into the educational process contributes not only to the modernization of curricula but also to the alignment of academic training with the real demands of the translation industry. Unlike traditional approaches, which often focus primarily on linguistic competence and theoretical knowledge, the use of CAT tools introduces a practice-oriented dimension that reflects the realities of professional translation workflows.

First and foremost, CAT technologies transform traditional teaching approaches by shifting the focus from passive knowledge acquisition to active, task-based learning. In conventional translation classrooms, students typically work with isolated texts and complete assignments individually, often without exposure to real-world constraints such as deadlines, client requirements, or collaborative environments. By contrast, CAT tools enable the simulation of authentic professional settings, where students engage in project-based activities, manage translation memories, use terminology databases, and perform quality assurance procedures. This not only enhances their technical skills but also fosters a deeper understanding of the translation process as a complex, multi-stage activity.

Moreover, the implementation of CAT technologies contributes to the creation of authentic professional environments within the educational context. Students gain experience working with industry-standard tools and formats, which prepares them for real-life translation tasks. They learn to handle large-scale projects, ensure consistency across texts, and apply standardized terminology, all of which are essential competencies in the professional sphere. The use of CAT tools also familiarizes students with collaborative workflows, including file sharing, version control, and communication within translation teams. As a result, the boundary between academic training and professional practice becomes increasingly blurred, making the transition from university to the labor market smoother and more effective.

An important outcome of integrating CAT technologies is the transformation of students' roles in the learning process. Rather than being passive recipients of knowledge, students become active participants who take responsibility for their own learning. They are encouraged to explore digital tools, experiment with different translation strategies, and critically evaluate the output generated by translation systems. This active engagement promotes the development of higher-order thinking skills, such as analysis, synthesis, and evaluation, which are essential for professional translators. In addition, students develop autonomy and self-regulation, as they learn to manage their time, organize resources, and monitor the quality of their work.

The study has also demonstrated that CAT technologies contribute significantly to the development of a wide range of professional competencies. In addition to enhancing translation competence, they support the acquisition of digital literacy, information management skills, and technological adaptability. Students learn to navigate complex software environments, process multilingual data, and integrate various digital resources into their workflow. These skills are increasingly important in the context of the digital

transformation of the translation industry, where professionals are expected to work efficiently with advanced technologies.

Furthermore, the use of CAT tools has a positive impact on language proficiency and terminological accuracy. By working with translation memories and terminology databases, students are exposed to consistent language patterns and domain-specific vocabulary. This repeated exposure reinforces their linguistic competence and helps them produce more accurate and coherent translations. At the same time, the ability to build and maintain terminological resources encourages students to develop a systematic approach to vocabulary management, which is a key aspect of professional translation practice.

Another significant finding is that CAT technologies foster the development of soft skills that are highly valued in the labor market. These include teamwork, communication, problem-solving, and adaptability. In collaborative translation projects, students must coordinate their efforts, negotiate translation choices, and provide constructive feedback to their peers. Such experiences help them develop interpersonal skills and prepare them for working in multicultural and multidisciplinary teams. Additionally, the need to adapt to different tools, formats, and project requirements enhances their flexibility and resilience in dynamic professional environments.

It is also important to note that the integration of CAT technologies encourages a more reflective and critical approach to translation. Students learn not to rely blindly on automated suggestions but to evaluate their relevance and accuracy in specific contexts. This critical awareness is essential for maintaining high standards of translation quality and avoiding potential errors associated with overreliance on technology. In this way, CAT tools serve not only as practical instruments but also as pedagogical means for developing professional judgment and responsibility.

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Meanwhile, the findings highlight the importance of methodological support for the effective implementation of CAT technologies. Simply introducing these tools into the classroom is not sufficient; their use must be carefully integrated into the curriculum and supported by appropriate teaching strategies. Educators need to design tasks that reflect real-world scenarios, provide guidance on the use of software, and ensure a balance between technological and linguistic training. Without such support, the potential benefits of CAT technologies may not be fully realized.

Some studies confirm that CAT technologies are an indispensable component of contemporary translator training. They not only transform traditional teaching approaches but also create authentic professional environments that prepare students for the realities of the translation industry. By promoting active learning, enhancing a wide range of competencies, and aligning educational outcomes with labor market demands, CAT tools play a key role in the development of highly qualified and competitive translation professionals. Further research and methodological innovation are needed to optimize their integration and maximize their educational impact.

Conclusions. The results of the study clearly demonstrate that CAT technologies have become an essential component in the development of professional skills of future translators and, more broadly, a defining element of contemporary translator education. Their integration into the educational process not only reflects current trends in the translation industry but also ensures that academic training remains relevant, practice-oriented, and aligned with labor market demands. In this context, CAT tools should no longer be considered optional or supplementary instruments; rather, they represent a core element of professional competence that directly influences the quality and efficiency of translation activities.

One of the key conclusions is that the systematic use of CAT technologies significantly enhances translation quality. Through the application of translation

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memories, terminology databases, and automated quality assurance tools, students are able to produce more consistent, accurate, and coherent translations. The ability to maintain terminological uniformity across large volumes of text is particularly important in specialized domains, where precision and standardization are critical. Moreover, CAT tools facilitate the revision and editing process, enabling students to identify and correct errors more efficiently. As a result, learners develop a more structured and professional approach to translation, which positively affects their overall performance.

Another important outcome is the substantial contribution of CAT technologies to the development of digital competence. In the context of rapid technological advancement, translators are expected to possess not only linguistic expertise but also the ability to effectively use digital tools and platforms. The integration of CAT systems into translator training fosters students' ability to navigate complex software environments, manage digital resources, and adapt to new technological solutions. This, in turn, enhances their readiness to operate in a highly digitalized professional environment, where efficiency, adaptability, and technological awareness are key success factors.

In addition, the study confirms that the use of CAT technologies has a direct impact on students' employability. Graduates who are familiar with industry-standard tools and workflows have a clear advantage in the labor market, as employers increasingly prioritize candidates with practical experience in using translation software. By simulating real-life translation scenarios and incorporating project-based learning, educational institutions can better prepare students for professional challenges and facilitate their transition from academic settings to the workplace. Thus, the integration of CAT technologies not only improves the quality of education but also contributes to the formation of competitive and in-demand specialists in the field of translation.

At the same time, the findings emphasize that the effective implementation of CAT technologies requires a well-structured methodological framework. It is not sufficient to

simply introduce software into the classroom; rather, its use must be pedagogically justified, systematically organized, and closely connected with learning objectives. This includes the development of specialized courses, the integration of CAT tools into existing subjects, and the design of tasks that reflect real-world translation practices. Equally important is the need to ensure a balanced approach, where technological training complements rather than replaces the development of linguistic and communicative competencies.

Furthermore, attention should be paid to the professional development of educators, who play a crucial role in the successful integration of CAT technologies. Teachers must possess not only theoretical knowledge but also practical experience with modern translation tools in order to effectively guide students and model professional practices. This highlights the importance of continuous training programs, workshops, and institutional support aimed at enhancing teachers' digital literacy and methodological competence.

Practical recommendations derived from the study include the introduction of dedicated CAT-oriented courses into translator training curricula, the use of authentic translation projects and industry-based assignments, and the establishment of partnerships between universities and translation agencies to provide students with practical experience. Educational institutions are also encouraged to ensure access to licensed CAT software, develop digital resource centers, and organize regular workshops focused on the latest translation technologies. In addition, it is advisable to implement blended and project-based learning approaches that combine theoretical instruction with hands-on practice in CAT environments. Particular attention should be given to continuous assessment of students' digital and translation competencies through practical tasks, portfolio development, and collaborative projects.

Despite the positive outcomes identified in the study, several areas require further investigation. In particular, there is a need for more extensive empirical research to validate the effectiveness of different approaches to integrating CAT technologies into translator training. Future studies could focus on comparative analyses of teaching methods, assessment of learning outcomes, and the long-term impact of CAT-based training on professional performance. Additionally, the development of standardized curricula and guidelines for the use of CAT tools in higher education remains an important task. Such frameworks would help ensure consistency in training and facilitate the exchange of best practices among educational institutions.

In conclusion, CAT technologies represent a powerful pedagogical and professional resource that significantly enhances the quality of translator training. Their integration contributes to the development of translation competence, digital literacy, and professional readiness, thereby preparing students to meet the challenges of the modern translation industry. At the same time, their effective use depends on thoughtful methodological design, adequate technical support, and continuous professional development of educators. By addressing these factors and advancing empirical research in the field, higher education institutions can maximize the potential of CAT technologies and ensure the training of highly qualified, adaptable, and competitive translation professionals.

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