

**THEORY AND METHODS OF TEACHING.
ТЕОРІЯ І МЕТОДИКА НАВЧАННЯ**

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**ICT-BASED TRASLATION STRATEGIES
OF PROSPECTIVE SCIENTIFIC AND TECHNICAL TRANSLATORS
ІКТ-СТРАТЕГІЇ МАЙБУТНІХ НАУКОВО-ТЕХНІЧНИХ ПЕРЕКЛАДАЧІВ**

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Abstract. Introduction. Responding to the translation service market requirements scientific and technical translators should be able to choose and properly use ICT-based translation strategies performing a translation workflow in the ICT environment. The **purpose** of this paper is to specify and systematize ICT-based translation strategies used by practicing translators in the real-life professional setting, which prospective scientific and technical translators should acquire in the process of training. The author applies theoretical (analysis of standards, academic papers and practicing translators' publications, synthesis of the obtained findings) and empirical (interviewing practicing translators) **methods**.

Discussion. The process of teaching scientific and technical translation correlates with the stages of practicing translators' professional activity comprising a set of steps aimed at solving particular translation tasks: preparatory, analytical, synthesizing, correction and assessment ones. Practicing translators turn to ICT at most steps of the translation process applying both general-purpose and translation ICT tools. They need to use a global ICT-based translation strategy – an algorithm of translator's actions aimed at creating the target text, which is determined by ICT tools and the degree of their involvement. The paper highlights the three groups of ICT-based translation strategies (MT-based, TM-based and mixed ones) among which the translator chooses the optimal one at the analytical stage for its application at further steps. This choice is determined by the objective and subjective factors described in the article.

Conclusions. In the process of prospective scientific and technical translators' training special attention should be paid to raising their awareness of possible ICT-based translation strategies and developing appropriate skills.

Key words: practicing translators, scientific and technical translation, translation strategy, ICT, TM, MT.

Introduction. The societal demand for highly-qualified scientific and technical translators capable of performing a translation workflow in the information and communication technology (ICT) environment urges translator trainers to focus on the formation of necessary competencies, in particular, ICT-based and strategic ones. One of the requirements of the contemporary translation service market is translators' proficiency in applying both general-purpose and translation ICT tools during the multi-stage translation process. Therefore, prospective translators should be aware of

their potential and application limitations, be able to make decisions on the appropriateness of using a certain ICT tool for translating a particular type of text or performing a translation task at a particular stage of the translation process, as well as develop an appropriate translation algorithm. In this context, ICT competence interweaves with strategic one. The former includes "all the knowledge and skills used to implement present and future translation technologies within the translation process" [5, p. 9]. The latter comprises translators' ability to use an appropriate ICT-based translation strategy

when working in the ICT environment. In this light, the process of scientific and technical translators' training should involve exposing ICT-based translation strategies to students and developing appropriate sub-skills and skills.

Analysis of recent researches and publications. A review of academic papers reveals researchers' interest in exploring a translation workflow, in particular that implemented in the ICT environment, and the way it can be reproduced in the process of prospective translators' training.

A. M. Alenezi has described the sequence and content of stages within the task-based approach to teaching translation: pre-task stage, task stage, reporting, analysis, revision, reflection [1, p. 190–191]. O. A. Mykhailenko has elaborated a four-stage methodology of business text translation teaching: the orientation and analytical stage, the stage of planning translation activities and forecasting translation outcomes, the operational stage (translation proper), the stage of assessment and evaluation: editing the target text and its pragmatic adaptation to the conditions of the host culture [12, p. 29–31].

The peculiarities of applying ICT tools both in professional and academic setting have been studied by a number of scholars. S. Amelina and R. Tarasenko have determined the stages of prospective translators' informational competence formation – constructive, technological and integrative – and specified their goals “detailed by a complex of information qualification and scientific achievements: electronic terminology databases of a specialized field in several areas; translation memory bases for use in automated translation systems; the base of electronic links to terminological resources network; the base of electronic references to the corpus of parallel texts; certificates of traineeship in production structures for using automated translation systems or terminological management systems; certificates of knowledge of specialized software in translation from manufacturing companies, their dealers, certification centers” [2, p. 44]. L. N. Vieira, X. Zhang and G. Yu [17] have presented an exploratory investigation of students' instrumental software skills

development with the help of autonomous tasks when teaching computer-assisted translation (CAT). A. Pym [13] has highlighted translation skill-sets needed for MT. M. Yamada [18] has investigated the impact of Google neural machine translation on post-editing carried out by student translators. A. Rothwell and T Svoboda [15] have suggested that CAT tool teaching should be closely integrated with practical translation mastering. This viewpoint is further supported by a recent study conducted by X. Zhang and L. N. Vieira [20] whose findings of the international survey on CAT teaching practices indicate that “tutorials, where students are told how to operate a CAT tool,” prevail over learning-by-doing activities and that “CAT tool training should be linked more closely to practical translation sessions and could be more intellectually stimulating”.

In terms of using MT, A. L. Mishchenko [11] has justified source text pre-editing in accordance with a controlled language rule set as well as demonstrated how MT and TM can be integrated; R. Loock [9] has analyzed the quality of machine translation output and emphasized the human added value at the stage of target text post-editing; M. Mačura has revealed the drawbacks of CAT and MT functionality, which imposes some limitations on their use and, accordingly, should be taken into consideration by translator trainers: “1) psychological problems related to CAT/MT use; 2) visual issues in some applications; 3) problems with consistency and uniformity; 4) cross-referencing; 5) absence of immediate context; 6) focus on technical aspects rather than text; 7) blind reliance on TM and its correctness, problems with terminological datasets, inconsistencies, MT operation and integration into CAT” [10, p. 207].

The notion of translation strategy has been addressed by O. M. Romaniuk and R. A. Zapotichna [14] who have examined its theoretical background and revealed the correlation between global and local strategies; O. A. Mykhailenko [12] who has highlighted the issue of teaching Philology majors strategies in translating business texts from Ukrainian into English; F. Fernández and P. Zabalbeascoa [6] who have substantiated the idea of raising trainee translators' strategic awareness through

engaging them into identifying translation problems and justifying their solutions.

A number of scholars have suggested their visions of strategies which can be chosen for dealing with various types of texts with the help of different ICT tools. A. L. Mishchenko [11] has elaborated project management scenarios in the field of technical documentation publishing, which is implemented at the linguistic and technology levels. The author has characterized tools that can be used for the production of German-Ukrainian technical texts, highlighted their functionality and limitations, as well as the advantages of integrating methods, resources, scenarios and tools into a virtual system of professional interaction. S. Doherty [4] has shown the impact of CAT tools and MT on the process of translation through revealing their functionality and commenting on their advantages and drawbacks. M. Yamada has focuses on the post-editing phase of the translation workflow and developing trainee translators' ability "to shift their attention to the right problems (such as mistranslation)" to be "effective post-editors" [18].

Practicing translators provide their own contribution to the problem under discussion publishing their translation workflow experience in professional journals and conference proceedings. A. Zaretskaya [19] has shared the methods of optimizing the translation workflow when implementing MT and TM. P. Gordon [7] has detailed her own steps of translating a popular science article from an online publication. Based on their translation practice, I. Sikora and M. Walczyński [16] have demonstrated how CAT tools and modern Internet technologies can be incorporated into the translation education.

The analysis of the above mentioned sources shows that the ICT-based translation strategies, which prospective scientific and technical translators need to acquire, should be specified and systematized which constitutes the **purpose** of this paper. Achieving it presupposes examining the stages of teaching scientific and technical translation, the role of ICT tools in them, the notion of translation strategy, and subsequently identifying and characterizing those strategies which are based on applying of ICT tools.

Methods of research. Conducting the current research we have used both theoretical and empirical methods: analysis of international translators' standards, namely the European Master's in Translation (EMT) Competence Framework [5] to determine the contemporary requirements to prospective translators; analysis of academic papers in the field of translator training methodology to define the scope of applying ICT-based tools in translator training and the notion of translation strategy; examination of recent publications in translators' professional journals and interviewing practicing translators specialized in technical areas to determine ICT-based strategies applied in real-life professional activity; synthesis of findings obtained by both theoretical and empirical methods to elaborate the system of ICT-based translation strategies for developing in the process of training scientific and technical translators.

Results of the research.

Stages of teaching scientific and technical translation. According to the principle of simulation, the application of which in translator training context has been theoretically substantiated and experimentally verified by M. M. Kozyar et al [8], the educational process, in particular, the stages of teaching scientific and technical translation should be as close as possible to translators' real-life professional activity which evolves through the specific procedure comprising a set of stages. Thorough study of academic papers [1], [11], [12], [18] and practicing translators' publications [7], [16], [19], outcomes of practicing translators interviews as well as our own translation experience have allowed us to concretize the stages of implementing scientific and technical translation, which can serve the basis for elaborating the stages of corresponding teaching. Each stage consists of steps aimed at solving particular translation tasks.

During the preparatory stage prospective translators familiarize themselves with the translation brief, communicate with a translation outsourcer in order to clarify the translation brief terms and requirements, and refine basic translation knowledge and sub-skills. The purpose of the analytical stage is to ensure prospective translators' deep understanding of the source text, involve

them in its pre-translation analysis, teach them how to search for background and subject-matter information, select appropriate ICT tools, and determine a translation strategy. Studying text corpora, searching for terminology, negotiating terminology options with experts and peers, pre-editing the source text (if necessary), and creating the target text are the steps prospective translators are expected to take at the synthesizing stage. At the last stage focused on the target text correction and translation process / result

assessment, they edit the target text (post-edit the text translated by MT system), perform its formatting following the translation outsourcer's requirements, carry out peer / self-assessment and / or undergo teacher's assessment, and reflect on the process and result of the whole translation project. The above mentioned stages and steps are presented in the table below.

Table 1 Stages and steps of teaching scientific and technical translation

Stages	Steps
Preparatory stage	Examining the translation brief
	Interacting with the translation outsourcer
	Refining basic translation knowledge and sub-skills
Analytical stage	Processing the source text
	Carrying out pre-translation analysis
	Searching for background and subject-matter information
	Selecting appropriate ICT tools
	Determining a translation strategy
Synthesizing stage	Studying text corpora
	Searching for terminology items
	Negotiating terminology options with experts and peers
	Pre-editing the source text (if necessary)
	Creating the target text
Correction and assessment stage	Editing the target text / post-editing machine translation
	Formatting the target text
	Teacher's / self- / peer assessing
	Reflecting

Role of ICT tools in teaching scientific and technical translation. As evidenced by surveys, academic and professional journal publications and our own translation experience, today practicing translators turn to ICT at most steps of the translation process applying both general-purpose and translation ICT tools. The first group includes Word processor, Internet resources (electronic reference books, encyclopedias, companies' and professional communities' websites, etc.), and electronic communication tools (chat, forum, e-mail, social network, and videoconferencing system), *Google Docs*, *Google Forms*. The second one comprises electronic dictionaries, thesauruses, translation databases, corpus

technologies, MT and TM systems [3, p. 86]. Referring to the above mentioned principle of simulation these tools should be used in the process of teaching scientific and technical translation.

Practicing translators typically receive the translation brief via email and negotiate problematic issues with the translation outsourcer through email or other electronic communication tools mentioned above. In the academic setting these conditions are reproduced at the more advanced stage that is during translation practice when senior students carry out a translation project working in teams. During translation training when junior students are more directed and guided by a translator trainer the first two

steps of teaching scientific and technical translation can be taken in the classroom without involvement of ICT tools.

At the analytical stage students search for background and subject-matter information making use of the Internet resources (electronic reference books, encyclopedias, companies' and professional communities' websites, etc.) and electronic communication tools (chat, forum, social networks, e-mail).

At the beginning of the synthesizing stage students study electronic text corpora of the relevant genre (specification, instruction, patent, company website, technical advertisement, newsletter, research article, etc.) and, using corpus technologies, perform tasks aimed at analysing (in monolingual corpora) and comparing (in bilingual corpora) their genre characteristics. The step of terminology search involves the use of a wide range of ICT tools such as electronic dictionaries (e.g. *“ABYY Lingvo x6 English Professional Version”*), thesauruses (e.g. *Power Thesaurus*), translation databases (e.g. *Ludwig, Reverso Context*, etc), and corpus technologies (parallel / comparable text corpora and concordances). Students negotiate terminology options with experts and peers via electronic communication tools (chat, forum, e-mail, social network or videoconferencing system). The procedure of target text creation depends on the translation strategy chosen at the analytical stage, which is determined, first of all, by the ICT tools appropriate for applying in a particular translation situation. The most common tools are MT systems (e.g. *Google Translate*) and automated translation systems based on TM also called CAT (e.g. *Trados, SmartCAT*). The former allow for accelerating target text drafting, while the latter release a translator from repetitive monotonous operations facilitating translation of texts belonging to the same genre and / or field due to terminology database as well as previously translated parallel text database. The peculiarities of their application will be described below.

The target text may be edited in different environments depending on the chosen translation strategy: MT-based, TM-based or mixed. The first and third strategies may involve *Google Docs* allowing project

team members to edit the target text collaboratively. Word processor is necessary for formatting and finalizing the target text. Self- / peer and teacher's assessment presupposes the use of *Google Docs* allowing for target text sharing and making comments and / or *Google Forms* with the help of which self- / peer and teacher's assessment forms can be created, completed and processed. *Google Forms* are also helpful at the reflection step as they can enable translator trainers to create translation project reflection forms to be filled in by students.

To sum up, ICT tools provide access to linguistic material and information resources and facilitate their processing, accelerate the translation process, allow for translation project members' interaction, ensure the target text consistency and proper formatting, as well as help translator trainers and prospective translators to monitor and assess the translation project and reflect on its effectiveness.

The notion of translation strategy.

P. Gordon [7], who has shared her own translation workflow of a popular science article from an online publication, states that “translators have their own multistep process and that, even in the best of circumstances, they must make quite a few independent decisions”. It implies their ability to develop the optimal translation strategy in each translation situation, which should be formed in the process of translator training.

Most scholars, in particular O. M. Romaniuk and R. A. Zapotichna [14], F. Fernández and P. Zabalbeascoa [6], characterize translation strategy as a comprehensive set of cognitive operations, sequentially performed by a translator for solving the translation problem in order to achieve the maximum pragmatic effect. O. A. Mykhailenko defines it as “an algorithm of consciously chosen translator's actions (stages and work methods) aimed at solving global and local problems of text translation” [12, p. 29]. Highlighting the awareness factor, researchers emphasize translation strategy's cognitive nature while underlining its algorithmic feature. Like any purposeful activity translation strategy is based on tactics, which includes ways of achieving the goal or a translation path. O. A. Mykhailenko

considers strategy to be “goal – plan – process – result” sequence. “Goal” refers to the translator’s vision of the target text. “Plan” implies determination of conditions, stages and specific actions that should be implemented in the process of text translation. “Process” is the direct implementation of the intended action algorithm, solving local rendering problems. “Result” is associated with obtaining the target text that is communicatively and pragmatically faithful to the source text [12, p. 29].

The notion of “translation strategy” is holistic as it comprises linguistic, psychological, pragmatic, sociological and cultural aspects. The linguistic aspect involves the use of translation techniques and transformations (transliteration / transcription; substitution, addition, omission, transposition, modulation, concretization, generalization, etc.). The psychological factor correlates with the student-centered and activity-based approach viewing a student as an active subject of the translation process. The pragmatic component is associated with goal achievement. The sociological one implies social interaction of all the participants of the translation project (translation outsourcers, practicing translators / trainee translators, managers, editors, experts of a particular field, translator trainers), namely constant coordination of different points of view. The cultural aspect presupposes taking into account cross cultural differences, and a translator’s desire to bring the target text to the host culture as close as possible. We suggest adding an ICT factor, which is crucial for choosing a global translation ICT-strategy by a contemporary translator working in the ICT environment.

Translation strategies based on applying ICT tools. S. Doherty notes that TM and MT “integration into the translation process has resulted in considerable alterations to how translators have traditionally worked with text” [4, p. 954]. In recent research papers ([4], [7], [9], [10], [11], [19]) we can find different scenarios of a translation workflow developed in the ICT environment. Thus, the translation scenario, suggested by A. L. Mishchenko [11, p. 16], is determined by the requirements for the text quality, and the combined translation model,

elaborated by the author, is aimed at achieving the maximum effect with minimum effort.

These scenarios can be adapted to the process of translating scientific and technical texts by reviewing the number and content of stages and analyzing the possibility of involving other resources (corpus-based technologies, Google tools etc.).

In this article we focus on a global ICT-based translation strategy, by which we mean an algorithm of translator’s actions aimed at creating the target text, which is determined by ICT tools and the degree of their involvement. Global strategies have been suggested by A. L. Mishchenko [11] and A. Zaretskaya [19] in the context of combining TM and MT tools, which we take into consideration when developing the system of global ICT-based translation strategies.

The empirical part of our research includes interviewing 27 practicing translators dealing with scientific and technical texts mostly in the field of energy resources. In order to clarify the real-life situations requiring the application of ICT tools (TM and MT), factors influencing strategic decision-making and the most common algorithms of dealing with familiar / unfamiliar genres / topics in the professional setting, they were asked the following questions:

1. How often do you use automated translation systems based on TM (e.g. Trados, Smart CAT)?
2. In what cases do you refer to TM systems?
3. In what cases don’t you refer to TM systems?
4. How often do you use machine translation systems (e.g. Google Translate)?
5. In what cases do you refer to MT systems?
6. In what cases don’t you refer to MT systems?
7. Outline the algorithm you typically follow when dealing with a scientific and technical text of a familiar genre and / or on a familiar topic.
8. Outline the algorithm you typically follow when dealing with a scientific and technical text of a unfamiliar genre and / or on a unfamiliar topic.
9. Do you combine TM and MT systems within one translation project? If so,

describe a typical situation requiring this combination.

10. What factors do you take into account when making up a decision on the most appropriate ICT tool in a particular translation situation?

The generalized and systemized findings obtained as a result of processing the respondents' answers are presented below.

The decision on a global translation strategy is made after carrying out pre-translation analysis of the source text and searching for background and subject-matter information and is based on the use ICT tools. The choice of the global translation strategy depends on objective and subjective factors. The objective ones include: the length of the text, its type / genre; the degree of machine translatability; the content (in quantitative and qualitative terms) of the TM-system database. The subjective factors comprise: the level of the translator's ICT competence, including TM skills and sub-skills, the translation outsourcer's requirements (for example, mandatory use of TM tools). Below are possible variants of global strategies to be implemented when creating the target text, which, based on these factors, are chosen by practicing translators and which, accordingly, should be taught to prospective translators.

1. MT-based strategies. If the translator does not use TM due to one or more subjective and / or objective factors, namely there are no previously translated texts of a particular genre and / or on a particular subject in the TM-system database, and the translator thinks that in the future he / she will not deal with such texts in the TM environment; the translator lacks appropriate skills and sub-skills; the use of TM is not required by the translation outsourcer, he / she should check the source text for machine translatability and follow one of the two strategies:

1a) If the translator receives a positive result, that is the source text meets machine translatability criteria, he / she should pre-edit it in the text editor following a controlled language rule set, translate it using MT system (e.g. *Google Translate*), post-edit the target text in the text editor, place both the source text and the target text in the

translator's portfolio and the database of Do-It-Yourself parallel text corpora for further use when translating texts of the same genre and / or on the same subject;

1b) If the translator receives a negative result, he / she has to perform manual and partially machine translation of the source text, working in the text editor and turning to MT to translate individual sentences, edit the target text, then like in the previous case place both the source text and the target text in the translator's portfolio and the database of Do-It-Yourself parallel text corpora for further use when translating texts of the same genre and / or on the same subject.

If a translation project is performed in pairs and groups, it is advisable to edit the target text in *Google Docs*.

2. TM-based strategies. Genre-thematic specialization is becoming a general trend in the modern translation business. This means that both translation agencies and individual translators, as a rule, perform the same type of work. Automated translation systems based on TM are designed for facilitating and accelerating the process of translating texts of the same genre and / or on the same subject.

If the database of the TM tool contains previously translated texts of a particular genre and / or on a particular subject, the translator proceeds to its application taking into account the percentage of matches:

2a) If the TM system offers 100% match of all segments, which completely complies with the context, the translator should accept them;

2b) If the TM system offers 100% match, which is not fully accepted, some segments should be edited. It can be caused by the context peculiarities or some additional requirements to translation.

2c) In the case of less than 100% match we recommend following the algorithm suggested by A. Zaretskaya [19, p. 136] and 20 (74%) interview participants: source file uploading → analysis and insertion of TM matches → machine translation of non-matches → full post-editing by linguist → proof-reading. Thus, the translator should "know exactly where it is better to use the MT suggestion, the TM match, or start translation of the segment from scratch" [19, p.139]. Since this strategy implies combining MT and

TM, it can be referred to mixed ones.

It should be noted that such steps as “searching for background and subject-matter information” (within the analytical stage), “studying text corpora”, “searching for terminology items”, “negotiating terminology options with experts and peers”, “pre-editing the source text” (within the synthesizing stage) can be eliminated in situation 2a) and significantly / partially reduced in situations 2b) and 2c) respectively.

3. Mixed strategies. Practicing translators often opt for mixed strategies combining application of MT and TM systems (like in strategy 2c). If the database of the TM tool does not contain previously translated texts of a particular genre and / or on a particular subject, and the translator thinks that in the future he will deal with such texts in the TM environment, he / she should check the source text for machine translatability and follow one of the two strategies:

3a) If the translator receives a positive result, that is the source text meets machine translatability criteria, he / she should pre-edit the source text in the text editor, translate it using MT (e.g. *Google Translate*), post-edit the target text in the text editor and place both texts in the TM system as initial components of the database for further translation of texts of the same genre and / or on the same subject;

3b) If the translator receives a negative

result, he / she should work in the TM environment, performing manual and partially machine translation of the source text, thus creating initial components of the database for further translation of texts of the same genre and / or on the same subject. Alternatively he / she can perform manual and partially machine translation of the source text in the text editor, and then place both the source text the edited target text to the automated translation system.

Conclusions. Working in the ICT environment, a modern translator of scientific and technical texts turns to ICT tools at almost all steps of the translation workflow, including the synthesizing stage, when, depending on the objective and subjective factors, he / she chooses the optimal strategy from the three groups of strategies discussed in this article: those based on the use of MT, those implemented with the help of TM tool, and mixed ones. In the process of prospective scientific and technical translators' training special attention should be paid to the formation of their strategic competence, in particular, raising their awareness of possible ICT-based translation strategies, as well as developing appropriate sub-skills and skills to choose and apply them in a particular translation situation. Creating a system of relevant exercises and tasks makes up the prospect for further research.

Список використаної літератури

1. Alenezi, A. M. (2020). Task-based Approach in Teaching Translation: A Case Study in Jouf University. *Higher Education Studies*, 10(2), 189–196.

2. Amelina, S. M. & Tarasenko, R. O. (2018). The essence of the stages of forming the information competence of the translator. *Information Technologies and Learning Tools*, 67(5), 44-55. <https://doi.org/10.33407/itlt.v67i5.2276>

3. Bihych, O. & Strilets, V. (2020). Potential for the use of ICT in teaching scientific and technical translation. *Information Technologies and Learning Tools*, 76 (2), 86–95. <https://doi.org/10.33407/itlt.v76i2.2812>

4. Doherty, S. (2016). The impact of translation technologies on the process and product of translation. *International Journal of Communication*, 10, 947–969.

5. European Commission. (2017). *European Master's in Translation (EMT) Competence Framework*. Retrieved from https://ec.europa.eu/info/sites/default/files/emt_competence_fw_2017_en_web.pdf

6. Fernández, F. & Zabalbeascoa, P. (2012). Developing trainee translators' strategic subcompetence through metacognitive questionnaires. *Meta: journal des traducteurs / Meta: Translators' Journal*, 57(3), 740–762.

7. Gordon, P. (2013). Translation workflow. *Translation journal*, 17 (4). Retrieved from <http://www.bokorlang.com/journal/66workflow.htm>

8. Kozyar, M. M., Pasichnyk, S. M., Kopchak, M. M., Burmakina N. S. & Suran, T. (2022). Simulation-based learning as an

effective method of practical training of future translators. *Journal of Curriculum and Teaching*, 11(1), 298–308. <https://doi.org/10.5430/jct.v11n1p298>

9. Loock, R. (2020). No more rage against the machine: how the corpus-based identification of machine-translated text can lead to student empowerment. *The Journal of Specialized Translation*, 34. Retrieved from https://www.jostrans.org/issue34/art_loock.php

10. Mačura, M. (2012). Limitations of CAT and MT Technology. *Teaching Translation and Interpreting Skills in the 21st Century: Proceedings of the Translation and Interpreting Forum Olomouc 2011* (November 11–12, 2011), 207–219. Retrieved from https://tifo.upol.cz/TIFO2011_book.pdf

11. Mishchenko, A. L. (2015). *Multilingual text communication in the light of contemporary linguistic technologies (on the material of technical documentation)*. Doctoral dissertation abstract, Vernadsky National Library of Ukraine, Kyiv.

12. Mykhailenko, O. A. (2015). *Methodology of teaching Philology majors strategies in translating business texts from Ukrainian into English*. PhD dissertation, Taras Shevchenko National University of Kyiv, Kyiv.

13. Pym, A. (2013). Translation skill-sets in a machine-translation age. *Meta: journal des traducteurs / Meta: Translators' Journal*, 58(3), 487–503. Retrieved from <http://id.erudit.org/iderudit/1025047ar>

14. Romaniuk, O. M., & Zapotichna, R. A. (2020). The notion of translation strategy: the main principles. *International Humanitarian University Herald. Philology*, 45(1), 125–128. <https://doi.org/10.32841/2409-1154.2020.45-1.30>

15. Rothwell, A. & Svoboda, T. (2019). Tracking translator training in tools and technologies: findings of the EMT survey 2017. *The Journal of Specialised Translation*, 32, 26–60.

16. Sikora, I. & Walczyński, M. (2015). Incorporating CAT tools and ICT in the translation and interpreting training at the undergraduate level. *The Translator and the Computer 2. Proceedings of a Conference held in Wrocław, October 25–26, 2014, organized by the Philological School of Higher Education and C&M Localization Centre*, 119–133. Retrieved from https://www.researchgate.net/publication/331939501_Incorporating_CAT_tools_and_ICT_in_the_translation_and_interpreting_training_at_the_undergraduate_level

17. Vieira, L. N., Zhang, X. & Yu, G. (2021). 'Click next': on the merits of more student autonomy and less direct instruction in CAT teaching. *The Interpreter and Translator Trainer*, 15(4), 411–429. <https://doi.org/10.1080/1750399X.2021.1891515>

18. Yamada, M. (2019). The impact of Google neural machine translation on post-editing by student translators. *The Journal of Specialised Translation*, 31, 87–106

19. Zaretskaya, A. (2019). Optimising the machine translation post-editing workflow. *Proceedings of the 2nd Workshop on Human-Informed Translation and Interpreting Technology (HiT-IT 2019)*, Varna, Bulgaria (September 5–6), 136–139. http://doi.org/10.26615/issn.2683-0078.2019_018

20. Zhang, X. & Vieira, L. N. (2021). CAT teaching practices: an international survey. *The Journal of Specialised Translation*, 36. https://jostrans.org/issue36/art_zhang.php

Анотація. Актуальність. У відповідь на вимоги ринку перекладацьких послуг, науково-технічні перекладачі, виконуючи переклад в ІКТ середовищі, повинні вміти вибирати і належним чином використовувати перекладацькі стратегії, які базуються на застосуванні ІКТ. **Мета статті** – визначити та систематизувати стратегії перекладу на основі ІКТ, які використовуються перекладачами-практиками в реальному професійному середовищі і які майбутні науково-технічні перекладачі повинні освоїти в процесі навчання. Автор застосовує теоретичні (аналіз стандартів, наукових праць і публікацій перекладачів-практиків, узагальнення отриманих результатів) та емпіричні (опитування перекладачів-практиків) **методи** дослідження.

Обговорення. Процес навчання науково-технічного перекладу співвідноситься з етапами професійної діяльності перекладачів, які складаються з кроків, спрямованих на вирішення конкретних перекладацьких завдань: підготовчого, аналітичного, синтезуючого, коригувального та оцінювального. Перекладачі-практики звертаються до ІКТ на більшості етапів процесу

перекладу, застосовуючи засоби ІКТ як загального, так і професійного призначення. Їм необхідно використовувати глобальну стратегію перекладу із застосуванням ІКТ – алгоритм дій, спрямований на створення тексту перекладу, який визначається засобами ІКТ та ступенем їх залучення. У статті виділено три групи стратегій перекладу на основі ІКТ (на основі МП, на основі ПП і змішані), серед яких перекладач обирає оптимальну на аналітичному етапі для її застосування на подальших етапах. Цей вибір зумовлений об'єктивними та суб'єктивними чинниками, описаними в статті.

Висновки. У процесі професійної підготовки науково-технічних перекладачів слід приділяти особливу увагу ознайомленню студентів із можливими перекладацькими стратегіями, які базуються на застосуванні ІКТ, та розвитку відповідних навичок і вмінь.

Ключові слова: перекладачі-практики, науково-технічний переклад, перекладацька стратегія, ІКТ, ПП, МП.