A Unification of the Study of Terminological Resource Management in the Automated Translation Systems as an Innovative Element of Technological Training of Translators

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Abstract. The article deals with the issues of improving the technological training of translators by introducing innovative elements within special courses or modules. A unification of the study of the same key operations of managing terminological resources in automated translation systems, which are used to support both simultaneous interpretation and translation, is proposed. The analysis of software products from the category of CAI (Computer-Assisted Interpreting) and CAT (Computer-assisted translation) for the revealing common characteristics in the aspect of working with terminological resources is made. An attempt has been made to optimize the technological training of translators for performing operations of search, selection, structuring, import, export of terminology, which is organized in the form of specialized terminological bases. The expediency of studying by future translators at least one of the software products related to CAI, one to cloud-based CAT, and one to desktop CAT is justified. The principles on which the process of optimizing the content and organizing the technological training of translators should be based are determined.

Keywords: Terminological Resources, Terminological Bases, CAT, CAI, Technological Training of Translators.

1 Introduction

1.1 The problem statement

With the rapid development of information technologies, they are widely introduced in all areas of professional activity, even in those where their use was not decisive for the effective achievement of high results. These technologies have already become an integral part of the translation technologies, but the area of simultaneous interpretation, until recently, had little in common with the achievements that can be drawn from them. However, the day-to-day work of an interpreter is becoming more diverse, requiring new ways to solve complex professional tasks. The usual functions of the translator are

changing, new horizons of the professional field of his activity are opening up, and combinations of various types of translation appear. In particular, the emergence of so-called trans-interpreter, that is, translators who combine translation and interpretation, is already noted, as evidenced by the new designation of their activities, made up of two words (English: translator and interpreter) [1]. Objective circumstances prompt universities that train translators to reorient and modify their programs, strengthening the technological component.

The purpose of the article is to analyse the content of the technological training of translators and to improve it by unifying the study of basic operations with terminological resources when performing translation and simultaneous interpretation using automated translation systems.

To achieve this goal, theoretical and experimental research methods were used. The method of analysis and synthesis allowed us to determine the state of study of the research problem, to determine the main research area and the tasks to be performed. The comparison method was used to identify common aspects in the process of creating electronic terminological databases for CAT and CAI to implement their study into the technological training of translators. The use of the questionnaire method was necessary to obtain data from students on the effectiveness of parallel study of software products for CAT and CAI. We used the generalization method to determine the main results of the research and to provide recommendations for their use in the educational process of universities that provide translators training.

1.2   Literature review

Despite the changes in the practical activities of translators due to the life of society at the present development stage, including the appearance of a combination of translation and interpretation during professional tasks, research on the technological training of future translators focuses mainly on the study of the functioning of CAT tools as part of practice courses of translation techniques. In particular, considerable attention is paid to the terminology management, which, according to Bruno Ciola, is "an important area of translation environments" [2]. Advantages of terminology management in translation and localization projects are highlighted in the works of Miloš Matović [3]. Terminology using specialized tools in translation environment is considered by Marta Gómez Palou Allard [4]. The benefit of terminology in translation for businesses and economics is proved by Nataly Kelly and Donald A. DePalma [5], and Kara C. Warburton points out the need to overcome differences between terminological bases and electronic linguistic corpora [6].

The terminology accumulates in the terminology databases that store the terms with additional information (a brief description explaining the term, or examples of context that show how the word is used). As Bruno Ciola points out, working with terminology can be done in advance – for example, when preparing a translation task, or directly when translating or editing translated texts [2]. Stressing the need to study terminology management in the framework of university programs, María Fernández-Parra emphasizes the benefits of such knowledge for future translation activities and identifies issues for study. Namely storing in terminological databases and adding to them, depending on the level of complexity of CAT tools, different types of information

about terms, such as definitions, part of speech, usage, subject area, etc. In addition, according to the researcher, terminology bases in CAT tools are much more efficient than using spreadsheets such as MS Excel. They may also allow hierarchical organization of information. Analysing several CAT systems, Fernández-Parra sees the advantage of the SDL MultiTerm terminology databases over others, such as, for example, Déjà Vu, in that it allows including not only descriptions, but also multimedia information, such as graphics, video and sound files [7, p.393].

Undoubtedly, among the research on terminology management in the works of scientists, studies related to CAT tools prevail. The problem of lack of relevant scientific achievements is ascertained by Hernani Costa, Gloria Corpas Pastor and Isabel Durán Muñoz, noting that, unlike many computer translation tools, there is still only a limited range of interpretation tools available [8]. According to scientists, interpreters are faced with different settings and specialized domains, where computer-supported tools may be useful. Specialized computer and mobile software could be used to assist translators in compiling, storing, managing and searching terms in glossaries [9; 19]. Recently, there have been studies by other foreign scholars on issues related to the terminology management in CAI tools. They are not numerous, but they outline promising directions and trends that should already be taken into account in the translators' training process. In particular, while conducting research on the introduction of CAI learning into a university program, Bianca Prandi argues that there are three undeniable truths about CAI tools: they can provide many terminological support benefits, they should be used strategically, and most translators know very little about them [10]. At the same time, from the point of view of C. Fantinuoli, one of the developers of the InterpretBank desktop software designed for professional translators, without the latest technologies, including terminology, there can be no effective interpretation. Speaking about changes in interpretation technologies, he noted that they are happening quickly and independently of us. According to Claudio Fantinuoli, it is a "technological turn in interpretation" [11]. As new software products began to appear on the translation services market specifically for the technological support of interpretation, attempts were made to analyse them. In particular, Hernani Costa, Gloria Corpas Pastor and Isabel Durán Muñoz [8] present a comparative evaluation of terminology management tools for interpreters by their users.

2 Result and discussion

When performing simultaneous interpretation, one of the types of traditional information resources of a translator is a terminological resource in the form of dictionaries or glossaries. However, despite the rather rapid development of information technologies and software that allows for structuring terminological data, it almost did not affect the way and approaches to their use in the process of interpretation. This is primarily due to the interpreters' lack of confidence in the capabilities of the terminology systems, due to their imperfections in entering queries, obtaining relevant results, clarity of presentation and choosing the right terms. However, recent developments in the field of simultaneous interpretation support systems indicate a new level of software in this area. In particular, a second generation

of these programs has emerged today, which is positioned as Computer-Assisted Interpreting (CAI). They are fundamentally different from previous generation programs that most of the interpreters are familiar with, but they unfortunately have not become their reliable assistants. Unlike conventional terminology management, modern systems provide three key functions [12]:

1. Preparation for interpretation. In this case, it is supposed to work with a database with auxiliary material, the possibility of automatic synthesis of documents, the function of extracting terminology and storing terms.
2. Support during the immediate execution of translation tasks covers both manual search of terms and automated search based on voice recognition.
3. Support for the processing of information after completion of the direct translation process – replenishment of terminological resources, assessment of the quality of the translation and reporting.

However, despite the presence of these functions in the CAI, their popularity among simultaneous interpreters remains low. A prerequisite for the widespread introduction of such systems in simultaneous interpretation processes should be a number of strategic steps, both from the side of their developers and from educational institutions that train translators for this type of translation.

In particular, the developers of CAI should offer such a level of these software products that would allow, first, due to the functionality and features of the interface, to achieve the maximum effectiveness of terminological support in the implementation of simultaneous interpretation. High efficiency must also be ensured at the preparatory stage, which involves searching for industry texts, selecting terminology, preparing glossaries, mastering terminology, and more. An equally important step on the part of the developers of CAI is building partnerships with educational institutions to improve the skills of new translators. Instruments are more likely to become more familiar if new practitioners are introduced to these opportunities at school and are expected to work in their working environment [12].

In their turn, educational institutions should also be aware of the importance of training future translators in terms of mastering modern tools. This applies not only to the study of computer-assisted translation (CAT) [13], which has already been widely introduced into the content of the training of translators by leading universities of the world [13], but also to CAI. Of course, in this aspect, traditional questions arise: what software products to study, what should be their optimal amount, how much training time should be allocated for their development, etc. However, despite this, the activities of universities should undoubtedly be aimed at introducing modules, theoretical and practical courses, or at least issues related to the study of CAI. This work has already been started by many universities that have introduced purely theoretical courses as well as theoretical courses in combination with practical courses, workshops, etc. into the structure of translators' training. At the same time, not only the forms of training but also the software products based on which the CAI study is carried out are diverse. In particular, universities do not prefer any one software product, but study different, and in some cases from 3 to 6 at the same time [14]. The list of CAI products currently being studied at universities includes InterpretBank, Intragloss, Interplex, LookUp,

Interpreters' Help and more. In our opinion, an integral part of the content of the study of these systems should be the formation of terminological resources organization, which will provide terminological support for interpretation. The effectiveness of mastering terminology resources in these systems will largely depend on the use of prior knowledge. Extremely useful may also be the experience of preparing terminological resources for their use in CAT during translation. Therefore, at the initial stage of the study, we focused our efforts on identifying similar operations for the organization and management of terminology when working with CAT and CAI.

First, we tried to optimize the technological training of translators for the search, selection, structuring, import, and export of terminology, which is organized in the form of specialized terminology bases. This is due to the coincidence of a large number of the same types of implementation of these operations, some of which can be done using office suite programs, some through the Internet, and the vast majority using the corresponding features available in automated translation support systems, including in CAT and CAI. For example, it is advisable to structure the terminology data by means of a word processor and a table processor, and then import it into the terminology database. The process of obtaining industry-specific terminology databases can be accelerated by leveraging available Internet resources and relevant search engine tools. In this case, preparatory work can be directed both to the search of ready bases and to the selection of texts on the issue of future translations, which can become donors for the extraction of terminology. However, most of the operations can be performed using functions available in automated systems aimed at extracting, structuring, importing, exporting terminology, and more. In order to improve the technological training of translators and to unify approaches to the study of basic terminological resources operations in the implementation of translation and simultaneous interpretation with the use of CAT and CAI, we have selected the following software products for comparison: InterpretBank (CAI), MemSource (cloud CAT), SDL Trados (desktop CAT). Unlike the well-known and widespread CAT SDL Trados and MemSource, CAI InterpretBank has relatively recently made its way into the software market, but is gaining popularity. This is evidenced by the sufficiently broad list of universities that use this software in the translators' training system. InterpretBank is software developed as part of a research project at the University of Mainz / Germersheim. The overall goal of the tool is to create a translator workstation, which allows optimizing the workflow before, during and after the event where the simultaneous interpreter performs simultaneous interpretation [11].

When preparing glossaries to work with both CAT and CAI, the experience gained in the initial stages of translator training in using information technologies to translate is important. First, these steps involved the structuring of terminological data using office suite programs [15; 17]. In particular, the ability to use MS Word and MS Excel for these purposes will enable future translators to adapt easily to the creation and completion of terminology databases. This is possible, first, because CAT and CAI allow the import of terminological data structured in simple constructions. Such constructions may include only tabular terminological entries in two languages, where the correspondences are placed within a single line. It is also possible to import structures with more complex terminological record, they may contain a certain number

of synonyms in both languages, definitions, information about sources of information, and other additional information. However, in this case, it is necessary to take into account the features of each program, since such functions may not be implemented in each of them.

It is important to note that XLS (XLSX) format deserves special attention when structuring terminology material, as it is a common format for importing data into most CAI and CAT tools. In particular, this format allows importing terminology records to terminology databases in cloud-based CAT such as XTM Cloud, Wordfast Anywhere, MemSource, MateCat, etc. [16; 18]. General principles for structuring terminology data using MS Excel for later import can also be used when working with desktop CAT, in particular SDL Trados. However, this is only possible initially; the next steps require converting XLS terminology data to XML format. In general, the generated skills of structuring terminological records using MS Excel are unified to perform preparatory operations for interpretation using CAI and translation using CAT. The only difference is the use of different coding systems to mark languages according to standards.

The preparation of terminological data for further import into terminological databases is an important element of the work when translating using CAT and CAI. However, the vast majority of terminology actions when working with these systems are done directly in the terminology editors. When using InterpretBank as a CAI, this system has in its structure a separate module designed to create and manage specialized terminology bases. Using this module allows to create a separate glossary or sub-glossary system in preparation for a specific simultaneous interpretation task. The filling of these terminological databases can be efficiently done manually, as the available functional tools and a clear interface facilitate this. Performing such operations with terminological material as entering a new term, moving it to the list, editing it, writing additional information, deleting are basic and sufficient to effectively manage the terminology within a separate database.

Forming the skills of future translators to perform these operations may be unified to work with CAT editors. This is primarily due to similar approaches of software developers to the structure of working icons, the organization of the interface, the logic of action, etc. These aspects should be the basis for the unification of approaches and the students' attention should be focused on this in their learning process. An example of the formation of a terminological base for interpretation support using InterpretBank as a CAI is shown in Figure 1.

The base thus formed is the basis for the use of other modules that are in the structure of InterpretBank, namely the terminology memorization module and the terminology access module during simultaneous interpretation.

The structure of records management in the MemSource CAT terminology editor is shown in Figure 2.

A parallel study of working with terminology database editors of various software products from the CAI and CAT categories will allow, based on a comparison of common features and differences, to form not only a stable ability of future translators to form terminology databases, but also the ability to adapt to performing these tasks in various software products. It can also be an additional element of motivation in the process of studying these technologies.
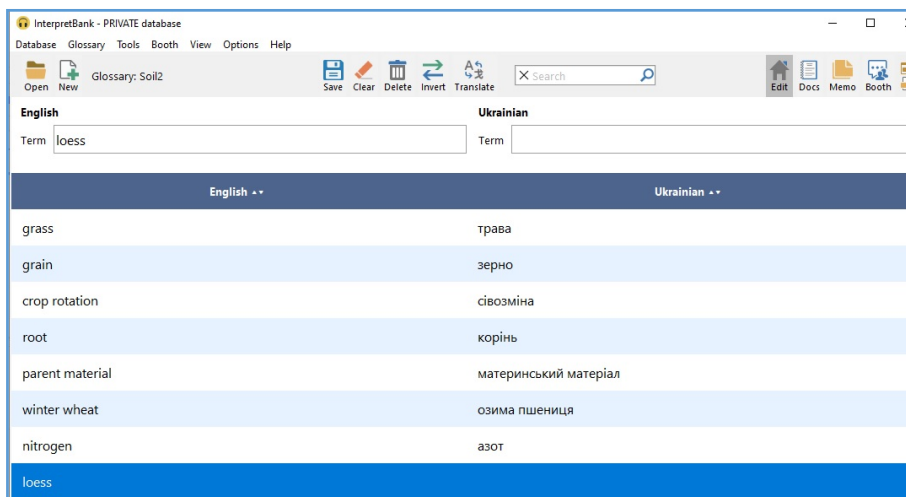
Fig. 1. Structure of the InterpretBank terminology database editor.
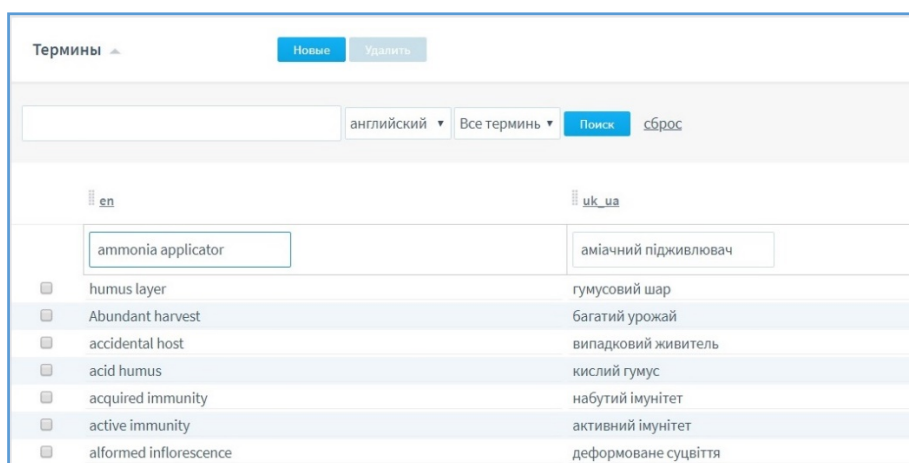
Fig. 2. The structure of records management in the editors of the terminology databases of the MemSource CAT.

One of the important operations in the structure of a set of measures for the creation and filling of terminological bases for both CAT and CAI is the extraction of terms from texts that are source for translation. This is a very effective way to formulate a terminological framework to support translation (or simultaneous interpretation) with such a set of terms as are guaranteed to be available in the text of the report or in the text for translation. There are a number of specialized programs related to the extractor group for the extraction of terms in the application of CAT. One of the most common programs in this group is SDL MultiTerm Extract. In our opinion, developing skills to work with this program is an integral part of the content of the study of CAT. The

advantages of using extractor programs as a whole, and SDL MultiTerm Extract in particular, are the ability to analyze texts to detect terms in automatic mode. The translator only has to choose from the proposed list those terms that he thinks should be added to the terminology base. The system helps to make the right decision by scoring a certain number of points against each entry. Entries with high scores are more likely to be terms. Although this technology requires separate software and the ability to use it, its overall performance is much higher than when manually searched and typed terms into the database.

In the process of mastering the technology of extracting terms from texts, understanding the file formats in which the source texts can be represented is important. In the case of SDL MultiTerm Extract, the terms can be extracted from texts in different languages, which are saved in text formats, including TXT, RTF, DOC, DOCX, ODT, and in other formats XLSX, PPTX, ODS and more. Understanding the nature of the formats used in terminological data is another aspect of the unification of translators' training, since the vast majority of programs use common formats.

Figure 3 shows the structure of terms extracted from the text by SDL MultiTerm Extract at the stage of their selection by translator.

Fig. 3. Structure of the recording of terms extracted from the text by SDL MultiTerm Extract.

In the case of using InterpretBank as a CAI, the functionality of this system also allows for the automatic analysis of texts for the presence of terms. From the texts that will be used in the report in a foreign language, the terms are extracted according to certain algorithms, and their list is formed in order of frequency of their appearance in the text. Thus, the translator is given the opportunity not only to select from the list the necessary terms, but also to receive their translation based on connected electronic dictionaries and systems of machine translation. The process of such an operation is clear, and the program interface allows easily and quickly processing the necessary texts and forming terminological bases at the stage of preparation for simultaneous interpretation (Fig. 4).
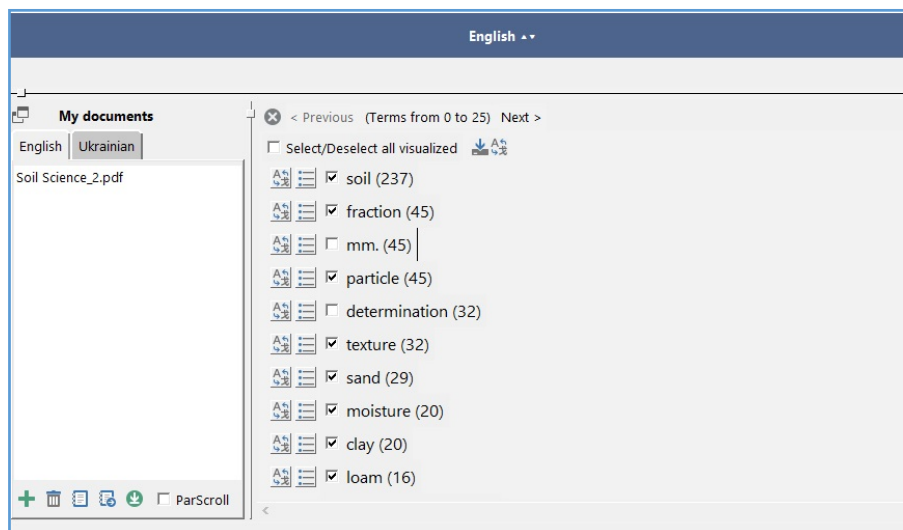
Fig. 4. Structure of organization of terms extracted from the text by means of the corresponding InterpretBank module.

As with SDL MultiTerm Extract, InterpretBank allows to extract terminology from texts written in different languages and presented in different text and other formats. Particularly valuable is the ability to extract terms from text in PDF format.

In view of the above, the technological training of translators in the terminological resources management, which can be used to support simultaneous interpretation and translation using CAI and CAT, should be optimized by unifying approaches to the study of key operations. Such operations, first, should include the selection, structuring, streamlining of domain terminology, and its import to terminology bases and export from them (see Table 1).

In our opinion, the process of optimizing the content and organization of technological training of translators should be based on the following principles:

— to study the systems of automatic translation used in both translation and simultaneous interpretation, the content of translators' training must be accompanied by specific courses or modules that provide both theoretical and practical components;
— in the structure of special courses it is expedient to study at least one of the software products related to CAI, one to cloud CAT, one more to desktop CAT;
— to take into account in the process of practical implementation of training of translators for the terminological resources management in the systems of automated translation, the expediency of simultaneous demonstration of the implementation of the same operations in the CAI and the CAT in order to form unified skills for their execution, taking into account the possible use of different programs;
— to emphasize on the initial stages of studying translators of office suite programs, in particular MS Excel, on developing the ability to structure terminological data in XLSX format, taking into account the peculiarities of using language codes and

placing them in a table of terms, synonyms, additional information, etc., in accordance with their further use in the CAI and CAT;

— it is advisable to pay particular attention to the possibility of using in the process of preparation of electronic terminology bases for use in the CAT and in the CAI of the open terminological resources presented on the Internet, in particular, the EU IATE terminological database (Interactive Terminology for Europe);

— practical tasks for mastering the operations of extracting terms from documents should be developed taking into account the need to use different formats for this purpose, in particular DOCX, XLSX, PPTX;

— to draw students' attention to the fact that it is expedient to select terminological material in terminological bases for AIS and CAT by domain specificity, structuring them, if necessary, according to a specific thematic hierarchy;

— acquaint students with the policy of licensing software by developers, as they have in common a distinction between freelance programs and corporate programs, as well as some additional benefits (for example, one license for two devices, which allows the translator to use their terminology base as with desktop PC, and from a mobile device).

Table 1. Aspects of the unification of operations for terminology resource management.

Technological operation	Software product		
	SDL Trados	MemSource	InterpretBank
Import of structured terminology entries to xlsx terminology database	+ (with intermediate conversion)	+	+
Import of terms to tbx terminology database	+ (with intermediate conversion)	+	+
Export of terms from a xlsx terminology database	−	+	+
Export of terms from rtf terminology database	+	−	+
Exporting of terms from the tbx terminology database	+	+	+
Extract of terms from docx, xlsx, pptx texts	+	−	+
Creation of new terminological bases by means of built-in editors	+	+	+
Manually adding terms to new and existing terminology databases	+	+	+
Managing the terminology of the built-in editors (editing terms, extracting, moving)	+	+	+
Recording additional information on terms in descriptive fields	+	+	+
Recording and saving synonyms for terms	+	+	−
Finding terms in the database using the built-in editors	+	+	+

At the initial stage of development and introduction to the content of training of translators of this special course, its purpose was to develop knowledge and skills of working with desktop CAT on the example of SDL Trados, and later on cloud-based CAT on the example of MemSource. The next step in improving the technological training of translators was to introduce into their curriculum a special course in studying CAI using the example of InterpretBank. At this stage, an innovative change in the study of the special course was the beginning of the practice of parallel study of the same operations in different programs and systems, in particular, work with terminological resources and the creation of terminological bases.

To determine the effectiveness of this method of technological training of future translators for the use of automated translation systems, we conducted a survey of students who completed the course "Information Technologies in Translation Projects" with these innovations. In total, 33 students participated in the survey. The questions of the questionnaire provided several options for the answer, which were aimed at differentiating students' understanding and attitude towards aspects of studying the special course. The contents and the results of the questionnaire are shown in Table 2.

The analysis of the questionnaires of the students showed, first of all, their positive perception of the introduction in the special course "Information Technologies in Translation Projects" of parallel study of CAT and CAI, as 60.6% of them rated this innovation unequivocally positive, and 24.2% answered "Rather yes, than no". According to the majority of students (69.7% + 6.1%, that is, the total amount was 75.8%), studying terminology in software products related to CAT and CAI, contributed to the understanding of the general principles of the technology of creating terminological bases, and was one of our main goals.

More varied were the answers to the questions about the perception of the unification of the study of basic terminology operations in software products in the CAT and CAI categories as a technological advantage. Here we received positive answers from 78.7% of the respondents, but at the same time 6.1% expressed their doubts by choosing the answer "Rather no, than yes". In addition, 9.1% do not consider the proposed innovation an advantage in technological training, and another 6.1% under "Other" said that unifying the study of basic terminology operations in several software products may be superfluous, and they will have to work with only one software. In view of the received answers, we see the need in the future to acquaint future translators in more detail with the changing situation in the translation services market. It is marked, on the one hand, by the rapid development of information technologies and the constant appearance of new software products, and, on the other hand, by the requirements of customers to use the specified software.

Equally ambiguous were the students' answers to questions about their opinion on whether the knowledge of various software products facilitated the creation of electronic terminology databases for working with them. If 57.6% of students answered this question in the affirmative, and 15.1% said yes, then 9.1% tend to evaluate negatively the likelihood of facilitating the use of automated translation systems by gaining knowledge of various software products related to CAT and CAI. 12.1% unequivocally believe that this knowledge will not facilitate their terminological work with the use of the CAT and CAI software.

Table 2. Results of the questionnaire of students on revealing the effectiveness of innovative methods of technological training of translators.

Question	Answer options, %				
	Yes	Rather yes	Rather no	No	Other
Do you find it useful to study CAT and CAI in parallel?	60.6	24.2	9.1	6.1	0.0
Has the study of working with terminology in software products related to CAT and CAI contributed to the understanding of the general principles of the technology for creating terminology databases?	69.7	6.1	18.2	3.0	3.0
Do you consider the unification of the study of basic terminology operations in the CAT and CAI software products as an advantage in the technological training of translators?	63.6	15.1	6.1	9.1	6.1
Are you ready to make additional efforts to learn several CAT and CAI software products in parallel to help manage terminology more effectively?	54.6	3.0	24.2	15.2	3.0
Do you find it easy to know the various software products related to CAT and CAI to create electronic terminology databases for the work with them?	57.6	15.1	9.1	12.1	6.1
Did detailed knowledge of the features of one of the automated translation systems allow you to master the work with terminology in another software product quickly?	72.7	6.1	12.1	9.1	0.0
Did the knowledge of one of the automated translation systems complicate the study of another software product in terms of working with terminology?	9.1	12.1	24.2	51.6	3.0
Do you think that after studying the ways of creating terminological bases in the offered programs in the CAT and CAI category, you will be able to work with other similar programs in this aspect?	45.5	15.1	18.2	15.1	6.1
Has the CAT and CAI parallel study technique helped you overcome your fear of the latest technology?	75.8	6.1	12.1	3.0	3.0
In your opinion, does the parallel study of CAT and CAI offer greater opportunities for future employment?	72.7	15.2	3.0	3.0	6.1

From 6.1% of students, we received "Other" answers, which generally came down to the fact that expanding the range of software products offered to study, on the contrary, slightly disoriented them and made it difficult to perceive the features of certain terminology operations. However, only 9.1% of students answered "Yes" to the question of whether knowledge of one of the automated translation systems made it difficult for them to study another software product in terms of terminology. This means that the vast majority of students have been able to acquire the course material that has supplemented the special program without too much difficulty.

The large number of "Yes" answers (72.7%) to the question about the possibility of accelerating the study of terminology in another software product due to the detailed knowledge of the features of one of the systems of automated translation testify to the unconditional expediency of the innovative modification of the technological training of translators offered by us.

Another positive achievement of the introduction of the CAT and CAI parallel study method was that it helped students overcome their fear of the latest technologies. The number of students mentioned this: 75.8% – Yes, 6.1% – Rather yes, than no. In our view, overcoming psychological barriers is an important prerequisite for successful acquisition of knowledge and ability to work with modern translation tools, but unfortunately, teachers do not always pay attention to this.

However, it is worth noting that only 54.6% of students expressed their absolute willingness to make additional efforts to master concurrently several CAT and CAI software for better terminology management, which can be explained partly by their overload in the educational process and partly by a certain inertia in the perception of the new.

In general, an overwhelmingly large number of students – 87.9% (72.7% – Yes, 15.2% – Rather yes, than no) think that the innovation we offer is positive. The parallel study of CAT and CAI provides them with greater opportunities for future employment.

The unification of approaches to the technological training of future translators made it possible to improve significantly it and to form in them a comprehensive understanding of the essence of the use of automated translation systems. It means, in particular, the basic principles and approaches that underlie the structuring of terminological material, its extraction from texts, import to the database, export from the database, etc. A systematic understanding of these processes, which in many respects are common not only to the same programs from different developers, but also common to various CAT and CAI programs, will allow the translator to overcome the fear of using such systems in a professional activity, or to use the software product with which he had no previous experience.

3   Conclusions

The conducted research has made it possible to conclude that the technological training of translators at universities should be improved constantly in view of new technologies, software products and technological developments on the translation services market. They also lead to changes in approaches to the organization and

implementation of translation and interpretation, which as of today are not reflected sufficiently in translators' training curricula. The introduction of innovative elements in the technological training of translators is expected to have a number of positive impacts, in particular:

— will help to increase their competitiveness in future employment;
— expand the translator's ability to be involved in various areas of translation, both traditional and new, emerging at their intersection;
— accelerate adaptation to changes in professional activity that will certainly continue to occur in the translation services market;
— provide the translator with the ability to respond more flexibly to the requirements and wishes of customers regarding the use of certain software products during translation;
— will allow the translator to reduce the cost of retraining in the future if the need arises.

One of the innovative elements in the technological training of translators may be the method of unifying the study of terminological resource management in automated translation systems, which in particular provides for:

— introduction to the training of translators of the study of the systems of automated translation, which are used in interpretation and translation in the form of special courses / modules with theoretical and practical components;
— structuring of special courses taking into account the study of at least one software product in the following categories: CAI, cloud CAT, desktop CAT;
— parallel study of the same types of operations in the CAI and the CAT in order to form unified skills in their execution;
— development of practical tasks for mastering the operations of extracting terms from documents, taking into account the use of different formats for this purpose.

The first results of the introduction of such a method in the process of training of translators have already proved its effectiveness.

Further scientific research may be directed to a more detailed study of the effectiveness of introducing innovations in the technological training of translators, developing a methodology for learning modern translator tools, improving the offer of learning software products within certain courses.

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