**Секція 4. Актуальні проблеми філологічних наук.
Соціальні комунікації: теоретичні та практичні аспекти**

TOP TEN ENGLISH-UKRAINIAN ONLINE TEXT TRANSLATION PLATFORMS FOR TECHNICAL DOCUMENTS

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Nowadays the world is digitalized, so all the information may be found on the Internet and is at hand any moment it is needed. Taking into account the amount of information in English, a good command of this language is a key to successful research of any topic.

Although the majority of Ukrainian teenagers and young adults have started studying foreign languages from the first form at school, the overall level of knowledge is quite low. To some extent, the situation with the requirements to school leavers' level of language has changed since the External Independent Testing was introduced, as there appeared the need to pass a foreign language to get a certain qualification at a higher educational institution. Moreover, now it is also necessary to pass the Unified Exam in a foreign language to enter postgraduate schools. Some students do get prepared for the exams, but many of them just rely on their luck.

Thus, when it comes to working with English language recourses there appears the necessity for looking up the dictionary. But performing translation of professional requires an understanding of grammar, and general rules of language. Hence, there are some challenges that a translator faces.

Technical language has specific lexical features because of the abundance of specialized terminology that makes it rather difficult for comprehension. They have a different way of delivery rooted in the mixture of terminology, syntax, and style. Altogether these factors as well as language register and tone that should be followed precisely when translating into the target language add to the problem.

Register is the level of formality of the statement. Most academic and scientific resources use a formal register. Technical texts are based on the impersonal style that means that it is preferable to use complete sentences, avoid slang, idioms and use technical or academic vocabulary.

Thus, any technical document has specific features, such as a clear and concise nature of the presentation, strict adherence to technical terminology, a clear logical sequence of information, unambiguousness and concreteness in interpreting the facts. When rendering the information in the target language the register and tone should correspond to the mentioned above standards.

Another challenge to face when translating English technical texts is following the inner structure of language. The more complex and unique the

source language is, the more difficult for translation it can be. For instance, the sentence structure of English and Ukrainian languages is quite similar: both have a subject, verb, and object. However, while English has mostly direct word order there are no strict rules concerning the word order in Ukrainian so while translating transformations may be needed, e.g. adding, removing, or rearranging source words to communicate the idea in the target language more effectively.

One more obstacle on the way to conveying the content of the source text is idiomatic expressions that are difficult items to translate even for professional translators to say nothing of non-language faculty students and machine translation systems. Translation of phrasal verbs constitutes a problem as well, because prepositions can change the meaning completely.

However, these are some lexical and grammatical difficulties that do not impact the understanding of the contents of the text. Although when it comes to translation of technical texts, having terms with multiple meanings and abbreviations, the most important is to avoid a mistake that can lead to the improper use or operation of the equipment or the material used in the technological process, etc. So, the translator should have good knowledge of the source and target languages and necessarily know the terminology. Even so, the assistance of the specialist in the given field may be needed to eliminate shortcomings and check lexical equivalents in the target language. The aim is to make an accurate translation, using synonyms or descriptive translations only in case of emergency.

Recognizing the problem of Ukrainian technical students' low level of command of the source language and the absence of knowledge of translation techniques when it comes to working with English language recourses, there appears the necessity to use some online machine applications or programs to translate the information. And the crux of the problem lies in the fact that the majority of software of more or less good quality gives translation into Russian. There are some online text translators into Ukrainian as well, but the result, as the further review can prove, leaves much to be desired.

So, we decided to research online-translators into Ukrainian, compare and rate them to choose the best. As far as we are interested first of all in the translation of technical tests, we have taken a passage from the official UK Health and Safety site as a pattern to use for translation into Ukrainian.

There are 4 types of machine translation: Statistical Machine Translation that looks for the correspondence between the words from the source and the target languages (Google Translate); Rule-based Machine Translation examines grammar of the source and the target language to create the translated sentence; Hybrid Machine Translation (a mix of Statistical Machine Translation and Rule-based Machine Translation) that uses a translation memory; Neural Machine Translation that relies upon neural network models to build statistical models [1].

So, machine translators analyze the structure of the source content and separate this content into single words or short expressions. Afterward,

«they reconstruct those single words or short expressions using the very same structure in the picked target language. Text-level translation applications incorporate the translation of a wide range of unadulterated reports, and the translation of archives with organized data» [1].

We have taken the top ten online translators from English into Ukrainian to determine that can satisfy all the requirements. We did not take into consideration applications that should be uploaded, only the ones that can translate on the spot.

The most often used translating recourse is, of course, Google Translate. It is a neural machine translation service developed by Google in 2006. The system embraces 109 languages and there are 61 languages in development as of March 2021. The accuracy of translation is quite high if it comes to the general information, although translations of professional texts and abbreviations can be controversial. It is worth saying also that if we compare the results of translation into Russian and Ukrainian they will differ in quality with the better result in Russian.

The first passage chosen to test translation platforms was about the specifications of Volvo FL250 Fire Engine:

- 005 model 27000 miles
- Auto Gearbox
- Godiva WTA 2010 main pump with 4 Deliveries
- 1800L water
- Ladder Gantry
- Easy Access Ladder Gantries for:
- 9m, Short Ext and Roof
- 1 x Hosereel and Branch
- Locker Drawers
- BA Racking
- Blues and Twos [2].

Google Translate coped only with the lexical equivalents «005 Модель 27000 миль» for «005 model 27000 miles» (although the transposition would make it sound more familiar), «Автоматична коробка передач» for «Auto Gearbox» and «Головний насос Godiva WTA 2010» for «Godiva WTA 2010 main pump». The meaning is badly delivered but at least clear in «1800L вода» for «1800L water» and «Шафи» for «Locker drawers». As for the rest terms and the colloquial idiomatic expression «blues and twos» no lexical equivalents were found [3] (further in brackets our variant of translation):

- with 4 Deliveries – з 4 доставками (з 4 виходними патрубками);
- Ladder Gantry –лазню (опорна рама для драбин);
- Easy Access Ladder Gantries for – Легко доступок Gantries для: (зручний доступ до опорної рами для драбин);
- 9 m, Short Ext and Roof – 9м, короткий твіт і дах (коротка висувна і дахова);
- 1 x Hosereel and Branch – 1 x шпунтова котушка та гілка (1 x рукавна котушка та пожежний ствол);
- BA Racking – стелаж ВА (комірки для зберігання протигазів);

- Blues and Twos – блюз і двійки (проблискові маячки зі звуковим сигналом).

The same excerpt was translated by other systems, too. All the platforms coped with the translation of phrases «005 model 27000 miles», «Auto Gearbox» and «1800L water». The other equivalents given are as follows:

- with 4 deliveries –з 4 поставками [4], [5], [6], [7], [8]; з 4 постачаннями [9], [10], [11]; із 4 постачальниками [12];

- ladder gantry – діаграма гантрі [4]; лазню [5]; портал для сходів [6]; сходовий портал [7], [8]; поміст сходів [9], [10], [11]; драбина[12];

- easy access ladder gantries – сходи легкого доступу gantries [4]; легко доступає сходинки gantries [5]; легко під'їзний козловий підйомник [6]; простота доступу до сходових лотків [7]; легкий доступ до сходових порталів [8]; легкі помости сходів доступу [9], [10], [11]; проста драбина [12];

- short ext and roof – короткий ext і дах [4], [5], [9], [10], [11]; короткий зовнішній вигляд і дах [6]; короткий вихід і дах [7]; коротка зовнішня частина і дах [8]; короткий текст і дах [12];

- hosereel and branch – хосереель і гілка [4], [5], [9], [10], [11], [12]; шланг і відсік [6]; hosereel і філія [7]; шланг і гілка [8];

- BA racking – стелажі BA [4], [8]; стійка BA [6]; мука Барії [9], [10], [11]; відстеження BA [12];

- Blues and Twos – блюз і двійки [4], [8]; блюз і два [5], [6]; блюз і двос [7]; блюз і пара [9], [10], [11]; блюз і твор [12].

Taking into consideration a very bad result of translation of Google Translate and even worth translation equivalents given by the other multiple online text translation platforms, we have decided to simplify the task and have chosen another passage with technical but less specialized vocabulary to test them: «Active fire prevention systems include water sprinklers, sprays and other specialised systems that actively combat a fire. According to the HSE, active fire prevention systems are normally used in the manufacturing industries and/or applications where highly flammable materials are used, but sprinklers and other active systems can also be used to control fires in large warehouses and other open spaces» [13].

Google Translate offers the following translation: «Активні протипожежні системи включають водяні спринклери, розпилювачі та інші спеціалізовані системи, які активно борються з пожежею. Згідно з HSE, активні системи запобігання пожежі зазвичай використовуються у виробничих галузях та / або додатках, де використовуються легкозаймисті матеріали, але спринклери та інші активні системи також можуть використовуватися для боротьби з пожежами на великих складах та інших відкритих просторах» [3].

As far as the passage is rather clear, only one transformation (transposition)was needed to find the lexical equivalent «системи запобігання пожежі» to the noun compound «fire prevention systems» and, other terms are translated properly, although the use of «додатках» for «applications» is not justified.

The system Babelfish.com must be mentioned at least because it was one of the pioneers in easy-to-use platforms that is almost extinct now although, initially, it was a predecessor to Google translate. Many bloggers mention Babel fish among top translation recourses, nevertheless, we should confess it is a rather uncomfortable platform because the input text volume is limited to 800 words or 5 Kb. The translated passage has a 99% coincidence with Google Translate with the only error «дощовики» for «sprinklers» [4].

Several Ukrainian systems can also be of help. M-translate calls itself the first national translator with the mission of making it free to be used by anyone everywhere. It chose some inadequate lexical equivalents while translating the sentence: «дуже легкозаймисті матеріали» for «highly flammable materials» and «для керування пожеж» for «to control fires» [5].

Online UA is a resource that offers a set of choices in five spheres: business, internet, general, technical and legal. The translation it makes speaks for itself: «Активні системи пожежної охорони включають *водні розбризкувачі, бризки і інший*, системи, що спеціалізуються, що *активно бойовий вогонь*. За твердженням HSE, активні системи пожежної охорони зазвичай використані в *обдіблювальній промисловості* і/або *додатках*, де *надзвичайно* легкозаймисті матеріали використані, але розбризкувачі і інші активні системи можуть також бути використані, щоб *управляти вогнями* у великих складах і інших відкритих просторах». The number of inappropriate lexical transformations and the abundance of incorrect grammatical forms of Ukrainian words make obviously overall negative impression [9].

Unfortunately, one more national text translator gave the same translation of the passage as the previous one. Translate.meta.ua that has more than 30 options of fields to choose from showed no difference in translation despite the changes in the offered categories [10].

The last two Ukrainian platforms disappointed as well. Both Translate.ua that is powered by Pragma 6 has several categories (general, technical, computer sciences, law, sports), and Webtran.com.ua did not show high-quality translated texts, although the second one is a bit better than the last three mentioned above [11].

Opentran.net makes quite decent work and can be compared with Google Translate [6]. As for Translate.systran.net, there are too many inadequate equivalents for the English words and phrases and what is more there is one «substitute» that completely changes the initial meaning of the sentence: «Активні системи захисту від вогню включають *водогінні паростки*, розпилювачі та інші спеціалізовані системи, що активно *перемагають пожежу*. За даними HSE, активні *системи захисту від пожежників* зазвичай використовують у виробничих галузях і/або *прикладах*, де використовують *високоякісні матеріали*, але *водоструминні* і інші активні системи також можуть використовуватися для контролю пожеж у *великих обсягах* та в інших відкритих просторах» [12].

And, eventually, PROMPT.One. It is a product of the company that specializes in the development of machine translation systems. Although it did not cope with finding the best equivalents for some terms, it is the only online resource that managed to translate the abbreviation used in the original text: ТБ та ООС for HSE, i.e. «техніка безпеки та *охорона оточуючого середовища*». Nevertheless, as far as it is a Russian language platform, it translated the first letter in the abbreviation «H» firstly into Russian as «охрана труда» but after forming the abbreviation out of these letters translated it again into Ukrainian. The result is a full loss of meaning and the transformation of a noun phrase into a preposition: «H – health – охрана труда – ОТ – ВІД» [10]. The only Ukrainian online translator that managed at least to try and look for the equivalent of the abbreviation showed just several incomprehensible letters «НДУ ВШЕ» [10].

Conclusions. As far as we were interested in finding online text translation resources and platforms available online (without downloads), we researched the ten most often referred to. We chose only those applications that can translate into Ukrainian because many students have insufficient knowledge of Russian terminology and abbreviations and will need to use further translation to understand the text to the full.

The review has shown that most resources can translate original English text into Ukrainian quite well preserving logic and conveying general contents. Though, if to rate them according to the degree of accuracy, Ukrainian online text translation platforms Online UA, META.UA, and Trident Software work the worst. Nevertheless, when it comes to translating specialized technical document (instructions, descriptions, etc.), online machine translation is useless and helpless because only understanding the concept in the target language it is possible to find its lexical equivalent while translating from the original language.

As for the best online platforms to translate from English into Ukrainian, the most helpful are Google Translate and Babelfish.com, although the last is considered dead and not well-known to most users. We would also rank among text translation systems PROMT.One, since it can be used to find equivalents for abbreviations.

Nevertheless, although there are many recourses to assist in translation, the better your knowledge of the original language and the topic of the research, the less the possibility of incomprehension and misunderstanding is, i.e. work with the specialized technical text proved the necessity in the knowledge of the object of translation and corresponding terms in both original and target languages.

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LITERARY TRANSLATION AS AN IMPORTANT FACTOR OF INTERCULTURAL COMMUNICATION

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The current level of comparative researches is defined within the meaning of the phenomenon of translation as an independent literary process as a special stratum of literary works that have a definite place in the system of literary relationships with their characteristics, typological properties, laws of operation, caused by a double source of appearance at the crossroads of cultures.

Learning of translation as a complex interliterary phenomenon become active over the last time in Ukraine. Significantly, the focus on literary translation as a literary relations factor was observed as early as in the nineteenth century. Ukrainian translation of the nineteenth century has been focused on the intelligent layers, which were mostly bilingual (multilingual). So it played not only an information function (potential readers could read definite literary works due to metropolitan language translations – Russian, German, or in the original), but above all – national creative function. This translation allowed for a direct, without intermediaries, Ukrainian cultural communication with foreign literature and helped to establish the idea of the possibility of direct cultural contacts between Ukrainians and foreigners, and therefore the idea of cultural and political equality of Ukrainians with other European nations, says Maxim Strikha [11, 9]. Thus, the translation occupies a special place in the literary process and is one of the obvious manifestations of interliterary (and then some way of cross-cultural) interaction, which is considered primarily in