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THE TRANSFORMATIVE ROLE OF ICT IN SCIENTIFIC TRANSLATION

Annotation

It is true that according to scientists' claims, science and inventions never stay in one sphere; they always change and open new doors to people. Admittedly, the role of information and communication technologies has changed rapidly, and many scientific works, official documents, and reports on the computer have been dramatically automated. Also, this opportunity has given its hand to the field of translation. First, machine translation was created, and all military documents were used to be translated by the government. Then, this invention rapidly spread out all over the world. After several years, many MT systems were changed, and the size of the information was maximized. Currently, without the assistance of translation, it is difficult to imagine using information communication technology. A lot of fields have transferred from translating documents by hand to translating them using computers. This includes translating resumes and email addresses of possible companies among other documents. However, additional actions also require the use of information communication technology, the translator's communication skills with the client, and the capacity to choose and combine materials for later translation. Furthermore, a lot of researchers primarily utilize translation tools to find fresh data in the disciplines of IT, business, law, medical, and scientific writing. The vast potential of translation systems, the scientific-theoretical aspects of ICT in translation, and ICT's function in ST are all covered in this article.

Key words: Informatization, ICT, machine translation, computer-aided translation, scientific text, the process of translation, cross-cultural communication, real-time collaboration, language translation, automation.

ILMIY TARJIMADA AKTNING TRANSFORMATIV O‘RNI

Annotatsiya

Dunyo olimlarning ta’kidlashicha, ilm-fan va ixtirolar hech qachon bir sohada qolmaydi, ular doimo o‘zgarib, insoniyatga yangi eshiklarni ochadi. Axborot-kommunikatsiya texnologiyalarning o‘rni tez rivojlangan sari kompyuterda ko‘plab ilmiy ishlar, rasmiy va hisobotlar avtomatlashtira boshlandi. Shuningdek, bu imkoniyat tarjima sohasida ham keng imkoniyat ochdi. Dastlab, mashina tarjimasi ixtiro qilindi va barcha harbiy hujjatlar hukumat tomonidan tarjima qilishni yo‘lga qo‘yishdi. Keyinchalik bu MT tizimlaridan foydalanish butun dunyoga tarqaldi. Oradan bir necha yil o‘tgach, ko‘plab zamonaviy MT tizimlari ixtiro qilina boshlandi va buning negizida juda ko‘p hajmdagi qog‘oz ma’lumotlarni tarjima qilish hajmini maksimal darajada oshirdi. Hozirgi vaqtda tarjima yordamisiz axborot-kommunikatsiya texnologiyalaridan foydalanishni tasavvur qilish qiyin. Ko‘plab soha vakillari inson tarjimasidan kompyuter tarjimasiga o‘tib, rezyumelarni, potentsial mijozlarning elektron pochta manzillari va boshqalar kabi hujatlarni tarjima qilish inson aralashuvisiz amalga oshirishmoqda. Shu bilan birga axborot kommunikatsiya texnologiyalari, tarjimonning mijoz bilan muloqot qilish qobiliyati, va keyinchalik tarjima qilish uchun matnlarni tanlab olish sintez qila olish kabi boshqa faoliyatida muhim ahamiyatga ega. Bundan tashqari, ko‘plab tadqiqotchilar IT, biznes, huquq, tibbiyot, ilmiy matn va boshqa sohadagi yangi ma’lumotlarni olish uchun asosan tarjimon vositalaridan foydalanadilar. Ushbu maqolada, tarjima tizimlarining keng imkoniyatlari tarjimada AKT ning ilmiy-nazariy qismlari va STda AKTning o‘rni haqida so‘z boradi.

Kalit so‘zlar: Axborotlashtirish, AKT, mashina tarjimasi, kompyuter yordamida tarjima, ilmiy matn, tarjima jarayoni, madaniyatlararo muloqot, real vaqtda hamkorlik, til tarjimasi, avtomatlashtirish.

ТРАНСФОРМАТИРУЮЩАЯ РОЛЬ ИКТ В НАУЧНОМ ПЕРЕВОДЕ

Аннотация

Действительно, по утверждениям учёных, наука и изобретения никогда не остаются в одной сфере; они всегда меняются и открывают людям новые двери. Следует признать, что роль информационных и коммуникационных технологий быстро изменилась, и многие научные работы, официальные документы и отчеты на компьютере были резко автоматизированы. Также эта возможность приложила руку к сфере перевода. Сначала был создан машинный перевод, и правительство использовало для перевода все военные документы. Затем это изобретение быстро распространилось по всему миру. Через несколько лет многие системы МП были изменены, а размер информации был максимальным. В настоящее время без помощи перевода трудно представить использование информационных коммуникационных технологий. Многие области перешли от перевода документов вручную к их переводу с помощью компьютеров. Это включает в себя перевод резюме и адресов электронной почты возможных компаний, а также других документов. Однако дополнительные действия также требуют использования информационно-коммуникационных технологий, навыков общения переводчика с клиентом, умения выбирать и комбинировать материалы для последующего перевода. Кроме того, многие исследователи в первую очередь используют инструменты перевода для поиска свежих данных в таких дисциплинах, как информационные технологии, бизнес, право, медицина и научная литература. В этой статье рассматриваются огромный потенциал систем перевода, научно-теоретические аспекты использования ИКТ в переводе и функции ИКТ в СТ.

Ключевые слова: Информатизация, ИКТ, машинный перевод, компьютерный перевод, научный текст, процесс перевода, межкультурная коммуникация, сотрудничество в режиме реального времени, языковой перевод, автоматизация.

Introduction. Currently, the informatization of the professional training process for a specialist in the field of foreign language education occurs concurrently with the development of a foreign language and requires a thorough understanding of information and communication technologies. Rethinking the philosophy of how the educational process is organized and how foreign language education is managed is crucial given the current state of active informatization of the educational system[1]. It is a well-established fact that information technology can enhance a course of study by providing a variety of computer

technology options, which in turn makes the course more engaging, effective, and appealing for students. The programs are invaluable resources for both teachers and students because of the incredibly high level of clarity of the material delivered, the interconnectedness of the numerous course components, complexity, and interaction. For instance, the use of electronic teaching aids in the classroom offers benefits like helping students become more accustomed to communicating in a foreign language and developing integrative language and information abilities in the use of computer systems.

Literature review. Translation is just one area in which information technology continues to have a significant influence on research and society at large in the twenty-first century. In this way, there's a lot of hope that soon enough, computer technology will increase the number of translators. Numerous scientists have shared their perspectives on this topic. A.N. Marchenko, M. Miyayeva, S. Seldean, V.A. Kuznetsov, T.Y. Nikishikhina, V.V. Grinshkun, T.I. Kuznetsova, and A.N. One can reference scientists like Ushakova and E. A. Morozkina as an example[2].

Research methodology. Russian scientist, T. Y. Nikishikhina claims that the advantages of using information and communication technologies are as follows:

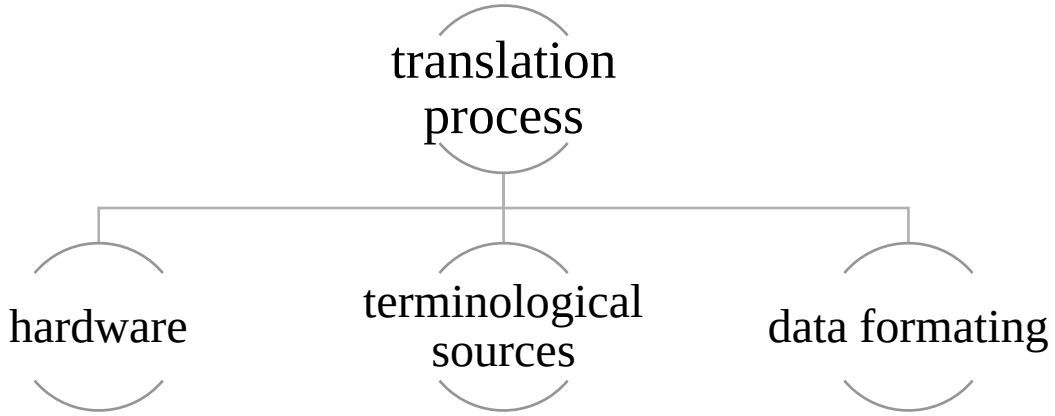
1) the ability to compactly store a large amount of information;
2) ease of updating information (supplemented and expanded);
3) extensive search capabilities;
4) ability to perform interactive exercises and tests;
5) visibility: ample opportunities for constructing visual models, and presenting graphic and audio information related to various aspects of translation activity;
6) good structure;
7) the opportunity to receive professionally relevant information for translators online, which is constantly updated[6].

The translation process currently makes use of a number of contemporary information technology classifications. We provide a categorization according on the following elements:

Graphic elements. The classification of the translation process

Hardware includes card readers and scanners. Terminological sources includes online dictionaries, and reference books comprise the information and reference base. Data formatting software includes tools for data aggregation, archiving, and translation search; machine translation.

Analysis and results. Cloud technologies are evolving at a rapid pace these days. Compared to conventional desktop systems, cloud-based translation memory solutions are more user-friendly and convenient. There is a large selection of professional cloud products available to translators. For small and medium-sized translation service providers as well as indepen



dent translators, the features of cloud-based translation memory systems are revolutionary[8].

Three key groups of cloud information technology can be differentiated from their widespread application in translation activities:

CAT systems (Computer Aided/Assisted
Translation)
Trados Studio Professional
MT (Machine Translation)

The most widely used are CAT (Computer Aided/Assisted Translation) systems, which have been around for about 30 years and are always being enhanced. Translation memory, the foundation of CAT technology, allows for term homogeneity throughout extensive projects. The translator does not have to waste time reviewing terminology during subsequent translations because words, phrases, and even full sentences that they have already processed are saved in the system. Together with clients or other translators, these databases can be utilized to swiftly edit translations, fix errors, and standardize terminology and style[4]. Considering financial, legal, and technical processes involve a lot of text repetition, CAT systems are particularly useful in these fields. Though CAT systems make translators' jobs much easier, machine translation is a separate piece of technology that may be needed for specific tasks[5].

Translation memory, which keeps previously translated phrases or phrases and lets you load and unload different files using different filters, is a valuable resource. Slang and vulgarisms can be worked with by the translator thanks to certain programs' usage of "fuzzy matching", also known as a fuzzy matching algorithm. The translator has the last say over the translation's final version, which is the primary distinction between CAT and machine translation. By using this technology, the translator's work can be completed up to 80% more efficiently[9].

Scientific Translation: What Is It? Technical translation has a subset known as scientific translation. Scientific translation specializes in scholarly content such as journal articles, academic theses, research papers, science webinars, etc., whereas technical translation has wider usage. The following academic disciplines frequently need translations[10]:

Medicine and pharmacology: clinical trials, legal documents, research results.

Life sciences: papers on biology, astronomy, zoology, chemistry, geology, physics;

Social science: papers on anthropology, sociology, psychology, political science, economics;

Mathematics.

Professionals in scientific translation need to be experts in the relevant topic of study. In addition, they need to be resourceful, proficient in both source and target languages, and flexible enough to adjust to the evolving styles of scientific publications[11].

Difficulties in Scientific Translation. A thorough examination and a solid justification of a scientific issue constitute the essence of scientific texts (particularly in papers detailing research results, hypotheses, theories, etc).The translator's objective is to accurately interpret the scientific data and present the information to the reader in a way that is as close to the original as possible. This condition gives rise to several difficulties that professionals deal with on a regular basis. Check out the most frequent problems that the translators have to resolve[12].

Complex terminology. Translating jargon and domain-specific words is never simple, but there are extra complexities and difficulties when translating scientific material. In their research articles, scientists frequently introduce new terms. As a translator, it might be difficult to decide how best to adapt these terms to the target language. A specialist needs both experience and knowledge to address this issue[3].

The task of translating science is extremely difficult. A translator for science needs to be:

Fluent in the source language;

Fluent in the target language;

Well-educated in translation techniques;

An expert in the chosen field of study.

The expertise of professional translators in this field is enormous. Becoming an expert in scientific translation is a challenge in itself.

Comprehending scientific translations. The process of translating scientific texts, documents, and publications from one language to another while preserving the precision, coherence, and consistency of the scientific vocabulary employed is referred to as scientific translation. Scientific translations demand more than simply word translations; they also call for a thorough comprehension of the subject matter and a working grasp of the scientific vocabulary in both languages. Translations of research articles, patents, lab reports, and other scientific documents that must be exchanged across language borders are examples of scientific translations.

The goal of scientific translations is to ensure that the content of the original document is accurately and completely communicated in the target language, facilitating effective cross-linguistic and cross-cultural collaboration within the scientific community. This is especially crucial in the increasingly globalized scientific community of today, as research and innovation frequently call for cross-border cooperation and knowledge sharing[7].

The impact of ICT in ST. In the dynamic realm of scientific research and communication, Information and Communication Technologies (ICTs) are crucial for fostering international cooperation and bridging linguistic divides. technology is crucial to highlight the role that ICT plays in improving communication, speeding up the spread of knowledge, and reducing obstacles to scientific advancement when examining the many ways in which technology affects scientific translation. It is feasible to ascertain the significance of ICT and its challenges in the translation of scientific literature by examining the following key elements.

1. Real-Time Collaboration: ICT facilitates real-time collaboration among scientists worldwide, enabling seamless communication regardless of geographical and linguistic barriers. Tools like video conferencing, instant messaging, and collaborative platforms empower researchers to exchange ideas, data, and findings in real-time, fostering a dynamic global scientific community.

2. Language Translation Tools: Advanced language translation tools, powered by artificial intelligence, are revolutionizing scientific translation. These tools not only provide accurate translations of research papers, documents, and communication but also contribute to breaking down language barriers, ensuring that scientific knowledge is accessible to a broader audience.

3. Enhanced Accessibility: ICT has democratized access to scientific information by offering translation services for diverse languages. This increased accessibility ensures that researchers from different linguistic backgrounds can engage with and contribute to the global scientific discourse, promoting inclusivity and diversity in scientific endeavors.

4. Global Data Integration: With the aid of ICT, researchers can integrate data from various sources globally. This cross-cultural data integration enables a more comprehensive understanding of scientific phenomena and promotes collaboration in addressing complex research questions that require diverse datasets.

5. Efficient Literature Review: Scientific translation through ICT expedites the literature review process. Researchers can access and comprehend studies from different parts of the world without language barriers, allowing for a more efficient and comprehensive understanding of existing research relevant to their work.

6. Multilingual Scientific Journals: The advent of ICT has led to the development of multilingual scientific journals. This initiative ensures that groundbreaking research is published in multiple languages, widening its reach and impact. Scientists can disseminate their findings to a global audience, fostering a more interconnected and collaborative scientific community.

7. Cross-Cultural Collaboration: ICT facilitates cross-cultural collaboration by enabling scientists to work together irrespective of cultural and linguistic differences. This promotes a rich exchange of ideas, methodologies, and perspectives, ultimately contributing to a more robust and well-rounded scientific landscape.

Conclusion. Based on the data and viewpoints presented above, it can be concluded that information technology is having a big impact on the translation industry and that translation is becoming simpler, more affordable, and more effective. A new perspective on the conventional philosophy or practice of translation is brought about by the development of new technology tools. Simultaneously, the aforementioned viewpoints and arguments highlight the significance of computer technology's involvement in translating scientific and popular publications. The utilization of the newest information technology for

humankind's future has been made feasible by the swift development of translation software. As a result, via the sharing of information, science and representatives from all fields, together with mankind, establish a foundation for eradicating deficiencies in this field. Furthermore, the role of ICT in scientific translation is transformative, reshaping the way researchers communicate, collaborate, and access information. As technology continues to advance, the integration of ICT in scientific endeavors will undoubtedly play an increasingly vital role in fostering a globally connected and collaborative scientific community.

REFERNCES

1. Grinshkun V. V. Razvitie integrativnyx podkhodov k sozdaniyu sredstv informati zatsii obrazovaniya. 2004.
2. Kuznetsova T.I., Marchenko A.N., Kuznetsov I.A. “Theory and practice of teaching English language and technical VUZe”. M. 2014
3. Miyayeva M. Scientific Translation: Everything you Need to Know. https://palexgroup.com/blog/scientific-translation-everything-you-need-to-know/
4. Morozkina E.A., Shakirova N.R. “Ispolzovanie informatsionnyx tehnologii dlya optimizatsii protsessa perevoda”. Vestnik Bashkirskogo universiteta. 2012. No. 1. S. 544–546
5. Morozkina E.A., Shakirova N.R. “Ispolzovanie informatsionnyx tehnologii dlya optimizatsii protsessa perevoda” Vestnik Bashkirskogo universiteta. 2012. No. 1. S. 556
6. Nikishikhina T. Y. Informatsionno kommunikasionnye tehnologii kak sredstvo povyshenia professionalnoy motivatsii spetsialistov sfery perevoda i perevodovedeniya. Kursky Gosudarstvennyy University. 2012 - №1. - S. 172
7. Seldean.S. The Science of Scientific Translations. 2023. https://www.daytranslations.com/blog/the-science-of-scientific-translations/
8. Ushakova V.A. The use of information technologies in the activity of a current translator. D. Mendeleev University of Chemical Technology of Russia, Moscow, Russia. TOM XXXV. 2021. № 11. – S. 21
9. Ushakova V.A. The use of information technologies in the activity of a current translator. D. Mendeleev University of Chemical Technology of Russia, Moscow, Russia. TOM XXXV. 2021. № 11. – S. 23
10. https://palexgroup.com/blog/scientific-translation-everything-you-need-to-know/
11. https://palexgroup.com/blog/scientific-translation-everything-you-need-to-know/
12. https://palexgroup.com/blog/scientific-translation-everything-you-need-to-know/