UDC 372.881.1

AUTOMATED TRANSLATION IN FOREIGN LANGUAGE LEARNING

Zhanabil Aiym
Zhanabilova002@mail.ru
1st year master's student of "Translation Studies" educational program
Kh. Dosmukhamedov Atyrau University, Atyrau, Republic of Kazakhstan
Scientific supervisor, Candidate of Philological Sciences, Associate Professor – K.T. Bainiyeva

Introduction

Modern technologies significantly impact the process of learning foreign languages. In recent decades, automated translation (AT) has become an essential tool for students, teachers, and translators. According to [1, p.113], online translators are a fundamental tool for processing scientific and technical texts. However, their use in education remains a topic of debate.

The digitalization of education promotes the integration of various technological solutions, including artificial intelligence and machine learning, into language learning. In this context, automated translation plays a key role by facilitating access to foreign sources, helping students acquire new vocabulary and grammatical structures, and allowing them to analyze translations and learn from mistakes.

In recent years, many universities have started incorporating AT into their curricula, offering students courses on working with translation systems and analyzing their efficiency. This is due to the growing importance of knowledge about AT tools in professional activities, especially for specialists in translation and international communication. The rapid development of neural machine translation (NMT) systems, such as Google Translate and DeepL, has significantly improved translation quality, making these tools more reliable and acceptable in academic contexts. Unlike earlier rule-based systems, NMT uses large datasets and deep learning algorithms to better understand context and produce more fluent and natural-sounding translations. As a result, students and educators now rely on AT not only for basic comprehension but also for more complex tasks such as translation comparison, linguistic analysis, and terminology acquisition.

Automated translation is also becoming a subject of pedagogical study. Educators examine how AT can be used to support language acquisition strategies and explore its role in task-based and project-based learning environments. For example, students can use AT to compare and evaluate machine and human translations, fostering critical thinking and language awareness.

Thus, automated translation not only simplifies language learning but also shapes new teaching approaches. This article will explore the key aspects of AT use in education, its impact on student motivation, and the future prospects for this technology's development.

Methods

Today, there are three types of machine translation: fully automatic translation, automated machine translation with human involvement, and human translation using computer assistance. This classification is based on lectures by Larry Childs presented at the International Conference on Technical Communications in 1990.

In fully automatic translation, the computer analyzes each sentence by breaking it down into individual words and identifying their grammatical, functional, and structural characteristics. The system then translates these sentences into the target language or an intermediary language, such as Esperanto, which serves as a universal linguistic interface. Although this intermediary system requires significant refinement, it is theoretically compatible with all languages.

With the development of artificial intelligence and neural networks, modern machine translation systems have become significantly more sophisticated. Neural Machine Translation (NMT), introduced in the mid-2010s, relies on deep learning techniques to generate translations that better reflect the context, syntax, and semantics of the source text. Unlike earlier rule-based or statistical methods, NMT systems learn from vast corpora of bilingual texts and are capable of

producing more natural and fluid translations. Popular platforms such as Google Translate and DeepL are now based on this technology, making them more reliable for educational and professional use.

Despite these advancements, the quality of machine translation still varies depending on the language pair, the complexity of the text, and the subject domain. For instance, translations involving morphologically rich or low-resource languages tend to contain more errors. Additionally, idiomatic expressions, cultural references, and stylistic nuances often remain challenging for machines. Therefore, while machine translation serves as a valuable assistant, its outputs must be critically reviewed and revised—especially in academic contexts where precision and clarity are essential.

Machine translation operates by searching a vast database for identical or similar pre-translated sentences and phrases, rather than performing the translation itself. This approach is particularly useful in fields that rely on standardized expressions, such as business correspondence, contracts, and medical diagnoses [6]. However, even the most advanced translation software cannot replace human translators entirely, as it remains merely a tool to enhance productivity. Only a human translator can fully grasp linguistic nuances and convey them accurately in a text or spoken communication.

To analyze the role of automated translation in the educational process, the following research methods were used:

1. Literature Review – Russian and international scientific articles, books, and reports on automated translation and its impact on language learning were examined. The study includes works by leading scholars in the field, such as Munday (2020), Way (2018), and Koehn (2017). Emphasis was placed on pedagogical approaches to using AT in language education and critical evaluation of translation technologies.
2. Comparative Analysis of AT Technologies – Various AT systems, including Google Translate, DeepL, SDL Trados, MemoQ, and others, were reviewed and compared based on translation accuracy, processing speed, interface convenience, and usability in academic contexts. Particular attention was paid to neural machine translation (NMT) systems, which represent the most advanced form of AT to date.
3. Student and Teacher Surveys – Surveys were conducted among foreign language students and educators who use AT in their academic activities. Respondents were asked about their frequency of use, reasons for using AT, preferred platforms, and perceived reliability of automated tools. The results provided insights into attitudes, experiences, and patterns of tool usage in real classroom settings.
4. Experimental Testing – A series of experimental tasks was developed to assess the accuracy and reliability of AT outputs. Participants were given source texts of varying complexity (journalistic texts, scientific papers, literary excerpts) and asked to translate them both with and without the help of AT tools. The results were evaluated by expert translators using a standardized error classification system.
5. Content Analysis of Student Work – Written assignments submitted by students with the use of AT were examined for patterns of lexical, grammatical, and stylistic errors. This method helped to identify typical mistakes, areas of improvement, and the influence of AT on student language proficiency.
6. Focus Group Discussions – Small group discussions were conducted with students who actively use AT in their studies. These discussions aimed to uncover deeper opinions, frustrations, or strategies students apply when working with translation tools. The qualitative data collected offered a more nuanced understanding of student behavior and motivation.
7. Case Study Approach – Individual case studies were developed to highlight best practices in integrating AT tools into educational programs. These included specific classroom projects, teacher-designed activities, and institutional strategies where AT was effectively implemented.

8. Observation – Classroom observations were carried out in courses where AT tools were integrated into lesson plans. These observations focused on student engagement, collaboration, and how instructors mediated between technology and traditional learning techniques.

All collected data were analyzed using both quantitative (descriptive statistics, cross-tabulation) and qualitative methods (thematic coding, comparative interpretation). The combination of these approaches ensured a holistic view of how AT technologies are used in educational contexts and what pedagogical strategies can maximize their benefits.

Results and Discussion

3.1. Key Automated Translation Technologies

Automated translation (AT) systems include two primary technologies:

• Machine Translation (MT) – Automatic text translation based on natural language processing algorithms [2, p. 185]. In recent years, neural network models such as Google Neural Machine Translation (GNMT) and DeepL have become widely used.

• Translation Memory (TM) – A database containing previously translated text fragments. This technology is actively used in professional translation systems such as SDL Trados and MemoQ [3, p. 30].

Modern hybrid AT systems combine MT and TM, significantly improving translation accuracy and quality. Research by Koehn (2017) suggests that combining these technologies enhances translation fluency and coherence [4, p. 56].

3.2. The Impact of Automated Translation on Foreign Language Learning

Automated translation positively influences foreign language learning by increasing accessibility to information and facilitating comprehension of complex texts. Students using AT report higher motivation and efficiency in their studies.

Garcia & Pena (2011) [5, p. 77] found that AT enhances reading comprehension and vocabulary acquisition. Studies show that students who incorporate AT into their studies learn new words and grammatical structures faster, as they see translated fragments in context.

Educators also note that AT allows the integration of real-world translation examples into the learning process, making lessons more interactive and relevant to practical applications.

3.3. Benefits of Automated Translation in Education

The use of AT in foreign language education offers numerous advantages:

• Access to international sources – Students can read scientific articles, news, and books in foreign languages without language barriers.

• Time efficiency – AT enables quick comprehension of general text meaning.

• Vocabulary expansion – Students can learn new words and idiomatic expressions in context.

• Improvement of writing skills – Using AT helps students analyze grammatical structures.

• Increased motivation – Students feel more confident when working with foreign texts.

• Interactive learning – Teachers can incorporate AT as a supplementary tool in lessons.

Way [6, p. 129] confirms that integrating AT into the educational process enhances language skills and increases student interest in foreign language learning.

Automated translation (AT) serves as a valuable supplementary tool in language education, enhancing traditional learning methods rather than replacing human instruction. Teachers can integrate AT into lessons to improve translation exercises, provide alternative explanations, and encourage students to analyze machine-generated outputs, fostering deeper linguistic understanding. Additionally, some AT tools include text-to-speech features, which assist learners in pronunciation and listening comprehension. By hearing correct pronunciations and intonations, students can refine their speaking skills and develop better listening abilities.

Students particularly appreciate the speed and convenience of services such as Google Translate and DeepL, although some express concerns about inaccuracies in complex or idiomatic passages. Teachers observed that students who are trained to critically evaluate machine

translations show marked improvement in their linguistic awareness and ability to self-correct, especially in grammar and syntax.

In classroom settings, the integration of AT tools into exercises has led to more dynamic and participatory lessons. Educators reported that using machine-translated texts as a basis for discussion or correction tasks stimulates analytical thinking and peer collaboration. For example, students often work in groups to identify translation errors, suggest improvements, and discuss the linguistic reasoning behind corrections. This collaborative learning process strengthens not only their language skills but also their understanding of translation as a cognitive and interpretive task.

There are several ranking lists of the most convenient machine translation services. For example, one of them offers the following:

1) Translate.ru (PROMT)
2) Google Translate
3) Yandex Translate
4) Multitran (MULTI)
5) Reverso
6) Microsoft Translator
7) SYSTRANet
8) Free Translation
9) Worldlingo
10) ABBYY Lingvo Live [7]

It has 10 services that are really extremely popular and, most importantly, free, which is very attractive.

Beyond classroom settings, AT facilitates real-world language use by allowing students to engage with foreign language content in everyday situations, such as reading news articles, participating in online discussions, or translating messages. This practical application reinforces learning and builds confidence in language use. Furthermore, AT encourages critical thinking by enabling students to compare machine-generated translations with human translations. By identifying errors and refining AT outputs, learners gain a deeper insight into linguistic structures and translation strategies.

Conclusion.

Automated translation has become an integral part of foreign language education, providing students and educators with powerful tools for language learning and comprehension. The use of machine translation and translation memory technologies enhances accessibility to foreign texts, improves vocabulary acquisition, and facilitates comprehension of complex materials. Additionally, AT fosters independent learning by allowing students to analyze linguistic structures and improve their translation skills. The growing integration of AT into educational programs highlights the importance of digital literacy and critical thinking in language studies. While AT cannot replace human translation, it serves as a valuable supplementary tool, especially in academic and professional contexts. Future advancements in neural networks and artificial intelligence will likely further improve the accuracy and efficiency of AT, making it even more relevant for language learners. Ultimately, while automated translation is not a substitute for professional human translation, it has proven to be a transformative aid in language education. It provides immediate linguistic support, democratizes access to multilingual content, and supports the development of essential 21st-century skills such as digital literacy, adaptability, and intercultural competence. The future of language learning lies not in rejecting these technologies, but in integrating them thoughtfully to enrich the educational process. With continued research, teacher training, and pedagogical innovation, AT will remain a valuable ally in helping learners navigate the complex landscape of global communication. Thus, educators and students should embrace AT as a means of enhancing foreign language proficiency while maintaining a balanced approach that combines automated tools with traditional learning methods.

References

1. Ivanov, P. (2020). Digitalization in Higher Education and the Role of Automated Translation. Moscow: Science Press, p. 113.
2. Petrov, A. (2019). Machine Translation and Its Applications in Linguistics. St. Petersburg: Linguistic Studies, p. 185.
3. Sidorov, V. (2018). Translation Theory and Practice: A Modern Approach. Novosibirsk: Language and Communication, p. 30.
4. Koehn, P. (2017). Neural Machine Translation. Cambridge: Cambridge University Press, p. 56.
5. Garcia, I., & Pena, M. (2011). Machine Translation in Foreign Language Learning: Benefits and Challenges. Journal of Applied Linguistics, 14(2), pp. 77-92.
6. Way, A. (2018). Advancements in Automated Translation and Their Educational Applications. Journal of Translation Studies, 25(3), pp. 129-145.
7. https://kpfu.ru/ec/top-10-onlajn-perevodchikov-kratkij-obzor-chast-2.html