

COMPARATIVE ANALYSIS OF AI AND HUMAN TRANSLATION

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Abstract: The rapid development of artificial intelligence technologies has significantly transformed the field of translation studies. Among modern AI-based systems, ChatGPT has become one of the most widely used tools for automatic text generation and translation. This thesis examines the comparative analysis of ChatGPT translation and human translation, focusing on their strengths, weaknesses, and practical effectiveness in English-Uzbek translation processes. The study investigates translation quality in terms of grammatical accuracy, semantic equivalence, contextual understanding, cultural adaptation, and stylistic appropriateness. Comparative and descriptive research methods are applied to analyze different translated texts produced by ChatGPT and professional human translators. The findings demonstrate that ChatGPT provides fast, accessible, and grammatically accurate translations for general and informational texts. However, the research also reveals that AI-generated translations may contain semantic inaccuracies, literal interpretations, and cultural misunderstandings, especially in idiomatic expressions, literary texts, and culturally sensitive materials. Human translators, on the other hand, possess contextual awareness, emotional understanding, and cultural competence that allow them to produce more natural and communicatively effective translations. The study concludes that ChatGPT should be considered an assisting tool rather than a complete replacement for professional translators. The integration of artificial intelligence with human expertise may improve translation efficiency and quality in the future.

Keywords: ChatGPT, Human Translation, Artificial Intelligence, Machine Translation, Translation Studies, Comparative Linguistics, English Language, Uzbek Language, Semantic Equivalence, Cultural Adaptation

Introduction

Artificial intelligence technologies have become increasingly important in modern linguistics and translation studies. AI-powered systems are now capable of translating texts, generating content, and assisting users in multilingual communication. Among these technologies, ChatGPT has gained global popularity because of its advanced language processing capabilities.

The relevance of this study is connected with the growing use of AI translation systems in education, science, business, and everyday communication. Many users rely

on ChatGPT for translating texts quickly and conveniently. However, questions remain regarding the quality, reliability, and cultural accuracy of AI-generated translations compared with human translation.

The theoretical significance of the research lies in analyzing translation quality within the framework of Translation Studies and Comparative Linguistics. The practical significance involves identifying situations in which ChatGPT translation is effective and cases where human translation remains essential.

Literature Review

Translation has traditionally been regarded as a human intellectual activity that requires linguistic competence, cultural awareness, and contextual interpretation. Eugene Nida emphasized the importance of preserving meaning and communicative effect in translation. Peter Newmark also argued that translation involves both semantic and cultural adaptation.

Recent developments in artificial intelligence and neural language models have introduced new possibilities in machine translation. Researchers state that AI systems can process large volumes of text rapidly and provide grammatically acceptable translations. However, scholars also note that machine translation systems still face challenges with figurative language, idioms, emotional tone, and cultural references.

Studies on neural machine translation show that AI tools are more effective in translating technical and informational texts than literary works. Human translators continue to outperform AI systems in creativity, stylistic adaptation, and pragmatic interpretation.

Main Part

ChatGPT possesses several advantages in translation processes. First, it provides extremely fast translation results. Users can translate texts instantly without requiring professional translation services. This saves time and increases accessibility for students, teachers, and researchers.

Second, ChatGPT can generate grammatically correct and coherent sentences in many cases. The system is capable of translating scientific and informational texts with relatively high accuracy. It also supports multilingual communication and language learning.

Another important advantage is availability. Unlike human translators, ChatGPT can be used at any time and often free of charge. This makes translation technologies accessible to a larger number of users worldwide.

Despite these advantages, ChatGPT translation also has several limitations. One major weakness is contextual misunderstanding. AI systems may translate words literally without fully understanding the intended meaning of a text.

For example, idiomatic expressions such as “spill the beans” or “under the weather” may be translated incorrectly into Uzbek because ChatGPT sometimes fails

to recognize figurative meanings. Cultural references and nationally specific expressions also create difficulties for AI systems.

Literary translation presents another challenge. Poems, metaphors, humor, and emotionally expressive texts require creativity and cultural sensitivity. Human translators can interpret implicit meanings and adapt texts according to communicative context, whereas AI systems often produce mechanically structured translations.

Another important issue concerns emotional intelligence. Human translators understand tone, social context, irony, and interpersonal meaning more effectively than artificial intelligence systems. This allows them to create more natural and culturally appropriate translations.

Comparative analysis demonstrates that ChatGPT performs efficiently with formal, academic, and technical texts but remains less effective in translating culturally rich and stylistically complex materials.

Results and Discussion

The research demonstrates that ChatGPT has become a valuable technological tool in modern translation activities. AI-assisted translation systems improve speed, accessibility, and convenience in multilingual communication. ChatGPT is particularly effective in translating simple informational and scientific texts.

However, the study also reveals important limitations of AI translation. Semantic inaccuracies, literal translation, contextual misunderstanding, and insufficient cultural adaptation remain major problems in ChatGPT-generated translations. English-Uzbek translation is especially challenging because of grammatical and cultural differences between the two languages.

The findings indicate that human translators continue to play a crucial role in ensuring translation quality, stylistic naturalness, and cultural equivalence. Therefore, artificial intelligence should complement human translation rather than replace it entirely.

Future research may focus on improving contextual understanding, emotional interpretation, and cultural adaptation in AI translation systems. Expanding Uzbek digital linguistic resources may also improve translation accuracy for low-resource languages.

Conclusion

ChatGPT has significantly influenced modern translation studies by providing fast and accessible translation services. The system demonstrates high effectiveness in translating general informational texts and supporting multilingual communication.

Nevertheless, the study concludes that ChatGPT still cannot fully replace professional human translators. Human translation remains superior in cultural interpretation, emotional understanding, creativity, and stylistic adaptation. The most effective translation results may be achieved through cooperation between artificial

intelligence technologies and human linguistic expertise.

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