

**A COMPARATIVE ANALYSIS OF AI-GENERATED AND HUMAN-WRITTEN ENGLISH-
UZBEK TRANSLATIONS**

<https://doi.org/10.5281/zenodo.20560233>

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Abstract: *This theoretical article examines the differences between AI-generated and human-written English–Uzbek translations. Drawing on contemporary translation studies and recent research on artificial intelligence, the paper analyzes translation quality through the lenses of functional equivalence, communicative translation, and socio-cultural approaches. Rather than conducting empirical research, the study synthesizes existing literature to explore how AI systems and human translators differ in accuracy, fluency, cultural adaptation, creativity, and contextual interpretation. The review demonstrates that AI translation technologies have achieved substantial progress in lexical and grammatical accuracy; however, limitations remain in handling figurative language, cultural references, and pragmatic meaning. Human translators continue to play a critical role in ensuring communicative effectiveness and cultural appropriateness. The paper argues that the future of translation lies in collaboration between AI systems and human expertise rather than replacement.*

Keywords: *Artificial Intelligence, Human Translation, Machine Translation, English–Uzbek Translation, Translation Studies, Translation Quality*

INTRODUCTION

Artificial intelligence has become one of the most influential technological developments of the twenty-first century. Among its many applications, machine translation has attracted considerable attention because it has transformed the way people communicate across languages. Modern AI-based systems can translate texts almost instantly, allowing users to access information and interact globally. As a result, questions have emerged regarding the quality of machine-generated translations and whether they can compete with professional human translators.

Translation is not merely the transfer of words from one language into another. It involves the transfer of meaning, culture, context, and communicative intention. English–Uzbek translation presents particular challenges because the two languages belong to different language families and reflect different cultural traditions. Consequently, successful translation requires more than grammatical accuracy.

Recent studies demonstrate that AI systems have become increasingly capable of producing fluent translations (Fu & Liu, 2024). Nevertheless, scholars continue to emphasize the importance of human expertise in achieving culturally appropriate and contextually accurate translations (Falempin & Ranadireksa, 2024). This article provides a theoretical comparison of AI-generated and human-written English–Uzbek translations and discusses their strengths and limitations.

Literature Review

The relationship between machine translation and human translation has been examined extensively in translation studies. Zong (2018) argued that machine translation should be viewed as a supportive technology rather than a replacement for professional translators. Similarly, Li and Chen (2019) found that machine translation performs effectively in lexical and grammatical processing but often struggles with contextual meaning and ambiguity.

Recent developments in generative artificial intelligence have significantly improved translation quality. Fu and Liu (2024) reported that AI-generated translations can achieve high levels of accuracy in scientific and technical texts. However, they also noted that human translators outperform AI in discourse coherence and contextual interpretation. These findings suggest that linguistic accuracy alone is insufficient for evaluating translation quality.

Falempin and Ranadireksa (2024) argued that the future of translation lies in collaboration between humans and machines. Their study emphasized that AI tools can increase productivity while human translators ensure cultural appropriateness and communicative effectiveness. Babazade (2026) similarly highlighted that creativity and artistic interpretation remain difficult for AI systems to reproduce.

Research conducted by Shahgaldiyev et al. (2025) demonstrated that successful translation depends on intercultural competence in addition to linguistic knowledge. The authors argued that translation quality should be evaluated according to how effectively messages are communicated across cultural boundaries. Likewise, Shahmerdanova (2025) identified both opportunities and challenges associated with the growing use of AI technologies in translation.

Studies focusing on specialized genres further support the continued importance of human translators. Al Romany and Kadhim (2024) found that legal translation requires precision and contextual understanding that AI systems do not always provide. Doan (2025) reported similar findings in literary translation, where human translators were more successful in preserving emotional tone and stylistic features. Finally, Al Mudarra (2025) concluded that human translators will remain essential despite ongoing technological advancements because translation involves interpretation as well as language transfer.

Theoretical Framework

This study is grounded in several influential theories of translation. Nida's Functional Equivalence Theory argues that translation should produce a similar effect on target

readers as the original text produces on source readers. From this perspective, successful translation depends on communicative effectiveness rather than literal word-for-word correspondence. Newmark's distinction between semantic and communicative translation provides another useful framework. Semantic translation focuses on preserving the exact meaning of the source text, whereas communicative translation emphasizes naturalness and readability in the target language. Human translators are generally able to balance these approaches according to context, while AI systems often prioritize linguistic correspondence. Scoop's theory developed by Vermeer emphasizes the purpose of translation. According to this theory, translation decisions should be guided by the intended function of the target text. Human translators can adapt their strategies based on audience expectations and communicative goals.

AI systems may have difficulty making such context-sensitive decisions. Socio-cultural approaches further emphasize that language and culture are inseparable. Translation involves transferring cultural meanings, values, and assumptions. Human translators possess cultural knowledge that allows them to interpret subtle meanings and adapt texts appropriately. These theories collectively provide a useful framework for evaluating the strengths and weaknesses of AI-generated and human-written translations.

Comparative Analysis

One major advantage of AI-generated translation is speed. AI systems can process thousands of words within seconds and maintain consistency throughout a document. This makes them particularly useful for technical texts, business communication, and educational materials. AI tools can also reduce costs and improve accessibility for users who require quick translations.

Despite these advantages, limitations remain. Consider the English expression "Actions speak louder than words." An AI system may translate this expression literally into Uzbek, producing a grammatically correct but culturally unnatural result. A human translator is more likely to choose an equivalent expression that conveys the intended meaning naturally. This demonstrates the importance of cultural adaptation. Another example involves the phrase "He felt like a fish out of water." Literal translation may not effectively communicate the meaning to Uzbek readers. Human translators typically interpret the underlying message and adapt it according to cultural expectations. Such decisions require contextual understanding and pragmatic competence. AI systems are generally effective in translating straightforward academic statements. For example, "Artificial intelligence has transformed translation practices" can be translated accurately by both AI and human translators. However, human translators often improve stylistic quality and readability by selecting vocabulary that better matches the target audience. Communicative effectiveness represents another important distinction. Human translators consider audience expectations, cultural norms, and communicative goals. AI systems primarily rely on patterns learned from training data. As a result, machine translations may be grammatically correct while still failing to communicate the intended message

effectively. Creativity is perhaps the most significant area where human translators maintain an advantage. Literary texts, poetry, humor, and culturally embedded content often require interpretation and adaptation. Human translators can make creative decisions that preserve tone, style, and emotional impact. AI systems frequently struggle with these dimensions because they depend on statistical patterns rather than genuine cultural understanding.

Overall, the literature suggests that AI translation excels in efficiency and consistency, while human translation remains superior in cultural adaptation, creativity, and contextual interpretation. Rather than replacing human translators, AI technologies are more likely to function as supportive tools that enhance productivity and facilitate multilingual communication.

CONCLUSION

This theoretical review has examined the differences between AI-generated and human-written English–Uzbek translations through the lenses of translation theory and recent scholarly research. The findings indicate that AI systems have achieved substantial improvements in translation quality, particularly in terms of speed, efficiency, and consistency. However, important challenges remain in the areas of cultural adaptation, contextual understanding, creativity, and communicative effectiveness. Human translators continue to play a crucial role because successful translation requires more than linguistic accuracy. It involves interpretation, cultural awareness, and audience-oriented communication. Existing research consistently demonstrates that human expertise remains essential when dealing with complex, culturally sensitive, or stylistically rich texts. The analysis suggests that the future of translation should not be framed as a competition between humans and machines. Instead, AI technologies and human translators should be viewed as complementary partners.

AI can increase productivity and support routine translation tasks, while human translators ensure quality, cultural appropriateness, and meaningful communication. This collaborative approach is likely to define the future development of translation practice in the age of artificial intelligence.

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