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SUN'YI INTELLEKT TARJIMASIDA PRAGMATIK EKVIVALENTLIK: INGLIZ VA O'ZBEK DISKURSIDAGI MUAMMOLAR

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Annotatsiya

Sun'iy intellekt (SI) va neyron mashinali tarjima (NMT) texnologiyalarining jadal rivojlanishi avtomatlashtirilgan tarjimaning samaradorligini sezilarli darajada oshirdi. Shunga qaramay, pragmatik ekvivalentlikka erishish hanuz murakkab masala bo'lib qolmoqda, ayniqsa ingliz va o'zbek kabi til va madaniyat jihatidan farqli tillar o'rtasida tarjima qilishda. Ushbu tadqiqot ingliz va o'zbek diskursini SI asosida tarjima qilishda pragmatik ma'noni saqlash bilan bog'liq qiyinchiliklarni tahlil qiladi. Sifatli diskurs tahlili va ommabop SI tarjima vositalaridan olingan qiyosiy misollar asosida tadqiqot xushmuomalalik strategiyalari, nutq aktlari, implikatura, madaniy ishoralar va kontekstga bog'liq ma'nolarni o'rganadi. Natijalar shuni ko'rsatadiki, SI tizimlari lug'at va grammatika jihatidan yaxshi natija ko'rsatsa-da, ko'pincha mo'ljallangan ma'no hamda madaniy nozikliklarni to'liq ifodalashda muvaffaqiyatsizlikka uchraydi. Maqolada kelajakda yanada aniqroq SI tarjima tizimlarini yaratish uchun pragmatik tushuncha va madaniy xabardorlikni integratsiya qilish muhimligi ta'kidlanadi.

Kalit so'zlar: pragmatik ekvivalentlik, SI tarjimasi, ingliz-o'zbek tarjimasi, diskurs tahlili, neyron mashinali tarjima, pragmatika.

ПРАГМАТИЧЕСКАЯ ЭКВИВАЛЕНТНОСТЬ В ПЕРЕВОДЕ С ИСПОЛЬЗОВАНИЕМ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА: ПРОБЛЕМЫ В АНГЛИЙСКОМ И УЗБЕКСКОМ ДИСКУРСЕ

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Аннотация

Стремительное развитие технологий искусственного интеллекта (ИИ) и нейронного машинного перевода (NMT) значительно повысило эффективность автоматизированного перевода. Тем не менее достижение прагматической эквивалентности по-прежнему остается сложной задачей, особенно при переводе между языками, существенно различающимися в лингвистическом и культурном отношении, такими как английский и узбекский. Данное исследование рассматривает трудности сохранения прагматического значения при переводе английского и узбекского дискурса с использованием ИИ. С применением качественного дискурс-анализа и сравнительных примеров, полученных с помощью популярных инструментов ИИ-перевода, в работе анализируются стратегии вежливости, речевые акты, имплицатуры, культурные отсылки и контекстно-зависимые значения. Результаты показывают, что, хотя системы ИИ демонстрируют высокую эффективность в работе с лексикой и грамматикой, они часто не способны точно передать предполагаемый смысл и культурные нюансы. В статье подчеркивается, что интеграция прагматического понимания и культурной осведомленности является ключевым условием для создания более точных систем ИИ-перевода в будущем.

Ключевые слова: прагматическая эквивалентность, перевод с использованием ИИ, англо-узбекский перевод, дискурс-анализ, нейронный машинный перевод, прагматика.

PRAGMATIC EQUIVALENCE IN AI TRANSLATION: CHALLENGES IN ENGLISH AND UZBEK DISCOURSE

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Abstract

The rapid advancement of Artificial Intelligence (AI) and Neural Machine Translation (NMT) has significantly improved automated translation effectiveness. Nonetheless, achieving pragmatic equivalence remains challenging, especially when translating between linguistically and culturally diverse languages like English and Uzbek. This research examines the difficulties in maintaining pragmatic meaning in AI-based translations of English and Uzbek discourse. Using qualitative discourse analysis and

comparative examples from popular AI translation tools, the study investigates politeness strategies, speech acts, implicature, cultural references, and context-dependent meanings. Findings reveal that while AI performs well with vocabulary and grammar, it often fails to capture intended meanings and cultural nuances. The paper emphasizes that integrating pragmatic understanding and cultural awareness is crucial for creating more accurate AI translation systems in the future.

Keywords: pragmatic equivalence, AI translation, English-Uzbek translation, discourse analysis, neural machine translation, pragmatics.

Artificial Intelligence has transformed modern translation methods with the emergence of Neural Machine Translation tools such as Google Translate, OpenAI ChatGPT, and DeepL Translator. These developments have greatly improved the speed and accessibility of translating between languages. Nonetheless, while there has been notable progress in managing vocabulary and grammar, achieving pragmatic equivalence remains a difficult challenge.

Pragmatic equivalence entails maintaining the intended meaning, communicative function, cultural nuances, and contextual relevance when translating between languages [1; 67-p.]. Unlike semantic equivalence, which emphasizes literal translation, pragmatic equivalence centers on how language functions in actual communication settings. This challenge is especially significant in English-Uzbek translation, given the variations in politeness standards, indirectness, honorifics, and wider sociocultural norms.

English discourse typically emphasizes clarity and straightforwardness, while Uzbek communication often depends on politeness, implicit messages, and culturally specific expressions. AI translation tools frequently struggle to accurately grasp these pragmatic elements because they rely mainly on statistical patterns and contextual cues rather than a deep understanding of cultural and social nuances.

This study aims to examine the difficulties in achieving pragmatic equivalence in AI-based translation between English and Uzbek. It focuses on how AI systems understand and produce speech acts, politeness strategies, idioms, and meanings reliant on context.

Methods

This study uses a qualitative descriptive approach grounded in discourse analysis. The data include English and Uzbek utterances translated by popular AI translation tools such as Google Translate, ChatGPT, and DeepL.

Data Collection

The data for this research were collected through a qualitative, corpus-based approach focused on AI-generated translations between English and Uzbek discourse. Since the primary goal was to examine pragmatic equivalence, careful attention was paid to selecting discourse samples that demonstrate cultural sensitivity, contextual nuances, and pragmatic intricacies.

The corpus consisted of authentic and semi-authentic examples sourced from diverse communicative contexts such as daily conversations, educational environments, social media interactions, professional and workplace exchanges, online communication, literary and media texts, as well as public speeches and interviews.

The analytical framework was based on core theories from pragmatics and translation studies by Grice, Leech, and Baker. The research focused on elements such as speech act realization, conversational implicature, politeness strategies, contextual relevance, and cultural adaptation. A comparative method was used to detect mismatches and inconsistencies between the original texts and their AI-generated translations.

Results

An analysis of AI-generated translations between English and Uzbek reveals that pragmatic equivalence frequently falls short in various communicative contexts. Although the AI systems examined typically manage to communicate lexical meaning and grammatical form, notable deficiencies are evident in their ability to convey implied meanings, sociocultural factors, norms of politeness, and the broader communicative purpose. The findings can be categorized into several main areas.

1. Problems with Politeness Strategies

A recurring problem in the corpus involves how politeness markers and respectful communication forms are rendered. English and Uzbek vary significantly in expressing politeness. English usually depends on modal verbs, indirect language, and softeners such as “could,” “would,” and “please.” In contrast, Uzbek emphasizes respectful verb forms, honorifics, and culturally suitable indirect

expressions.

AI systems often generated Uzbek translations that, while grammatically correct, were pragmatically inappropriate. Consequently, the responses appeared too direct and did not convey the expected politeness in social interactions.

For example,

Source text: “Could you open the window, please?”

AI Translation: “Derazani oching.”

Although structurally correct, this version lacks the softening features typically used in Uzbek discourse. The imperative form may sound abrupt, particularly in formal settings. A more appropriate version would be:

“Derazani ochib yubora olasizmi, iltimos?”

In this case, “-a olasizmi” functions as a politeness marker, while “iltimos” further enhances the politeness of the request.

Source text: “Would you mind helping me?”

AI Translation: “Menga yordam berishga qarshimisiz?”

This translation conveys the literal meaning but sounds pragmatically awkward and unnatural in Uzbek. More appropriate alternatives would be:

“Menga yordam bera olasizmi?” or “Yordamlashib yuborsangiz yaxshi bo‘lardi.”

These patterns indicate that AI systems tend to prioritize structural accuracy over culturally appropriate expression. Moreover, respectful forms of address commonly used in Uzbek were frequently omitted.

Source text: “Thank you, teacher.”

AI Translation: “Rahmat, o‘qituvchi.”

This version does not convey the warmth and respect typically present in Uzbek communication. More natural alternatives would be:

“Rahmat sizga, ustoz.” or “Katta rahmat, ustoz.”

These omissions highlight the limited sociolinguistic awareness of current AI systems.

2. Difficulties with Indirect Speech Acts

Indirect speech acts represent another major challenge. In pragmatic communication, speakers often imply meanings rather than expressing them directly, particularly in English, where indirectness helps maintain politeness and social harmony. AI systems frequently translate such expressions literally, failing to capture their communicative intent.

Source text: “It’s a bit cold here.”

AI Translation: “Bu yer biroz sovuq.”

Although semantically accurate, this translation fails to capture the possible implied request, such as asking someone to close a window. Human translators would usually interpret the context more flexibly.

Similarly, indirect refusals pose significant challenges:

Source text: “I’ll think about it.”

AI Translation: “Men bu haqda o‘ylab ko‘raman.”

Although grammatically correct, this translation may fail to communicate the subtle implication of a polite refusal.

Source text: “That would be difficult.”

AI Translation: “Bu qiyin bo‘ladi.”

In English discourse, this expression often functions as an indirect refusal. However, the literal Uzbek translation does not fully convey that intention. These examples demonstrate that AI systems still struggle to move beyond surface-level interpretation.

3. Translation of Idiomatic and Figurative Expressions

Idioms and figurative expressions proved particularly challenging because their meanings are deeply rooted in culture and cannot be interpreted literally.

Source text: “Break a leg!”

AI Translation: “Oyog‘ingni sindir!”

While grammatically correct, this translation fails to convey the intended meaning. More appropriate Uzbek equivalents would be:

“Omad tilayman!” or “Ishingizga omad!”

Source text: “He kicked the bucket.”

AI Translation: “U chelakni tepdi.”

In this case, the idiomatic meaning (“he died”) is completely lost.

AI systems generally performed better with widely recognized metaphors.

Source text: “Time is money.”

AI Translation: “Vaqt puldir.”

However, culture-specific idioms frequently resulted in substantial errors.

Source text: “Spill the beans.”

AI Translation: “Lovyani to‘kib yubor.”

A more appropriate translation would be:

“Sirni oshkor qilmoq.”

These findings reveal deficiencies in metaphorical interpretation and cultural awareness.

4. Contextual Ambiguity and Polysemy

Lexical ambiguity and polysemy also created difficulties, as AI systems occasionally selected incorrect interpretations due to insufficient contextual understanding.

Source text: “He is seeing someone.”

AI Translation: “U kimnidir ko‘ryapti.”

The system interpreted “seeing” literally rather than recognizing its meaning in the context of a romantic relationship. A more accurate translation would be:

“U kim bilandir uchrashib yuribdi.”

Source text: “She left the company.”

In certain cases, “company” was translated as “kompaniya” even when the intended meaning referred to companionship. This demonstrates limitations in contextual disambiguation.

5. Cultural References and National Worldview

The analysis also revealed difficulties in handling culture-specific expressions. Uzbek discourse frequently contains kinship terms and religious references that lack direct English equivalents.

Source text: “Assalomu alaykum.”

AI Translation: “Hello.”

Although functionally similar, this translation omits important cultural and religious connotations.

Source text: “Xudo xohlasa.”

AI Translation: “If God wants.”

While semantically accurate, this translation may sound unnatural in English due to differences in cultural conventions.

6. Emotional Tone and Interpersonal Meaning

AI systems also demonstrated limitations in conveying emotional nuances and interpersonal meanings.

Source text: “I really appreciate your help.”

AI Translation: “Yordamingizni qadrlayman.”

Although technically correct, this version sounds somewhat formal and emotionally distant. A warmer and more natural translation would be:

“Yordamingiz uchun chin dildan rahmat.”

Failure to preserve emotional intensity can reduce the effectiveness of communication.

Overall, the results indicate that AI translation systems are highly effective in handling grammar and vocabulary but continue to face significant challenges in pragmatic translation between English and Uzbek. The primary difficulties include:

- Loss of politeness and respect markers;
- Failure to interpret indirect speech acts;
- Literal translation of idioms and figurative expressions;
- Limited contextual understanding;
- Insufficient cultural adaptation;
- Difficulties in preserving emotional tone and interpersonal meaning.

These findings suggest that achieving pragmatic equivalence requires more than linguistic competence; it also demands sociocultural awareness, contextual sensitivity, and communicative competence.

Discussion

The findings indicate that modern AI translation tools perform considerably better in conveying semantic meaning than in preserving pragmatic nuances. This discrepancy arises from several underlying factors.

First, AI models rely heavily on large-scale linguistic datasets but often lack deep cultural and contextual understanding. According to Grice's Cooperative Principle, successful communication depends not only on literal meaning but also on shared assumptions, contextual knowledge, and inferred meanings. AI systems frequently fail to capture these implicit layers of communication [3; 41–58-p.].

Furthermore, English and Uzbek represent distinct linguistic and cultural systems. English communication generally favors clarity and directness, whereas Uzbek discourse often relies on indirectness, honorific expressions, and culturally specific politeness strategies. Consequently, literal translations generated by AI may appear unnatural or pragmatically inappropriate in Uzbek communicative settings.

Another important factor is the context-dependent nature of pragmatic meaning. The same utterance may serve different communicative functions depending on social relationships, situational context, and speaker intention. Current AI systems continue to face difficulties in accurately accounting for these variables.

The findings also suggest that AI translation tools are generally more effective when translating formal or informational texts than conversational discourse. Informal communication typically contains a higher degree of implied meaning, emotional nuance, and cultural reference, all of which remain challenging for machine interpretation.

Despite these limitations, AI translation technologies continue to improve through advances in context-aware language models and reinforcement learning. The integration of pragmatic annotations, intercultural communication datasets, and sociolinguistic corpora may significantly enhance the accuracy and naturalness of future translation systems.

Conclusion

Pragmatic equivalence remains one of the most significant challenges in AI-powered translation between English and Uzbek. Although modern AI systems demonstrate strong performance in vocabulary and grammatical accuracy, they frequently struggle to convey implied meanings, politeness conventions, cultural nuances, and communicative intentions accurately.

The findings indicate that successful AI translation must extend beyond semantic accuracy and incorporate pragmatic awareness and cultural competence. To improve translation quality between linguistically and culturally diverse languages, future AI systems should integrate contextual reasoning, sociocultural knowledge, and discourse-oriented algorithms.

Future research may expand this investigation by examining pragmatic equivalence in other Central Asian languages and by developing hybrid approaches that combine human expertise with AI-assisted translation technologies.

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