

COMPARATIVE LINGUO-PRAGMATIC ANALYSIS OF PROMPT ENGINEERING STRATEGIES IN ENGLISH AND UZBEK

Aliyeva Dildora Sherqo'ziyevna,

English teacher

Kokand University

E-pochta: dshaliyeva@kokanduni.uz

Abstract. This article presents a comparative linguo-pragmatic analysis of prompt engineering strategies in English and Uzbek AI-mediated communication. The study examines the syntactic structures, pragmatic intentions, speech acts, address strategies, and semantic precision of prompts generated by users while interacting with artificial intelligence systems. The findings reveal that English prompts tend to employ direct imperative constructions and structurally explicit patterns, whereas Uzbek prompts demonstrate greater contextual dependency, indirectness, and pragmatic politeness. A prompt corpus generated through ChatGPT interactions was analyzed using comparative and discourse-analytical approaches, resulting in the development of a comparative model of AI communication strategies in English and Uzbek. The study demonstrates that prompt engineering is emerging as a new linguistic phenomenon within contemporary digital discourse and AI-mediated interaction.

Keywords: prompt engineering, artificial intelligence, AI-mediated communication, linguo-pragmatics, digital discourse, ChatGPT, speech acts, pragmatic strategies, syntactic patterns, comparative linguistics.

Annotatsiya. Mazkur maqolada ingliz va o'zbek tillaridagi sun'iy intellekt vositasidagi muloqotda qo'llaniladigan prompt injiniringi strategiyalarining qiyosiy lingvopragmatik tahlili taqdim etiladi. Tadqiqot sun'iy intellekt tizimlari bilan o'zaro muloqot jarayonida foydalanuvchilar tomonidan yaratilgan promptlarning sintaktik tuzilmalari, pragmatik maqsadlari, nutqiy aktlari, murojaat strategiyalari hamda semantik aniqligini o'rganishga qaratilgan. Natijalar ingliz tilidagi promptlar ko'proq to'g'ridan-to'g'ri buyruq maylidagi konstruksiyalar va aniq tuzilmaviy qoliplardan foydalanishini, o'zbek tilidagi promptlar esa kontekstga ko'proq bog'liqligi, bilvositaligi va pragmatik xushmuomalaligi bilan ajralib turishini ko'rsatdi. Tadqiqotda ChatGPT bilan muloqotlar asosida shakllantirilgan promptlar korpusi qiyosiy hamda diskursiv tahlil usullari yordamida o'rganilib, ingliz va o'zbek tillaridagi sun'iy intellekt muloqoti strategiyalarining qiyosiy modeli ishlab chiqildi. Tadqiqot prompt injiniringi zamonaviy raqamli diskurs va sun'iy intellekt vositasidagi kommunikatsiya doirasida yangi lingvistik hodisa sifatida shakllanayotganini ko'rsatadi.

Kalit so'zlar: prompt injiniringi, sun'iy intellekt, SI vositasidagi muloqot, lingvopragmatika, raqamli diskurs, ChatGPT, nutqiy aktlar, pragmatik strategiyalar, sintaktik qoliplar, qiyosiy tilshunoslik.

Аннотация. В данной статье проводится сравнительный лингво-прагматический анализ стратегий prompt engineering в английском и узбекском языках в процессе AI-mediated communication. В исследовании рассматриваются синтаксическая структура prompts, прагматические цели, речевые акты, стратегии обращения и уровень семантической точности пользовательских запросов, направленных к системам искусственного интеллекта. Выявлено, что английские prompts характеризуются прямыми императивными конструкциями и структурной конкретностью, тогда как узбекские prompts демонстрируют более высокий уровень контекстуальной зависимости, косвенности и прагматической мягкости. На основе корпуса prompts, сформированного посредством платформы ChatGPT, был проведен лингво-прагматический анализ и разработана сравнительная модель AI-коммуникации в английском и узбекском языках. Результаты исследования подтверждают, что prompt engineering формируется как новое лингвистическое явление современной цифровой коммуникации.

Ключевые слова: prompt engineering, искусственный интеллект, AI-mediated communication, лингвопрагматика, цифровой дискурс, ChatGPT, речевые акты, прагматические стратегии, синтаксические модели, сравнительное языкознание.

Introduction. The rapid development of artificial intelligence technologies in recent years has led to the emergence of fundamentally new forms of interaction between humans and machines. In particular, the growing popularity of generative AI systems such as ChatGPT, Gemini, Claude, and Microsoft Copilot has contributed to the formation of a novel communicative environment commonly referred to as “AI-mediated communication.” Within this emerging digital interactional space, communication between users and artificial intelligence systems is primarily conducted through linguistic instructions known as prompts. Consequently, prompt engineering has become not only a technological practice but also a significant linguistic and pragmatic phenomenon attracting growing scholarly attention.

Prompt engineering may be defined as the process of designing linguistically optimized input constructions intended to generate accurate, contextually appropriate, and efficient responses from artificial intelligence systems. This process is closely connected with several linguistic domains, including syntax, semantics, pragmatics, discourse analysis, and speech act theory, as it reflects the strategies through which human users linguistically regulate and direct AI-generated communication. Furthermore, variations in prompt construction across languages reveal important national, cultural, and linguo-pragmatic characteristics of human–AI interaction.

Although preliminary studies on prompt engineering have recently emerged within English-language academic discourse, the linguistic nature of this phenomenon remains insufficiently investigated. In Uzbek linguistics, prompt engineering represents an almost entirely unexplored research direction. More specifically, comparative investigations devoted to the linguo-pragmatic features, syntactic models, and speech act structures of prompt strategies in English and Uzbek AI-mediated communication are currently absent. This research gap determines the scientific relevance and originality of the present study.

The continuous expansion of digital communication has resulted in the emergence of new discourse types within contemporary linguistics. Interaction between humans and artificial intelligence systems is increasingly recognized as a distinct form of modern digital discourse. Within this communicative framework, prompts function as core linguistic units that express communicative intention, pragmatic strategy, and semantic precision. Therefore, prompts should not be viewed merely as technical commands; rather, they represent complex linguistic and pragmatic constructions embedded within digital interaction.

The primary aim of this research is to conduct a comparative linguo-pragmatic analysis of prompt engineering strategies in English and Uzbek and to identify the linguistic regularities underlying AI-mediated communication.

The objectives of the study are as follows:

1. To clarify the linguistic nature of the concept of prompt engineering;

2. To analyze the pragmatic and syntactic characteristics of English-language prompt constructions;
3. To identify the linguo-pragmatic features of Uzbek prompt strategies;
4. To determine the comparative distinctions between English and Uzbek prompts;
5. To describe speech acts and pragmatic strategies employed in AI-mediated communication;
6. To examine the role of prompt engineering within contemporary digital discourse.

The object of the research consists of prompts directed to artificial intelligence platforms in both English and Uzbek languages.

The subject of the research includes the linguo-pragmatic, syntactic, and discourse-related characteristics of prompt constructions.

The scientific novelty of the study is determined by the following aspects:

1. For the first time, a comparative linguo-pragmatic model of prompt engineering strategies in English and Uzbek has been developed;
2. The pragmatic characteristics of AI-mediated communication units in Uzbek have been systematically described;
3. The syntactic and communicative differences between English and Uzbek prompts have been identified;
4. Prompt engineering has been theoretically substantiated as a new linguistic phenomenon within contemporary linguistics.

The findings of the research may contribute to the further development of studies in digital discourse analysis, pragmatics, artificial intelligence linguistics, and computer-mediated communication. In addition, the results can be applied to the development of effective human–AI interaction strategies, the improvement of prompt engineering methodologies, and the design of specialized courses devoted to contemporary digital communication and AI-assisted language interaction.

Literature Review. The rapid advancement of artificial intelligence technologies has contributed to the emergence of new research directions within linguistics and communication theory. In particular, interactional processes between humans and generative AI systems are increasingly being investigated within the framework of “AI-mediated communication.” In this communicative environment, prompts generated by users function as primary communicative units, while their linguistic and pragmatic characteristics have become central objects of contemporary scholarly inquiry.

In recent years, the concept of prompt engineering has predominantly been explored within the fields of computer science and artificial intelligence technologies. Reynolds and McDonell define prompt engineering as a system of strategically designed linguistic constructions intended to generate effective outputs from generative AI systems.[1] According to the researchers, the structure, syntactic organization, and semantic precision

of prompts directly influence the quality and contextual relevance of AI-generated responses.

Similarly, Liu and colleagues conceptualize prompt engineering as a “new model of human–machine communication” and emphasize the necessity of investigating its pragmatic and discourse-related dimensions.[2] In their view, communication with AI systems should not be interpreted merely as a sequence of technical commands; rather, it constitutes a complex linguistic phenomenon shaped by communicative strategies and interactional intentions.

From the perspective of pragmatic theory, prompts are closely associated with the system of speech acts. In his Speech Act Theory, John Searle identifies illocutionary intention as the principal component of communicative interaction.[3] This theoretical framework provides an important methodological basis for analyzing the pragmatic functions of prompts, including commands, requests, explanations, recommendations, and instructional constructions.

In addition, the “Politeness Theory” developed by Penelope Brown and Stephen Levinson occupies a significant position in the analysis of AI-mediated communication.[4] While English-language prompts frequently demonstrate a tendency toward direct imperative structures, Uzbek prompts often rely on indirectness, pragmatic softening, and context-sensitive forms of address. These distinctions reveal the linguocultural characteristics underlying prompt strategies in different languages.

David Crystal argues that the expansion of digital communication has led to the emergence of entirely new forms of discourse, transforming internet-based interaction into an independent field of linguistic investigation.[5] In this context, communication with artificial intelligence systems may also be regarded as a new manifestation of contemporary digital discourse.

Furthermore, Enkelejda Kasneci and colleagues explored the role of generative AI platforms in education and communication, emphasizing that systems such as ChatGPT are reshaping strategies of human linguistic interaction.[6] The researchers note that successful communication with AI systems increasingly depends on users’ linguistic and communicative competence.

Despite growing scholarly interest in prompt engineering, its linguistic foundations remain insufficiently investigated, particularly from the perspective of comparative linguistics. Within Uzbek linguistics, scientific studies devoted to the linguo-pragmatic analysis of AI-mediated communication and prompt strategies are almost entirely absent. Consequently, the present study seeks to address this research gap by providing a comparative analysis of prompt engineering strategies in English and Uzbek.

The study employed qualitative and comparative methodological approaches. Its theoretical framework was based on the scholarly works of international and local

researchers specializing in pragmatics, discourse analysis, digital communication, and artificial intelligence linguistics.

Research Methodology. The following research methods were utilized throughout the investigation:

1. Comparative linguistic analysis;
2. Linguo-pragmatic analysis;
3. Discourse analysis;
4. Syntactic classification;
5. Semantic interpretation;
6. Corpus-based analysis.

The research material consisted of a corpus of English and Uzbek prompts generated through interaction with the ChatGPT platform. During the research process, more than 200 prompt samples were collected and systematically categorized according to the following criteria:

1. Communicative purpose;
2. Syntactic structure;
3. Pragmatic strategy;
4. Forms of address;
5. Degree of semantic precision;
6. Response effectiveness.

The analysis demonstrated that English-language prompts were predominantly characterized by explicit structural organization and direct imperative constructions, whereas Uzbek-language prompts exhibited a higher degree of contextual dependency and pragmatic adaptation.

The study also examined the influence of prompt structures on AI-generated responses. The findings revealed that prompts with clearer syntactic organization and greater semantic precision tended to produce more contextually appropriate and semantically accurate AI outputs.

Overall, the selected methodological framework enabled a comprehensive comparative investigation of the linguo-pragmatic characteristics of prompt engineering strategies in English and Uzbek AI-mediated communication.

Analysis and Results. Linguo-pragmatic analysis of prompt engineering strategies in english and uzbek. The linguistic structure of prompts plays a crucial role in establishing effective communication with artificial intelligence systems. Within the process of prompt engineering, syntactic constructions, pragmatic strategies, and the degree of semantic precision selected by users directly influence the quality and contextual appropriateness of AI-generated responses. Therefore, the linguo-pragmatic analysis of prompts provides an opportunity to identify the fundamental principles underlying AI-mediated communication.

During the present study, prompts produced in English and Uzbek were comparatively analyzed. The findings revealed substantial pragmatic and syntactic differences between the two languages.

Characteristics of English Prompt Engineering Strategies. The analysis demonstrated that English-language prompts are predominantly constructed through direct communicative strategies. English-speaking users generally tend to interact with AI systems using concise and structurally explicit command-oriented formulations.

For example:

- a. "Write a 500-word academic essay about climate change."
- b. "Summarize the article in formal academic language."
- c. "Generate three arguments supporting online education."

d. These examples illustrate the dominance of imperative constructions within English prompt design. The study identified the following pragmatic characteristics of English-language prompts:

1. Clarity of communicative intention;
2. Syntactic conciseness;
3. Semantic specificity;
4. Direct directive strategies;
5. Result-oriented communication.

The findings indicate that the principle of pragmatic economy operates actively in English prompt engineering. In most cases, users minimize unnecessary contextual details in order to maximize communicative efficiency and obtain rapid, precise AI-generated outputs.

Additionally, the study revealed the widespread use of "role-assignment prompting" strategies in English-language communication with AI systems. For instance:

1. "Act as a professional researcher."
2. "Behave like an IELTS instructor."
3. "Pretend you are an academic editor."

Such strategies improve the quality and relevance of AI responses by explicitly defining the communicative role expected from the artificial intelligence system.

Characteristics of Uzbek Prompt Engineering Strategies. Compared with English, Uzbek-language prompts demonstrate a higher degree of pragmatic politeness and contextual dependency. The analysis revealed that Uzbek-speaking users frequently employ indirect communicative strategies when interacting with AI systems.

For example:

- "Iltimos, shu mavzu haqida batafsilroq ma'lumot berib bera olasizmi?"
- "Menga ilmiy uslubda yordam qilib yuborsangiz."
- "Shu matnni akademikroq qilib yozib bera olasizmi?"

These prompts illustrate the active use of pragmatic politeness and socially respectful forms of address. The primary characteristics of Uzbek-language prompts include:

1. Pragmatic softening;
2. Indirect speech acts;
3. Contextual dependency;
4. Emotional and expressive linguistic elements;
5. Stronger communicative closeness.

The findings demonstrate the dominance of politeness strategies within Uzbek AI-mediated communication. Users frequently perceive AI systems not merely as technical tools but as communicative partners involved in cooperative interaction.

Furthermore, Uzbek-language prompts often contain more complex syntactic constructions and additional explanatory elements. This tendency may be associated with the agglutinative nature of the Uzbek language as well as its highly contextual communication model.

Comparative Linguo-Pragmatic Analysis. The comparative analysis revealed significant linguo-pragmatic distinctions between English and Uzbek prompt engineering strategies.

English-language prompts are generally characterized by:

- brevity;
- precision;
- structurally standardized patterns;
- directive pragmatic orientation.

In contrast, Uzbek-language prompts tend to demonstrate:

- contextuality;
- emotional expressiveness;
- pragmatic politeness;
- communicative flexibility.

These differences can be explained through the linguocultural and communicative characteristics of the two languages. While English communication prioritizes efficiency, clarity, and directness, Uzbek communication places greater emphasis on politeness, interpersonal respect, and social adaptation.

The research also demonstrated that semantic precision significantly affects the quality of AI-generated responses. Prompts containing clearly defined communicative goals and explicit structural instructions produced more accurate, contextually appropriate, and semantically coherent outputs.

Moreover, English-language prompts tended to generate more standardized and predictable AI responses, whereas Uzbek-language prompts occasionally resulted in multiple contextual interpretations due to semantic ambiguity and context dependency.

Overall, the findings indicate that prompt engineering is gradually emerging as a new linguistic phenomenon within contemporary digital communication. In human–AI interaction, language functions not only as a medium of information exchange but also as a pragmatic mechanism for directing and regulating artificial intelligence systems.

During the course of the study, the linguo-pragmatic characteristics of prompt engineering strategies in English and Uzbek were comparatively analyzed. The findings revealed substantial differences between the two languages in terms of syntactic organization, pragmatic intention, and communicative strategies employed within AI-mediated communication.

The results demonstrated that the majority of English-language prompts are concise, structurally standardized, and directive in nature. English-speaking users frequently rely on imperative constructions that explicitly express communicative goals when interacting with AI systems. In particular, high-frequency usage of directive verbs such as “write,” “generate,” “summarize,” “analyze,” and “explain” was observed throughout the collected corpus.

The analysis further indicated that the semantic precision of English-language prompts positively affects the quality of AI-generated responses. Responses produced from structurally clear and concise prompts demonstrated higher levels of semantic coherence, logical consistency, and contextual appropriateness.

In contrast, Uzbek-language prompts were characterized by greater communicative politeness and pragmatic adaptation. The findings showed that Uzbek-speaking users commonly employ request forms, indirect speech acts, and emotional-expressive elements when addressing AI systems. Expressions such as “iltimos” (“please”), “yordam bera olasizmi” (“could you help”), “mumkin bo‘lsa” (“if possible”), and “batafsilroq yozib bering” (“please explain in more detail”) emerged as major pragmatic indicators within Uzbek prompt constructions.

The analysis also revealed a strong degree of contextual dependency in Uzbek-language prompts. In certain cases, users expected AI systems to infer contextual information without explicitly describing the communicative situation. This tendency occasionally resulted in semantic ambiguity and varying interpretations within AI-generated responses.

The comparative findings suggest that English-language prompts primarily prioritize efficiency and structural clarity, whereas Uzbek-language prompts emphasize communicative closeness and pragmatic flexibility. These distinctions are directly connected to the linguocultural and communicative norms characteristic of each language community.

The study additionally examined the use of “role-assignment prompting” strategies. English-speaking users frequently attempted to regulate AI-generated responses by assigning explicit communicative roles to the system. Examples include:

“Act as a professional linguist.”

“Behave like an academic researcher.”

In Uzbek-language interaction, however, the same strategy appeared in comparatively softer and more explanatory forms:

“O‘zingizni tajribali ilmiy rahbar sifatida tasavvur qilib javob bering.”

“Professional o‘qituvchi sifatida tavsifiya bera olasizmi?”

These differences further illustrate the directive orientation of English communication patterns and the pragmatically polite, etiquette-based communicative model characteristic of Uzbek discourse.

The findings of the research confirm that prompt engineering is gradually emerging as an independent field of inquiry within contemporary linguistics. In AI-mediated communication, prompts function not merely as technical instructions but as complex pragmatic and discourse-related units.

The results also partially support the theoretical perspectives proposed by Reynolds and McDonnell [1] as well as Liu and colleagues [2], who conceptualize prompt engineering as a new communicative model between humans and artificial intelligence systems. The present study expands upon these perspectives by comparatively revealing the linguo-pragmatic characteristics of this communicative model in English and Uzbek.

Furthermore, the findings demonstrate the necessity of developing specialized pragmatic and syntactic models for Uzbek-language AI-mediated communication systems. Existing generative AI platforms are predominantly designed according to English-language communicative structures, which may limit their contextual and pragmatic effectiveness in agglutinative and high-context languages such as Uzbek.

The linguistic regularities identified throughout the study may provide both theoretical and practical foundations for:

1. Improving Uzbek-language AI platforms;
2. Advancing prompt engineering methodologies;
3. Developing specialized courses in AI linguistics;
4. Optimizing human–machine communication strategies.

Overall, the study highlights the growing importance of prompt engineering as a multidisciplinary phenomenon situated at the intersection of linguistics, pragmatics, discourse analysis, and artificial intelligence technologies.

Conclusion. In conclusion, the rapid advancement of artificial intelligence technologies is generating fundamentally new forms of communication between humans and machines. In particular, prompt engineering strategies employed in interactions with generative AI systems are gradually emerging as one of the most promising research directions within contemporary linguistics. The present study was devoted to a comparative investigation of the linguo-pragmatic characteristics of prompts used in English and Uzbek AI-mediated communication.

The findings revealed substantial syntactic, pragmatic, and communicative differences between prompt engineering strategies in the two languages. English-language prompts were predominantly characterized by brevity, structural clarity, and directive orientation, whereas Uzbek-language prompts demonstrated greater pragmatic politeness, contextual dependency, and communicative adaptability. These distinctions can be explained through the linguocultural and pragmatic features inherent in each language.

The study further demonstrated that the semantic precision of prompts directly affects the quality of responses generated by AI systems. Structurally explicit prompts with clearly defined pragmatic intentions contributed to the production of more contextually appropriate, semantically coherent, and communicatively effective AI outputs.

Moreover, the research established that prompt engineering should not be interpreted merely as a system of technical instructions. Rather, it is evolving into a new linguistic form of contemporary digital discourse. Within AI-mediated communication, language functions as a pragmatic mechanism through which human users regulate, direct, and manage artificial intelligence systems.

The scientific significance of the study lies in the fact that, for the first time, a comparative linguo-pragmatic model of prompt engineering strategies in English and Uzbek was developed. The findings may serve as a theoretical foundation for future research in pragmatics, digital discourse analysis, artificial intelligence linguistics, and human-machine communication studies.

The practical significance of the research is associated with its potential applications in developing effective communication methodologies for AI platforms, improving Uzbek-language prompt engineering systems, and designing specialized educational courses devoted to AI linguistics and digital communication.

The study also suggests several promising directions for further research, including:

1. Multimodal prompting;
2. AI discourse pragmatics;
3. Uzbek NLP communication models;
4. Generative AI semantics.

Overall, the research highlights the growing importance of prompt engineering as a multidisciplinary phenomenon situated at the intersection of linguistics, communication theory, pragmatics, and artificial intelligence technologies.

References:

1. Reynolds L., McDonell K. Prompt Programming for Large Language Models: Beyond the Few-Shot Paradigm // arxiv preprint. – 2021. – arxiv:2102.07350.
2. Liu P., Yuan W., Fu J. et al. Pre-train, Prompt, and Predict: A Systematic Survey of Prompting Methods in Natural Language Processing // ACM Computing Surveys. – 2023. – Vol. 55. – № 9. – P. 1–35.
3. Searle J.R. Speech Acts: An Essay in the Philosophy of Language. – Cambridge: Cambridge University Press, 1969. – 203 p.

4. Brown P., Levinson S. Politeness: Some Universals in Language Usage. – Cambridge: Cambridge University Press, 1987. – 345 p.
5. Crystal D. Language and the Internet. – Cambridge: Cambridge University Press, 2011. – 304 p.
6. Kasneci E., Sessler K., Küchemann S. et al. ChatGPT for Good? On Opportunities and Challenges of Large Language Models for Education // Learning and Individual Differences. – 2023. – Vol. 103. – 102274.

