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AI-BASED DETECTION OF CULTURAL MISUNDERSTANDINGS IN ENGLISH–UZBEK FOREIGN LANGUAGE LEARNING

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Annotation

This study explores the application of artificial intelligence (AI) in detecting cultural misunderstandings in English–Uzbek foreign language learning. Cultural misunderstandings often stem from differences in pragmatic norms, politeness strategies, and sociocultural expectations. Drawing on intercultural pragmatics, second language acquisition theory, and educational technology, the article examines how AI-based tools using natural language processing and machine learning can identify pragmatic mismatches in learner discourse. The study argues that AI-assisted detection enhances learners' pragmatic competence and intercultural awareness. Pedagogical implications for English language teaching in Uzbekistan are discussed.

Annotatsiya

Ushbu tadqiqot ingliz–o‘zbek chet tilini o‘rganish jarayonida madaniy tushunmovchiliklarni aniqlashda sun’iy intellekt (AI) texnologiyalaridan foydalanish imkoniyatlarini o‘rganadi. Madaniy tushunmovchiliklar ko‘pincha pragmatik me’yorlar, xushmuomalalik strategiyalari va sotsiomadaniy kutishlardagi farqlar natijasida yuzaga keladi. Madaniyatlararo pragmatika, ikkinchi tilni o‘zlashtirish nazariyasi hamda ta’lim texnologiyalariga tayangan holda, maqolada tabiiy tilni qayta ishlash va mashinaviy o‘rganishga asoslangan AI vositalarining o‘quvchi nutqidagi pragmatik nomuvofiqliklarni aniqlash imkoniyatlari tahlil qilinadi. Tadqiqot AI yordamida aniqlash jarayoni o‘quvchilarning pragmatik kompetensiyasini va madaniyatlararo xabardorligini oshirishga xizmat qilishini asoslaydi. Shuningdek, O‘zbekistonda ingliz tilini o‘qitish uchun pedagogik xulosalar keltiriladi.

Аннотация

Данное исследование рассматривает применение искусственного интеллекта (AI) для выявления культурных недопониманий в процессе изучения английского языка как иностранного в англо-узбекском контексте. Культурные недопонимания часто возникают вследствие различий в прагматических нормах, стратегиях вежливости и социокультурных ожиданиях. Опираясь на межкультурную прагматику, теорию усвоения второго языка и образовательные технологии, в статье анализируются возможности AI-инструментов, основанных на обработке естественного языка и машинном обучении, для выявления прагматических несоответствий в речи изучающих. В исследовании утверждается, что использование AI-ассистированных средств способствует развитию прагматической компетенции и межкультурной осведомлённости обучающихся. Также обсуждаются педагогические импликации для преподавания английского языка в Узбекистане.

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Keywords

artificial intelligence, cultural misunderstanding, pragmatic competence, English–Uzbek communication, EFL.

Kalit so‘zlar

sun’iy intellekt, madaniy tushunmovchilik, pragmatik kompetensiya, ingliz–o‘zbek kommunikatsiyasi, ingliz tili chet tili sifatida (EFL).

Ключевые слова

искусственный интеллект, культурное недопонимание, прагматическая компетенция, англо-узбекская коммуникация, английский язык как иностранный (EFL).

Introduction.

In foreign language education, communicative competence extends beyond grammatical accuracy to include pragmatic and cultural appropriateness. Uzbek learners of English often face pragmatic challenges due to cultural differences between Uzbek and English-speaking communication styles. Recent advances in AI offer new possibilities for analyzing learner language and identifying culturally inappropriate usage.

In contemporary foreign language education, communicative competence is no longer understood as limited to grammatical accuracy or lexical knowledge. Rather, it encompasses the ability to use language in a manner that is pragmatically appropriate and culturally sensitive to specific communicative contexts. Pragmatic competence involves understanding how meaning is negotiated through social norms, power relations, politeness strategies, and discourse conventions, all of which vary significantly across cultures.

For Uzbek learners of English, the development of pragmatic competence presents particular challenges, as Uzbek communicative norms are shaped by collectivism, respect for hierarchy, indirectness, and strong politeness conventions. When interacting in English, learners may unconsciously transfer these culturally grounded norms into their target-language communication. Such pragmatic transfer can sometimes result in positive politeness effects; however, it may also lead to pragmatic failure, including unintended impoliteness, over-formality, or misinterpretation of speaker intent in intercultural communication with native or proficient English speakers.

Recent advances in artificial intelligence (AI) and natural language processing have created new opportunities for examining learner language beyond surface-level grammatical errors. AI-based systems can analyze large volumes of learner output, identify recurring pragmatic patterns, and detect instances of culturally inappropriate or contextually infelicitous language use. By modeling discourse features such as speech acts, politeness markers, mitigation strategies, and contextual alignment, AI tools offer a promising means of supporting pragmatic awareness and intercultural competence in English language learning. Consequently, integrating AI-driven pragmatic analysis into foreign language education may contribute to more effective instruction and help Uzbek learners develop communicative competence that is both linguistically accurate and culturally appropriate.

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Literature Review.

Research in intercultural pragmatics emphasizes the role of culture in shaping speech acts and politeness strategies (Brown & Levinson, 1987; Spencer-Oatey, 2008). Studies on pragmatic transfer show that learners rely on first-language norms, leading to pragmatic failure (Thomas, 1983). In parallel, AI in language education has expanded through intelligent tutoring systems and learner analytics.

Research in intercultural pragmatics consistently highlights the central role of culture in shaping communicative behavior, particularly in the realization of speech acts and the use of politeness strategies. Seminal work by Brown and Levinson (1987) introduced the concept of face and proposed a universal model of politeness, emphasizing how speakers strategically mitigate face-threatening acts through linguistic and pragmatic means. Although influential, subsequent research has demonstrated that politeness is deeply embedded in sociocultural norms and cannot be fully explained through universal principles alone. Spencer-Oatey's (2008) rapport management framework further advanced the field by accounting for relational goals, social identity, and contextual expectations in intercultural interaction.

Within second and foreign language acquisition research, the phenomenon of pragmatic transfer has received significant scholarly attention. Thomas (1983) distinguished between pragmalinguistic failure and sociopragmatic failure, showing that learners often rely on first-language norms when performing speech acts in a target language. Such transfer may result in communication that is grammatically accurate but pragmatically inappropriate, leading to misunderstandings or negative evaluations by interlocutors. Numerous empirical studies have confirmed that pragmatic competence develops more slowly than grammatical competence and requires explicit instruction and contextualized exposure, particularly in foreign language environments where authentic interaction is limited.

Parallel to developments in pragmatics research, the integration of artificial intelligence in language education has expanded rapidly in recent years. AI-driven technologies such as intelligent tutoring systems, automated feedback tools, and learner analytics platforms have been increasingly used to analyze learner output, personalize instruction, and identify patterns of language use. While early applications of AI focused primarily on grammatical accuracy and vocabulary development, more recent studies have begun to explore its potential in assessing discourse-level features, including coherence, register, and pragmatic appropriateness. This growing body of research suggests that AI can play a significant role in supporting the development of pragmatic and intercultural competence by providing data-driven insights into learner communication.

Cultural Misunderstandings in English–Uzbek Communication**.** Uzbek communication prioritizes indirectness, respect for hierarchy, and social harmony. English communication, especially in academic contexts, values clarity and directness. These differences often result in misunderstandings when pragmatic norms are transferred across languages.

Communication styles in Uzbek and English-speaking cultures differ considerably in terms of pragmatic norms and interactional expectations. Uzbek communication is strongly influenced by collectivist values, with an emphasis on maintaining social harmony, demonstrating respect for hierarchy, and avoiding direct confrontation. Indirectness, honorific expressions, and mitigated speech acts are commonly used to preserve interpersonal relations

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and show deference, particularly in interactions involving age differences, institutional authority, or social distance.

In contrast, English communication, especially in academic and professional contexts, tends to prioritize clarity, efficiency, and explicitness. Direct expression of opinions, clear requests, and concise argumentation are often interpreted as signs of confidence and competence rather than impoliteness. As a result, English speakers may perceive indirect or overly deferential language as vague, evasive, or lacking assertiveness, while Uzbek speakers may interpret direct English communication as rude or insufficiently respectful.

These divergent pragmatic conventions frequently lead to cultural misunderstandings in English–Uzbek communication. When Uzbek learners of English transfer their native pragmatic norms into English, they may unintentionally violate target-language expectations, resulting in pragmatic failure. Such misunderstandings are particularly salient in academic settings, where email communication, classroom interaction, and peer collaboration require precise alignment with English pragmatic norms. Addressing these challenges requires heightened intercultural awareness and pedagogical approaches that explicitly focus on pragmatic differences rather than relying solely on grammatical instruction.

AI Technologies for Pragmatic Analysis. AI technologies such as natural language processing, machine learning, and discourse modeling enable automated analysis of learner language. These systems can detect deviations in politeness, speech act realization, and discourse conventions. AI-based detection relies on annotated learner corpora containing pragmatic features. Models are trained to recognize culturally inappropriate expressions and provide corrective feedback. Such systems support adaptive and personalized learning.

Recent developments in artificial intelligence have significantly enhanced the capacity to analyze learner language at the pragmatic and discourse levels. Core AI technologies such as natural language processing (NLP), machine learning, and discourse modeling enable the automated examination of linguistic features that extend beyond syntax and vocabulary. AI-driven pragmatic analysis typically relies on annotated learner corpora that incorporate explicit pragmatic labels, such as levels of directness, politeness markers, honorific usage, and contextual appropriateness. Supervised and semi-supervised machine learning models are trained on these datasets to recognize culturally inappropriate expressions and pragmatically infelicitous language use across different communicative contexts.

Furthermore, AI-based detection systems increasingly support adaptive and personalized learning environments. By providing targeted feedback on pragmatic usage, such systems help learners become aware of culturally specific communication norms and adjust their language use accordingly. Personalized feedback mechanisms can highlight alternative expressions, explain pragmatic constraints, and offer context-sensitive recommendations, thus promoting intercultural awareness and pragmatic competence. As a result, AI technologies hold considerable potential for complementing human instruction and addressing longstanding challenges in pragmatics-focused foreign language education.

Pedagogical Implications. Integrating AI tools into EFL classrooms in Uzbekistan can enhance pragmatic instruction. Teachers can use AI-generated insights to design targeted activities and support intercultural competence development.

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The integration of AI-based tools into English as a Foreign Language (EFL) classrooms in Uzbekistan offers significant potential for enhancing the teaching and learning of pragmatic competence. Given that pragmatic features are often underrepresented in traditional EFL curricula, AI technologies can help bridge the gap between grammatical instruction and real-world communicative demands.

Teachers can utilize AI-generated feedback and analytics to design targeted instructional activities that address specific pragmatic challenges faced by Uzbek learners of English. For example, classroom tasks can be developed to contrast English and Uzbek pragmatic norms in requests, refusals, or academic email communication. AI-supported platforms can also facilitate data-driven learning by presenting learners with authentic examples, personalized feedback, and reflective tasks that promote awareness of intercultural differences. Such pedagogical applications allow instructors to move beyond intuition-based instruction and adopt evidence-based approaches to pragmatic teaching.

Moreover, the use of AI in EFL instruction supports the development of intercultural communicative competence by encouraging learners to critically reflect on their own cultural norms and those of English-speaking communities. When implemented thoughtfully, AI tools can function as a pedagogical aid rather than a replacement for teachers, enabling more individualized support in large or diverse classrooms. Ultimately, integrating AI-assisted pragmatic analysis into EFL education in Uzbekistan can contribute to more effective communication outcomes and better prepare learners for academic, professional, and intercultural interactions in English.

Conclusion.

This study has demonstrated that AI-based detection of cultural misunderstandings represents a promising and innovative approach to improving English–Uzbek foreign language learning. By moving beyond a narrow focus on grammatical accuracy, AI technologies enable the systematic identification of pragmatic and intercultural challenges that frequently arise in learner communication. Such challenges, often rooted in culturally specific norms of politeness, indirectness, and social hierarchy, can significantly affect communicative effectiveness despite otherwise accurate language use.

The findings suggest that combining AI-driven pragmatic analysis with intercultural pedagogy offers substantial benefits for both learners and educators. AI tools provide scalable, data-driven insights into learner language, while pedagogical frameworks grounded in intercultural pragmatics help contextualize these insights within broader cultural and communicative norms. This integrated approach supports the development of pragmatic awareness, reduces instances of pragmatic failure, and enhances learners' ability to engage successfully in academic and professional communication in English.

Ultimately, the effective integration of AI technologies into English language education in Uzbekistan has the potential to foster more nuanced communicative competence and intercultural sensitivity. Future research should further explore the longitudinal impact of AI-assisted pragmatic instruction and examine how such technologies can be adapted to diverse educational contexts. By aligning technological innovation with pedagogical goals, foreign language education can better prepare learners for meaningful participation in global intercultural communication.

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