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THE IMPACT OF INFORMATION TECHNOLOGICAL FACTORS ON THE ECOLOGY OF THE UZBEK LANGUAGE

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ANNOTATSIYA:

This article analyzes the impact of information-technological factors on the ecology of the Uzbek language in the digital era. The study examines the role of the Uzbek language in the digital space, the expansion of its usage, and the challenges emerging as a result of the rapid development of the Internet, social networks, and telecommunication technologies. In particular, the article highlights such issues as violations of spelling and grammatical norms, inconsistency in terminology, and the influence of digital communication on the linguistic environment. Recommendations are developed from the perspectives of language policy and information security to ensure the sustainable development of the Uzbek language in the digital age.

Introduction

In recent decades, information technologies have deeply penetrated all spheres of social life, including the linguistic environment. This process has led to the formation of a new and previously non-existent "digital environment" from the perspective of language ecology, where the patterns of existence, distribution, and transformation of language units have significantly accelerated.

The field of information and communication technologies is rapidly developing in Uzbekistan. These processes demonstrate not only the increasing number of Internet users but also the continuous growth of digital content created in the Uzbek language. At the same time, this development has both positive and negative effects on the ecological state of the language. Therefore, the issue of language ecology has become increasingly relevant in modern linguistics.

Analysis and findings

According to the theory of linguoecology, language constantly interacts with the environment of its speakers. With the widespread use of the Internet, social networks, and messengers, a new virtual layer has been added to this environment. Today, language exists not only within families, educational institutions, and communities but also through screens, text-based communication, voice messages, and video content.

The widespread use of modern information technologies, including social networks, messengers, and other digital platforms, serves as a positive factor for development on the one hand, while on the other hand, it increases the risk of various threats emerging through the information environment.

The increase in the number of Internet users has significantly expanded the volume of digital content in the Uzbek language. Government institutions conduct their activities in Uzbek, and the growing amount of content on official websites and social media platforms contributes to the recognition of the Uzbek language in the international digital space. This process expands the social functions of the language and transforms it into an important means of modern information exchange. As a result, it also contributes to strengthening the prestige of the Uzbek language.

Moreover, the development of digital dictionaries, distance learning platforms, and electronic libraries has significantly expanded opportunities for learning and teaching the native language. The emergence of artificial intelligence-based translation and text analysis tools has created new possibilities for developing the Uzbek language corpus and enriching it with digital linguistic resources.

At the same time, the lack of compliance with Uzbek spelling and grammatical rules on social networks has become a widespread phenomenon. In addition, the increasing amount of low-quality and meaningless content negatively affects the quality of language usage. This is particularly evident in the mixed use of Latin and Cyrillic scripts on social media platforms, as well as in the incorrect spelling of words through transliteration.

Another important issue related to technological development is the uncontrolled process of introducing terms that express new concepts into the language. Research shows that in the translation of ecological and technological neologisms in media texts, the most frequently used method is calquing (42%), followed by descriptive translation (28%), transcription/transliteration (18%), and combined methods (12%). The absence of a unified terminological dictionary and standardization system leads to different translations of the same concept by different translators. This indicates inconsistency within the terminological system of the language and demonstrates a disruption of linguistic ecological balance.

The increasing influence of information-technological factors also requires attention at the state level. In Uzbekistan, national policy documents aimed at ensuring information security and protecting citizens from the negative influence of external information sources and social networks have been developed, including the “Information Security Concept” and

related roadmaps. Such documents provide a legal basis not only for cybersecurity but also for protecting the national linguistic and cultural space from external information pressure.

A systematic approach is required to manage the impact of information-technological factors on language ecology. First, automatic tools that encourage compliance with Uzbek spelling standards on social networks and messengers (such as spelling checkers and keyboard systems) should be further developed. Second, unified and scientifically based terminology dictionaries should be created for new concepts and implemented at the national level. This would help eliminate inconsistencies in the translation of neologisms.

Third, the potential of the Uzbek language in the digital environment can be increased through the expansion of digital educational platforms and dictionaries, as well as through the development of an artificial intelligence-based Uzbek language corpus. Fourth, it is necessary to develop a conscious attitude toward preserving language culture in the Internet environment through media literacy programs designed for young people. All these measures will ensure that language ecology remains a system adapted to the digital era while preserving its historical roots.

Conclusion

In conclusion, information-technological factors have become an integral part of modern Uzbek language ecology. On the one hand, the Internet and digital technologies expand the social functions of the language and contribute to strengthening its position in the international information space. On the other hand, these processes create new ecological challenges, including violations of spelling and grammatical norms, terminological inconsistency, and threats related to information security.

To address these challenges, the following recommendations have been developed:

- 1. Developing digital tools that ensure compliance with Uzbek spelling norms on social networks and messengers;
- 2. Creating a unified scientific terminology system for new concepts and standardizing it at the national level;
- 3. Supporting the development of an artificial intelligence-based Uzbek language corpus and digital dictionaries at the state level;

4. Promoting digital media literacy and language culture among young people;

- 5. Integrating information security policies with the task of protecting the national language and cultural environment.

These measures will contribute to preserving the purity, richness, and ecological stability of the Uzbek language in the digital era.

REFERENCES

1. Law of the Republic of Uzbekistan “On Guarantees and Freedom of Access to Information” dated April 24, 1997.

2. Law of the Republic of Uzbekistan “On Informatization” dated December 11, 2003.

3. Information Technologies. Official website of the Ministry of Digital Technologies of the Republic of Uzbekistan.

4. Hamidova, F. (n.d.). Development Trends of the Uzbek Language in the Internet Era. Modern Educational System and Innovative Teaching Solutions: European Science International Conference.

5. Rahimova, M. (2025). Problems of Translating Ecological Neologisms in Media Texts. The Lingua Spectrum, 10(1), 279–284.

6. Ro‘ziyev, Y. Z., & Abdullayeva, B. S. (2024). Media Literacy and Information Culture: A Textbook for Students of Higher Educational Institutions. Tashkent: O‘zbekiston Publishing House. 260 p.

7. Xaydarova, N. X., Obidova, N. J., & Xamidullayeva, M. X. (2024). The Introduction and Development of the Internet in Uzbekistan. Journal of Science-Innovative Research in Uzbekistan, 2(5), 7–11.