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THE ROLE OF COMPUTER LINGUISTICS IN UZBEKISTAN LINGUISTICS

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Abstract: Since the middle of the 20th century, the process of globalization has begun, which has fundamentally changed the history of mankind. cannot satisfy the needs of the youth. The important features of global development are determined by the introduction of technology into the spheres, the formation of computer programs, and the integration process. In the current global integration process, the creation of an information method based on natural language has become a vital necessity. Today, one of the important needs is to raise the status of the Uzbek language and bring it to the ranks of authoritative languages. Computational linguistics is one of the convenient opportunities created to implement this need. This article is aimed at highlighting the topic indicated above.

Keywords: applied linguistics, mathematical linguistics, engineering linguistics, information technologies, computer technologies, linguostatistics, automation, Turkic language machine fund, traditional linguistics, Uzbek computer linguistics, modeling, linguistic models, simple sentence model.

Research on computer linguistics in the USA, European countries, and Russia paved the way for the development of this field in other countries, including the Turkic countries and Uzbekistan. Research in the field of mathematical and engineering linguistics, that is, modern computer linguistics, has also been carried out among the Turkic peoples. The introduction of new information computer technologies into Turkology has been carried out in recent years. Turkish, Kazakh, and Kyrgyz linguistics have achieved certain successes in this regard. Mathematical linguistics and computer linguistics have developed consistently in Kazakhstan. The initial research carried out was mainly related to the statistical direction, and later Kazakh linguists conducted research in such areas as machine translation, automatic editing, and language teaching. Prof. Q.B. Bektayev's contribution to the formation of Kazakh computer linguistics is great. During his scientific career, the scientist created works on mathematical and engineering linguistics. These studies emphasized the comprehensive importance of studying language and speech units using computers, and practical work - research on programs and dictionaries was carried out. Members of the "Linguistics and Automation" group under the leadership of Q.B. Bektayev compiled a frequency dictionary of the language of M. Avezov's novel "The Path of Abay" (4 books) using a computer. This frequency dictionary contains more than 20,000 lexemes and 60,000 word forms ("glossema"), which are used 466,000 times. This dictionary became the basis for the development of computer linguistics in Kazakh linguistics.
The acquisition of the status of the Uzbek language as a state language, the rise of its global position, and the growing desire to learn the Uzbek language further increase the need for computer programs designed to teach this language. After all, such programs make it possible to easily master the lexicon of the Uzbek language, find the meaning and synonymous variants of a word expressing one or another concept. As is known, linguistic support is necessary for any computer program. Linguistic support, that is, a database, is created on the basis of the

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grammatical laws and semantic possibilities of a particular language. A database is created on the basis of all word classes in the Uzbek language
and its inclusion in the world information bank serves to expand the functional scope of the language. The creation of language teaching programs creates an opportunity to apply the results of theoretical research in the interests of humanity, in accordance with the balance of theoretical and applied linguistics. The issues that need to be resolved in Uzbek linguistics today require that research be directed to the interests of the people and the development of the country. Currently, the Uzbek language is taught in developed countries such as the USA, England, Germany, South Korea, Japan, China, the number of Uzbek language learners and speakers is increasing, computer programs are being created in the Uzbek language, in short, efforts to bring the Uzbek language to the level of world languages - determine the foreign language policy of Uzbekistan. According to V.A. Avrorin, the direct object of language policy is the functional side of the language. The functional side of the language is sensitive to external influences. Society can also control the structural aspect of language to a certain extent, but it does so not directly, but through the functional aspect of language. Typically, the structural aspect of language is influenced by factors directly related to the functional aspect of language, such as schools, literature, theater, propaganda, and other mass media.
conscious influence is exerted through conditions. Abroad, mainly in the USA, Ukraine, Belarus, Russia, China, and Japan, the scope of research on computer linguistics is wide. In Uzbekistan, this field has developed in recent years. Although the number of studies conducted is small, it plays an important role in determining the main directions of development of the field. The work carried out is only in the field of statistical analysis, and the issue is only touched upon in some scientific works. This situation indicates that there are many issues that need to be resolved in computer linguistics in Uzbek linguistics. By the middle of the 20th century, several computer-related terms such as “machine translation” and “machine linguistics” began to be used in the field of science and technology in Uzbekistan. However, these terms were mainly observed in mathematical research. Later, in linguistics
mathematical representation, computer system research was conducted. Scientists who conducted research on computer linguistics on Uzbek language materials are H.Arzikulov, S.Rizayev and S.Muhamedov. These scientists mainly conducted research in the field of statistical analysis of computer linguistics. H.Arzikulov *« Computer Science and processing text by means computational In his monograph " Technical "* he analyzed the basics of an automatic system for processing large volumes of texts using a computer. Under the leadership of Professor H. Arzikulov, the Center for Engineering Linguistics was established at the Samarkand State Institute of Foreign Languages. This center conducted scientific observations on the issues of computer processing of texts in the state language. Scientific research in the field of creating computer programs for text processing, collecting texts of all levels of the Uzbek language, bringing them into a specific system, indexing, developing algorithms, approaching them statistically, and creating an English-Uzbek machine translation program
The center's representatives were among the first to create the "Uzlington" automatic system for processing Uzbek texts, the "Spellchecker" program for converting texts in the Latin alphabet to Cyrillic and from Cyrillic to Latin, and computer programs for editing and correcting spelling errors. H. A. Rzikulov studied word structure in order to create an Uzbek machine language. The scientist's ideas about morphemes and word formation structures, the principles of text statistics and frequency dictionaries, and serious research on the creation of computer-based processing and automatic editing programs for Uzbek texts have become a significant part of the Uzbek language.

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It laid the foundation for the formation of engineering linguistics in linguistics and ensured the emergence of computer linguistics.
In his book, co-authored with RRPiotrovsky, S. Muhamedov provides information about linguistic models, the modeling process, and proposes quantitative models of Uzbek texts. This work also provides an automatic translation of Turkish newspaper texts in terms of lexical and morphological aspects. The results of a statistical analysis of the lexical and morphological structure of Uzbek texts, which can be used in the process of automatic processing of Uzbek speech using artificial intelligence and engineering linguistics methods, are presented. S. Rizayev discusses the use of specific methods in linguistics and
The use of computer science, the reasons for the statistical approach to language and speech phenomena, and the problems of automatic text processing, machine translation, as well as the use of computer science in determining the frequency of letters, were presented.
S. Rizayev's PhD dissertation is also devoted to the statistical examination of the grammatical and phonological system of the Uzbek literary language. Works created by S. Muhamedovcomputer
served as a source for further research in linguistics.

In order to form and develop Uzbek computer linguistics, a computer linguistics laboratory was established at the National University of Uzbekistan in 2001. The laboratory conducted scientific and practical research on the creation of mathematical and computer models of the Uzbek language, editing Uzbek texts, and developing English-Uzbek computer translation programs. The laboratory conducted research not only on computer linguistics, but also on computer literary studies. In addition to linguistic issues, namely, language teaching, knowledge assessment, editing texts, and translation from one language to another, research was also carried out on the tasks of literary studies in cooperation with computers: abstracting a work of art, creating a world-class library, objective and universal analysis programs for literature, organizing, placing, and searching works. Scientific articles on the areas of computer linguistics in Uzbek linguistics have been published.
In 2016, L. Abdukhamidova completed her graduation thesis on automatic editing. M. Abjalova defended her master's thesis on the linguistic content of a computer-based editing program for Uzbek texts. Handbooks on computer linguistics have been published.

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