

## THE ROLE OF LINGUISTICS IN THE INTEGRATION OF SCIENCES

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**Abstract:** This article explores the role of linguistics in the integration of sciences. It analyzes the connections of linguistics with natural, exact, and social sciences, and highlights the importance of interdisciplinary cooperation through cognitive linguistics, sociolinguistics, and linguistic cultural studies.

**Keywords:** linguistics, integration of sciences, cognitive linguistics, sociolinguistics, linguistic cultural studies, ethnolinguistics, computational linguistics, language and society, information technology.

The integration of sciences is an important factor in the development of scientific and educational processes, and serves to strengthen the interconnections of various disciplines. Linguistics plays a central role in this process, as it is connected to all sciences as the primary means of information exchange. As Chomsky noted, linguistics is strongly associated not only with linguistic theories, but also with psychology, computer science, and philosophy.

The integration of sciences refers to the interconnection and complementarity of different disciplines. Linguistics is inextricably linked with natural sciences, exact sciences, and social sciences and humanities. For example, Edward Sapir made significant contributions to the study of the relationship between linguistics and sociology by researching the connection between language and society [6.15].

The integration of linguistics with other sciences is manifested as follows:

**Connection with Natural Sciences:** The evolution of language and the processes of language processing in the human brain are studied in connection with biology and neurology. For instance, Steven Pinker demonstrated the integration between linguistics and neurology by proving that language is formed naturally by the human brain.

**Connection with Social Sciences:** Language is inextricably linked with sociology and psychology, and influences the development of society. David Crystal explored the interrelation of language and culture, and analyzed the processes of language change in the context of globalization.

**Integration with Exact Sciences:** The application of language in technology through artificial intelligence, programming, and linguistic modeling illustrates the integration of linguistics with computer sciences.

The integration of linguistics with a number of sciences has led to the formation of new fields. These fields serve to analyze language in collaboration with related disciplines.

Linguistics is interconnected with sociology. Sociology analyzes society, the characteristics of personal development, and social relations. The integration of linguistics with sociology has resulted in the field of sociolinguistics. Sociolinguistics is a field that studies the

relationship between language and society, the manifestations and functions of language in society [1.215].

Sociolinguistics is a relatively new field. Although the social aspects of language have attracted attention before, sociolinguistics took shape as a science only in the mid - 20th century. The change of language over time and space was recognized in ancient times. Historical linguistics and dialectology have demonstrated that these changes are systematic and follow certain patterns, thus proving its basis for scientific research. Later, when it became clear that language changes in another dimension, and this dimension was neither geographical expansion nor historical roots, linguistics and sociology were able to propose the necessary models to explain socially conditioned language variations [2.563].

Cognitive linguistics (from the English "cognize" meaning "to know", "perceive", "understand") is not limited to the theory of knowledge in philosophy, but connects language with thought (consciousness), and deeply and scientifically investigates the integral relationship of its psychological, biological, and neurophysiological aspects with social, cultural, and linguistic phenomena. Cognitive linguistics works with concepts and concept units in psychology. Meaning and image lie at the heart of the concept, and they are called "quanta" as a generalization of knowledge. The connection between concept - consciousness - symbol is controlled by brain activity [3.15]. For example, the concept of "goodness" encompasses all good things, signs, qualities, habits, etc., and forms its own "conceptual field", while the concept of "evil" expresses the opposite.

Linguistic culturology scientifically investigates the issues of language and culture, and intercultural communication. "Language is connected with culture, it reaches culture, develops in it and expresses it" [4.9]. This field studies not only culture, but also various national customs, religious events, national concepts, and means of consciously perceiving the world through language. The linguistic map of the world generally corresponds to their logical expression in people's minds. A broad and in-depth study of this issue is related to linguistic culturology and linguistic cognitology.

Ethnolinguistics is related to linguistics, ethnography, and sociology, and studies the connection of language with ethnos (the origin of people) and its role in society. Ethnolinguistics analyzes the use of linguistic tools and categories in the study of ethnic and social processes. This field studies the origin of peoples and ethnic groups (ethnogenesis and ethnic history); the material and cultural history of peoples (objects, customs, concepts, symbols, etc.); the formation of the history of people's thinking; language policy; and the process of language dissemination [5.7].

In Uzbek linguistics, the field of "computer linguistics" has emerged as an integral expression of computer science and linguistics. Computer linguistics serves not only the development of the field of linguistics, but also the development of other fields. The role of computer linguistics in the development of Uzbek linguistics and in the process of teaching the Uzbek language is significant. It is important to use the capabilities of ICT and computer linguistics in enhancing the status of the Uzbek language, improving its information and communication capabilities, and expanding its functional scope. Obtaining information about the vocabulary of the Uzbek language, studying the patterns of linguistic disciplines and grammatical systems, presenting linguistic phenomena and grammatical processes, using and explaining computer dictionaries, reflecting the semantic possibilities of lexemes, and illuminating their synonyms through a thesaurus yields practical results [7.230].



The development of modern sciences is closely related to the process of integration, and linguistics plays a special role in this process. Linguistics is developing not only as an independent science, but also in close connection with other sciences. Effective integration between different fields is carried out based on linguistics in matters such as the correct interpretation of language units, standardization of scientific terms, and ensuring mutual understanding. In particular, fields such as linguoculturology, cognitive linguistics, and sociolinguistics serve as an important tool in interdisciplinary approaches. Therefore, linguistics deserves special attention as a foundational science that shapes the theoretical foundations and defines the practical tools of the integration of sciences.

## References:

1. Xolmatova Z. Theory of Linguistics. – Tashkent, 2020. - B.215.
2. Couimas, F. In the Handbook of Linguistics. Edited by Arnoff M., Rees-Miller, J. P. 563-565.
3. Сафаров Ш. Cognitive Linguistics. - Jizzakh: Sangdor, 2006. -Б.15.
4. Маслова В.А. Linguistic Culturology. 2nd edition —М.: Академия, 2004. -С. 9.
5. Герд А.С. Introduction to Ethnolinguistics. Publishing House of St. Petersburg University, 2005. -С. 7.
6. Sapir E. (1921). Language: An Introduction to the Study of Speech. Harcourt, Brace.
7. Xolmatova Z. Theory of Linguistics. – Tashkent, 2020. - B.230.