STUDY OF METHODOLOGY OF MODELING IN UZBEK LANGUAGE

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Annotation

The article describes the application of the modeling method in linguistics, in particular, the views of linguists on the modeling method in scientific research on the study of language levels. The studies of Uzbek linguists on modeling language levels are analyzed.

Keywords: Model, modeling, modeling method, modeling process, linguistic modeling, mathematical modeling, linguistic form, syntactic model.

Introduction

Research on language levels has also shown that linguists rely on modeling techniques. Some of them used semantic content as a criterion in modeling language levels, while others chose the grammatical expression and syntactic functions of language levels as the main criteria. In this article, we would like to share our views on the topic of research in Uzbek linguistics. Modeling in Uzbek linguistics began in the 70s and 80s of the twentieth century with a monograph by Professor A. Nurmonov on the problems of systematic study of the syntax of the Uzbek language. He argues that the starting point in the systematic study of syntax should be the syntactic model. The issue of modeling language levels is also covered in T. Mirzakulov's research.

Linguistics emphasizes two principles for defining syntactic models: the first principle is to define a minimum structure containing units that are sufficient to be a predicative unit; the second principle is to identify the structural elements that serve to ensure not only grammatical integrity but also semantic completeness. In both cases, the syntactic model is determined by removing the primary units from the sentences and removing the secondary optional units.

Main part

In recent years, monographs by R. Sayfullayeva, M. Kurbanova, D. Lutfullayeva, M. Abuzalova, S. Nazarova and others on the problems of modeling syntactic units have appeared. They use the terms "structural model", "structural scheme", "speech pattern", and "speech model" in relation to sentence construction patterns.

Professor R. Sayfullayeva and M.Kurbanova share their ideas on modeling simple sentences in their research. When thinking about the problems of modeling the syntactic units of the Uzbek language, they recognize the multilevel nature of modeling: the superficial structure of the sentence; the internal construction pattern of the sentence; the essence of the sentence: zoti - linguistic pattern. The first is a graphical model created as a generalization of speech products, and the second is an internal construction model based on the syntactic functions of the internal parts of speech, both of which are

shown to be secondary to speech products. The authors state the following about the inherent-linguistic pattern of speech: any linguistic unit must have the same high degree of commonality as the language itself. It should be solved not on the basis of the method of generalization of speech derivatives, but on the basis of paradigmatic relations and whole-piece relations between linguistic units at the linguistic stage.

The authors also emphasize the need to correctly identify the stages of molding in the process of linguistic molding and the types of patterns formed in these stages, and state that the speech patterns in the surface and internal construction stages of molding differ sharply.

According to Professor D. Lutfullayeva, a linguistic pattern is an ordered sequence of certain language elements that reflects different levels of abstraction through certain symbolic symbols.

D. Nabiyeva is one of the researchers in Uzbek linguistics who pays special attention to the problem of linguistic modeling. In his view, the linguistic model is characterized by the fact that it is a constructive scheme that exists in the human mind as an opportunity and is supplemented by specific lexical units in the direct speech process. He also emphasizes that modeling is based on the stable relationship of the elements in a character set, and therefore the separation of stable or disordered characters in the relationships between the elements in the whole is of great importance for modeling.

S. Nazarova's dissertation on the study of vocabulary in the Uzbek language is aimed at highlighting the linguistic essence of the vocabulary, which raises the issue of moving from the specificity of speech to the linguistic commonality. The study is led by the study of the internal structure and interrelationships of word combinations, as well as "the study of types of phrases and ways of combining words, from specific to general, from reality to opportunity." When the researcher thinks that there is a two-way relationship between the members of a phrase, "the internal balance created between the possibility of the subordinate part and the need of the dominant part is the essence of the syntactic connection". - he emphasizes.

In S. Nazarova's work the semantic that serves for the formation of phrases - [M]; formal - [Sh]; location - modeling is carried out by searching for [J] factors. Among the components of the phrase in the study, the dominant part - [HB] can be connected in 6 different ways, while the subordinate part - [TB] can also be connected in 6 different ways, thereby forming millions of word combinations It is shown that it is possible to create 36 different phrase patterns. The study also seeks to justify the use of 18 priority patterns of Uzbek phrases - [SB].

Indeed, the semantic, formal, and semantic features that serve to combine words, along with the variety of speech, serve to define the possibilities in the language system. This situation allows enough to model a phrase based on semantic coherence, formal-grammatical harmony, speech sequence.

M. Abuzalova's research is aimed at defining the essence of speech by approaching it as a linguistic unit. One of the main tasks of the research is to find out what this commonality is in Uzbek speech. In the work, the unit that comes as a cut function consists of two parts: on the one hand, it is defined by the lexical meaning - [W], on the other hand, the part of the cut indicators - [$〚P〛$ _m], and thus the sentence the smallest construction template is given as GKQ- [WP_m].

In this study, it was found that the small pattern of speech, which is free of non-syntactic phenomena, lives in the minds of members of the Uzbek community as an opportunity in the following six forms at the linguistic stage:

Speech type	The pattern of speech
A compact simple statement with one content	$I\ WP_m\ I$
A one-content spread is a simple matter	$I\ WP_m\ Yo$
A two-component collection is simple	$E + II\ WP_m\ Y$
A two-component possessive spread is a simple matter	$E + II\ WP_m\ Yo$
A compact simple statement without a two-component owner	$E - II\ WP_m\ I$
A simple statement without a two-component owner	$E - II\ WP_m\ Yo$

A special place in the study of modeling of linguistic units belongs to   M.Kurbanova's doctoral dissertation on "Formal-functional direction and interpretation of simple sentence construction in Uzbek linguistics." It is a linguistic-syntactic pattern - [LSQ] construction diagram and structure, in which the relationship of form and content, generality and specificity between types and speech events, relations such as essence and event, invariant and variant, lexeme and word combination, linguistic paid special attention to the coverage of issues such as the expansion factor in the syntactic pattern.

The author emphasizes that the patterns of word formation and sentence formation are linguistic-syntactic patterns. The Linguistic-Syntactic Pattern - [LSQ] describes the general-specific dialectic between a speech phrase and a sentence. According to M. Kurbanova, [LSQ] is not a simple way of generalizing speech products, but should be opened at the linguistic stage between the paradigmatic relations between linguistic units and whole-piece relations.

In other words, the constituents of a linguistic-syntactic pattern - [LSQ] - must have lower linguistic units and enter into certain relationships, unite as part of a new whole, and give a syntactic linguistic unit. This means that the components of [LSQ] must be lower level units than syntactic level units. For example, the scholar states that both symbols in the small construction pattern of the sentence - [WPm] - have such a very high degree of commonality. According to M. Kurbanova, [W] is a symbol of any unit that performs the function of a noun in speech, and is equal to a word, a phrase, a phraseological unit, or an integral syntactic whole, through any of them. can be expressed. It also states that [〖P〗 _m] is a cut category, and that this section has the same common denominator, stating that the grammatical meanings that make up the cut categories can occur in aggregate, diffuse, and analytic forms. He admits that if one of the components of the [WPm] linguistic-syntactic template - [LSQ] - is removed from this template, the feature of the sentence is lost. Because the lexical meaning is the unit of the nominal level [W], the part of the cross-sectional indicators is the unit of the morphological level [〖P〗 _m]. Each

of them is a separate non-syntactic level unit, and a syntactic level unit is a combination of such non-syntactic units.

M. Kurbanova's great achievement is that the linguistic-syntactic pattern - [LSQ] reveals the fact that they have a hierarchical character, as well as defining the relationship of form and content. In his view, the model of the accusative compound - ⟦ [I⟧ ^ qk I ^ eq] is a general form, which is separated and generalized from the material side, which is repeated in the phrases that occur in speech. The absolute of this generality is that ⟦ [I⟧ ^ qk I ^ eq] can be repeated in an infinite number of new phrases.

Professor D. Lutfullayeva raises the problem of defining the semantic-syntactic patterns of sentences in Uzbek using simple sentences denoting existence. It represents the simple form of non-existence as the participle of non-existence [YKSH], and the simple form of existence as the participle of existence - [MKSH].

The problem of modeling morphemic units in Uzbek linguistics is first put forward in the research of T. Mirzakulov. He studies Uzbek morphemes paradigmatically and syntagmatically. According to him, the concept of paradigm - gang, set, set, system - is inextricably linked with the modeling of certain units. According to the scientist, morphological paradigms can be defined in the form of: word modification, word-lexeme paradigm, word group paradigm and grammatical category paradigms.

In the research of Sh. According to him, "the strengthening of the functional-communicative approach to language, the introduction of the concept of derivation in science, its differentiation in lexical and syntactic planes, the dynamic nature of the word-formation process, the desire to form secondary units and define their models more importantly, it has led to the identification of paradigms that organize birth patterns of secondary cues from primary cues. "

Conclusion

Professor A. Nurmonov considered that a morpheme "consists of a syntagmatic relationship of two or more phonemes and is considered a system as a whole with a new quality", that the whole consisting of a syntagmatic relationship of morphemes is considered a word form, so explains that the z form is a morphological level unit that is one degree higher than the morpheme level, and that its building material is a morpheme. In turn, the word gives synthetic, analytical, compound, and artificial word models, depending on the syntagmatic relationship of the morphemes to the form:

Shape model	Shape structure
$M_l + M_{yord}$	lexical morpheme + auxiliary morpheme
$M_l + M_l - M_{yord}$	lexical morpheme + lexical morpheme + auxiliary morpheme
$M_l - M_{yord}$	lexical morpheme + auxiliary morpheme

It seems that certain level units in a paradigmatic relationship are modeled using certain specific, yet general, features. While integral symbols serve to synthesize an object and create a system, differential symbols serve to distinguish system members from each other. Each level unit, in turn, serves as a

material for a step level unit above itself. This, of course, can not only ensure the integral relationship of language level units to each other, but also serve as a basis for modeling them.

For the first time in the history of Uzbek linguistics, Sh. Rakhmatullayev put forward the idea of modeling phraseology in the 80s and 90s of the last century. He uses the term formula instead of model: "In a phrase, a particular formula of a compound, a phrase, is filled with lexemes and morphemes as a constant component. For example, the phrase "open the eye" is originally a compound compound formed by subordinating the lexeme of the eye to the open lexeme; there is an indicator of the lexeme of the eye and the conjugation of the vowel, which participates in the lexeme-like structure of the eye in the expressive aspect of this phrase; the numerator and the denominator are also involved as a necessary part, but which numerator and denominator to use is determined at the speech stage. "

In modeling the expressive aspect of a phrase, the author relies mainly on the stable compounds in its composition and focuses on their occurrence in the speech process. He tries to explain the difference between a language unit and its speech, using the example of a blindfold. According to him, the second member of this phrase, which is structurally equivalent to a compound, is represented by a hungry lexeme. In this phrase, as a whole, indivisibility, inclination, time, and personality are added to the speech. In addition to phrasal verbs, a similar compound is used in speech. This type of speech is called free speech.

The scientific researches of H. Arzikulov, M. Ayimbetov, N.Yokutov, S.Rizayev and S.Muhamedova, who conducted linguostatic researches on Uzbek language materials in the development of computer linguistics in Uzbekistan, are noteworthy. They mainly did theoretical and practical work in the field of statistical analysis of computer linguistics. H. Arzikulov's monograph "Informatics and processing of text by means of computer technology" analyzes the automatic system of processing large volumes of text using a computer. RGPiotrovsky's and S.Muhamedova's book "Engineering Linguistics and Experimental System-Statistical Research of Uzbek Texts" and RGPiotrovsky's and T.Sadikov's scientific researches provide opinions on linguistic models, modeling and its general principles, as well as quantitative Uzbek texts.

S.Rizayev's book "Cybernetics and Linguistics" provides information on the use of specific methods in linguistics, including the use of computers, the reasons for the statistical approach to language and speech phenomena, the role of computers in determining the frequency of letters. MKAimbetov developed a quantitative typology of Turkic languages - Uzbek, Kazakh and Karakalpak by modeling the morphology of Turkic languages using statistical methods, while XFIskhakova developed effective research on the formal morphology of Turkic languages. went In 2001, at the initiative of Professor A. Pulatov, the field of computer linguistics was founded at the National University of Uzbekistan. In recent years, significant research has been conducted in the field of computer linguistics. Examples are the works of A. Rakhimov, A. Glatky, I. Melchuk, R. Grishma and S. Muhamedova.

N.Abdurahmanova, who is currently conducting effective research in the field of machine translation to create a linguistic support of the Uzbek-English translation program, entitled "Linguistic support for the translation of English texts into Uzbek / (on the example of simple sentences)" The importance of

the modeling method is also emphasized in the dissertation. The research provides linguistic models for automated text editing software.

The modeling of language levels follows the principle of separating the relevant and irrelevant units of real material units given to our sensory organs and excluding irrelevant units. It is well known that the fragmentation of language elements with an orderly sequence is an important principle in defining linguistic models. This means that any model as a whole has a hierarchical hierarchy.

If we look at quantitative concepts, in many languages grammatical models are used only in certain places, although linguistics focuses on modeling phonological, syntactic level units, the basic gradations are literally z is represented by data.

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