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SEMANTIC PARAMETERS OF ARGUMENTATIVE DISCOURSE IN
TECHNICAL RESEARCH PAPERS

СЕМАНТИЧНІ ПАРАМЕТРИ АРГУМЕНТАТИВНОГО ДИСКУРСУ У
НАУКОВО_ТЕХНІЧНИХ СТАТТЯХ

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Abstract. *The article presents a study of argumentative discourse in technical research papers with relation to semantic parameters. The urgency of the research is determined by insufficient investigation of argumentation genre features in scientific sphere. The backbone of analysis is the model of S. Toulmin, the object of regard being all its components. The research is aimed at ascertaining the semantic relations between the model components, presenting them in compositional speech forms and in the context of Rhetorical Structure Theory.*

Key words: *argument, causativity, evidentiality, compositional speech forms, contamination, convergence.*

Introduction. The purpose of the research is to project the expanded model of argument onto Rhetorical Structure Theory and determine a number of semantic relations between the model components. This study is an attempt to describe a variety of argumentative methods peculiar to technical research papers. Moreover, the argumentative discourse structure of technical research paper was described.

Methods. It has been found that the presence of argumentation in a text is recognized according to pragmatic, logical, structural and lexicogrammatic criteria.

Pragmatic criterion is the presence of argumentative fragments with pragmatic parameters in the text. We call them arguments. Structural and logical criteria are closely connected. According to them, each argument consists of two parts. The first is Thesis, i. e. the conclusion whose truth or falsity should be proved by the author. The other part of argument is the reasoning from which the Thesis is concluded logically. Finally, the process of argumentation usually involves a number of certain lexicogrammatic means.

It has been established that the discourse of technical research papers is characterized by both such universal discourse categories as integrity, coherence, informativeness, implicitness, personality, intertextuality, pragmativity, relevance etc.

and specific ones including text argumentativity, evaluation, evidentiality and dialogism. The categories of causativity, modality and negation create argumentative discourse. Moreover, semantics of conditioning is also realized due to such categories as condition, concession and purpose which serve as modifications of causativity. It is shown the correlation between the components of argument model and the specific categories.

The study is based on the S. Toulmin's model of argument. It consists of Thesis mentioned above and five following components: Grounds, Warrant, Backing, Rebuttal and Qualifier [3, c. 274-277].

It has been found that there is a correlation between the categories of argumentative discourse and the Toulmin's model components (Table 1).

Table 1

The categories of argumentative discourse and the Toulmin's model components

Component \ Category	Grounds	Warrant	Thesis	Backing	Rebuttal	Qualifier
Causativity		+				
Concession					+	
Purpose		+				
Condition		+			+	
Evidentiality	+			+		
Epistemic modality						+
Negation						+
Argumentativity	+	+	+	+	+	+
Evaluation			+			

Since not all the model components of the model are explicit, it is analyzed the type of implicit information and renewal potential for each of them [2].

A unit of argumentative discourse is considered to be an integral structural-semantic formation with common semantic sense. The unit is represented in the form of semantic network with semantic relations holding between the components.

The ways of argumentation imaging by means of compositional speech forms are analyzed. In particular, five types of arguments were determined as a result of matching between argumentation and compositional speech form reasoning according to a number of criteria.

In respect to that classification and its representation in Rhetorical Structure Theory the inventory of argumentation maneuvers for each type was established [1].

It has been revealed that the compositional speech forms composing the text of technical research papers are in interaction through the agency of such methods as:

- 1) combination, in particular, by attaching, alternation, listing, insertion, overlapping;
- 2) contamination;
- 3) convergency.

Results and conclusions. It has been established that the argumentative structure of a technical research paper is a three-level construction. The bottom level reflects local argumentation in the text of article. The middle corresponds to the argumentation of the whole paper with its conclusions being the Thesis. Besides, the process of argumentation is shown in the abstract of different detailed elaboration degree.

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Анотація. Проведене дослідження присвячене аргументації у жанрі науково-технічної статті. Присутність аргументації у тексті визначається відповідно до прагматичного, структурного, логічного та лексико-граматичного критеріїв. Дослідження базується на універсальній розширеній моделі аргументу С. Тулміна. Окреслено специфічні категорії аргументативного дискурсу та висвітлено їх співвідношення з компонентами моделі. У контексті Терії Риторичних Структур модкль аргументу представлено у вигляді семантичної мережі з визначеним набором риторичних відношень між компонентами. Проведено інвентаризацію прийомів аргументації. Аргументативну структуру науково-технічної статті представлено у визляді трьохярусної побудови. Крім того, визначено композиційно-мовленнєві форми, що відображають аргументацію у жанрі науково-технічної статті на кожному ярусі..

Ключові слова: аргумент, каузативність, евіденціальність, композиційно-мовленнєва форма, контамінація, конвергенція

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