



Sabinabonu MAKHMUDOVA,

Andijan State Institute of Foreign Languages Teacher of the Department of Practice of English Language

E-mail: sabinamaxmudova2000@gmail.com

LEXICON AND TERMINOLOGY OF SCIENTIFIC DISCOURSE (IN THE MATERIAL OF ARTICLES AND THESES)

Annotation

This article aims to discuss how terminological vocabulary of a non-native language through scientific texts might help students develop linguistic and professional competence. In this article, the characteristics of scientific discourse as well as the range of typical scientific terms and expressions and their functions have been reviewed. Furthermore, this research explores the characteristics of scientific language and the unique discourse markers used in academic literature.

Key words: Terminology, common scientific expressions, lexicology, function, theory, vocabulary, social, linguistics.

ЛЕКСИКОН И ТЕРМИНОЛОГИЯ НАУЧНОГО ДИСКУРСА (НА МАТЕРИАЛЕ СТАТЕЙ И ДИСКУРСОВ)

Аннотация

Целью данной статьи является обсуждение того, как терминологическая лексика неродного языка посредством научных текстов может помочь студентам развить языковую и профессиональную компетентность. В данной статье рассмотрены характеристики научного дискурса, а также круг типичных научных терминов и выражений и их функции. Кроме того, в этом исследовании изучаются характеристики научного языка и уникальные дискурсивные маркеры, используемые в академической литературе.

Ключевые слова: Терминология, общенаучные выражения, лексикология, функция, теория, лексика, социальная, лингвистика.

ILMIY NUQT LEKSIKONASI VA TERMINOLOGIYASI (MAQOLA VA TEZISLAR MATERIALIDA)

Annotatsiya

Ushbu maqola ilmiy matnlar orqali ona tilining terminologik lug'ati talabalarning lingvistik va kasbiy kompetentsiyasini rivojlantirishga qanday yordam berishi mumkinligini muhokama qilishga qaratilgan. Ushbu maqolada ilmiy nutqning xususiyatlari, shuningdek, tipik ilmiy atamalar va iboralar doirasi va ularning vazifalari ko'rib chiqildi. Bundan tashqari, ushbu tadqiqot ilmiy adabiyotda qo'llaniladigan ilmiy tilning xususiyatlarini va o'ziga xos nutq belgilarini o'rganadi.

Kalit so'zlar: Terminologiya, umumiy ilmiy iboralar, leksikologiya, funktsiya, nazariya, lug'at, ijtimoiy, tilshunoslik.

Introduction. Most studies characterize modern society as an information society because “theoretical knowledge occupies the central position, being the core of new equipment, technology, economic growth and social stratification organization”[1]. In this civilization, science serves multiple functions, including epistemology, socio-cultural innovation, etc. The integration of science into new social practices through information and computer technology highlights the need of seeing science as a type of public discourse. Modern scientific discourse combines theoretical, pragmatic, and socio-cultural factors to build the foundation for innovation in information society. The importance of human language in post-modern civilization necessitates broadening the scope of linguistic research and aligning it with other humanities disciplines. Modern linguistics recognizes the importance of investigating linguistic and communication issues from various scientific perspectives. This involves reframing classic language notions and exploring various elements of verbal and cognitive activities. The cognitive discourse approach, combining traditional linguistic analysis and other scientific methodologies, has taken linguistics to a new level of cognition and discourse study, focusing on complex cognitive concepts. According to E.S.Kubryakova, the cognitive discourse paradigm examines language as a tool for achieving specific goals in reality cognition and description, as well as communication and interaction [6].

“Terminology” is the branch of lexicology (or the study of lexicon) concerned with specialized vocabularies and sets of terms linked to specific fields. Terminology, as a new

academic topic, exists at the intersection of linguistics, logic, the theory of existence, information science, and specialized fields of science and technology, as well as the interdisciplinary area [11].

The most distinctive style of scientific prose is, undoubtedly, functional, mostly because of the extensive use of scientific phraseology and structuring. Along with scientific and technical terms specific to a particular terminology, phraseology also includes a variety of common expressions. For example, the English expressions such as exploratory study, above mentioned, in addition, for this reason, therefore, moreover etc.; Uzbek: kashfiyotni o'rganish, yuqorida aytib o'tilganidek, qo'shimcha ravishda, shu sababli, shuning uchun, bundan tashqari etc. and the Russian expressions: вышеупомянутый, по этой причине, в дополнение к, далее мы опишем are included in the phraseology. These lexical items are referred to as common scientific terms and expressions.

Terms and common scientific expressions serve different tasks in scientific discourse. Specific terms refer to concepts, objects, and processes within a specific scientific domain. Common scientific expressions, on the other hand, are domain independent and are used to organize scientific text narratives by expressing the logic of reasoning, connecting text fragments, and structuring the text under development. Common scientific expressions have a syntactically quite varied set, comparable to terms, but even more so than words. The set includes functional (auxiliary) words in addition to content (autosemantic) terms. Including

conjunctions, adverbial and participle phrases, noun and verb-noun combinations, compound prepositions, and conjunctions. Among the word combinations, one can notice stable expressions that are used as ready-to-use colloquial formulas (clichés) [1] can be observed; for example, Eng. as it was stated above, to outline directions of further research; Uzb. yuqorida aytib o'tilganidek, tadqiqotning kegingi yo'nalishlarni belgilash; Rus. Из вышесказанного следует, как показало проведенное исследование. Certain clichés are unique to specific genres, whereas others are frequently used in technical and scientific writing. Discourse markers are terms and statements that are often used in science.

Research methodology. The following procedures were utilized during the study: logical methods of classification and systematisation, linguistic methods of compatibility, definition and contextual analysis and word-building. The scientific style lexicon is characterized by conceptuality, the use of nouns and adjectives, terms with clear and narrow definitions, the absence of expressive lexemes, and the high repetition of lexis. This results in a stereotypical vocabulary and semantic condensation, with a preference for noun groups.

Literature review. In this section, we will highlight works that demonstrate the maturity of lexicography as a scholarly field. We will also focus on the discourse of key proponents who approach the discipline from a theoretical or methodological standpoint.

Research on scientific discourse has been conducted in the field of world linguistics. This is strongly linked to the works of I.Igolkina, J.G.Scott, A.Yu.Panasyuk, V.Sterkenburg, L.Zgusta, and S.Landau. V.Sterkenburg describes L.Zgusta, a Czech-American historical linguist and lexicographer who produced the first international lexicography textbook in 1971, as 'the twentieth-century godfather of lexicography. According to him, Zgusta dominated lexicography in the 1970s and 1980s. Furthermore, Sidney Landau (1933–present) is the leading authority on American lexicography. His book *Dictionaries: The Art and Craft of Lexicography*, first published in 1984, provides a thorough introduction of English lexicography. Also noteworthy are the *Dictionnaires: An International Encyclopedia of Lexicography* (Hausmann et al., 1989-1991), which was published in three volumes, and the *Dictionary of Lexicography* (Hartmann & James, 1998/2002). Finally, and most relevant to the topic of this thesis, John Considine's work, particularly the 2014 publication *Academy Dictionaries 1600-1800* (Considine, 2014), traces the history of lexicography on a European scale and discusses the numerous dictionaries compiled by various national academies in the 17th and 18th centuries. Many scientists have investigated the style of discourse and scientific writing. Here we can provide some examples: L. Vladimirova provides methodological strategies for improving scientific writing skills and mastering key vocabulary (Vladimirova, 2010, 8). E.V. Ivanitskaya [8] and E.V. Krasilnikova emphasize the importance of implementing scientific speaking styles in both written and oral forms. They link the development of scientific speech to a scientific mindset. According to Ivanitskaya (2016) and Krasilnikova (2017), learning the scientific style requires knowledge of vocabulary and speech clichés. N.N.Miroshkina perceives the issues more generally. When building workout routines, she recommends considering two goals: training in interpreting and evaluating scientific communication, as well as introducing conventions and norms for writing scientific texts, which can help create professional national skills [9].

I.R.Galperin [5] defines texts as having the following characteristics: completeness and content, adherence to literary language norms and genre requirements, a specific structure with mandatory elements such as a title and sphere-

phrase units, a system of communication means, focus, and pragmatics. V.E.Chernyavskaya identified similar traits in the region's scientific texts. According to J.S.Justeson and S.M.Katz (1995), an algorithm for recognizing terminology in scientific writings is necessary to classify them. The authors analyze the linguistic features of technical terminology.

In Uzbek linguistics H.Jalilov, A.R.Mamatkulov, A.G.Gulomov, T.H.Asadov, Kh.Doniyorov, B.Yoldoshev, Sh.Rahmatullaev, A.Boboyeva, I.Asomiddinova, E.Begmatov's works can be highlighted.

Analysis and results. A scientific text's fundamental objective is to convey logical knowledge, argue for novelty, summarize, and generalize. It resembles a text in terms of structure and semantics. Vocabulary is an important aspect in determining how informative a scientific book is. In any language, it is regarded the primary building block of the text. Scientific speech vocabulary is separated into three categories: common and general scientific words, special terminological words, and sky vocabulary. Besides, scientific discourse vocabulary is separated into words and non-terms. Non-term lexicon can refer to common scientific and technical terms. Correlating a lexical unit with a scientific definition distinguishes professional terminology from ordinary literary ones. This is especially significant when dealing with consubstantial terms, which are similar in form to ordinary literary language words. They account for a third of all terms.

The distinction between terminological and general vocabulary is fluid and not based on history. Terms are constantly transformed into commonly used words and vice versa. The transition from common to terminological vocabulary begins with the use of the former in specific contexts.

Research Terms and Definitions. Knowing standard research language helps us comprehend how to read and evaluate scholarly journal articles, allowing us to apply the findings more successfully to real-world human performance. The following are some basic research words and definitions.

Abstract. An abstract is a quick overview of a research paper, thesis, review, conference proceeding, or any in-depth investigation of a particular subject.

Assignment is the process of randomly assigning a sample to different groups or treatments in your study.

Background of the study. The research background is a brief summary of the most important investigations completed thus far, provided in chronological order. The research background should include a brief review of significant theories and models linked to the research problem.

Cause and effect is a relationship between two phenomena in which one phenomenon serves as the foundation for the other. The term effect has been widely used in scientific research.

Conclusion. The conclusion is designed to help the reader comprehend why your study is important to them after they have done reading the paper. A conclusion is not only a summary of your ideas or a re-statement of your research problem, but a synthesis of essential points.

Data. Study data is any information that has been gathered, observed, developed, or manufactured in order to validate original study findings. Although most research data is digital, it can also be in non-digital media such as laboratory notebooks and diaries.

An experiment is a technique used to support, disprove, or validate a theory.

Findings. The main results of a study effort; what it suggested, showed, or indicated. This usually refers to the entire set of outcomes, rather than the conclusions or suggestions derived from them.

Hypothesis. A hypothesis is a precise statement of prediction. It discusses in real (rather than theoretical) terms

what you anticipate will happen during your research. Not all research have hypotheses.

A manuscript is the material that an author sends to a publisher, editor, or producer for publication. Preprints are accepted manuscripts that have been evaluated but are not yet in final format.

Methodology. Research methodology refers to the precise procedures or strategies used to find, select, process, and analyze information about a subject. The methodology portion of a research article allows the reader to objectively assess the overall validity and reliability of the study.

A questionnaire is a research tool that consists of a series of questions designed to elicit information from respondents. Questionnaires can be viewed as a form of written interview.

Recommendations are based on the findings of your research and outline particular measures or directions that can be followed. As a result, implications represent the influence of your research, whereas recommendations may be concrete steps/actions that the research advises.

A reference page is the final page of an essay or research paper prepared in APA format. It highlights all of the sources you utilized in your project, making it easy for readers to identify what you cited.

Research is the systematic exploration and analysis of materials and sources in order to establish facts and draw new findings. A research question is an answerable query about a specific problem or subject. It's the first stage of a research effort.

A research problem is a statement about an area of concern, a condition to be improved, a difficulty to be eliminated, or a troubling question that exists in scholarly literature, in theory, or in practice that points to the need for meaningful understanding and deliberate investigation.

A researcher is someone who conducts research, i.e., an organized and systematic investigation into something.

Scope and limitation. Scope and limitations are two terms that address the details of a research project. The term scope refers to the problem or issue that the researcher wants to study with the project. Limitations is the term used for constraints that impact the researcher's ability to effectively study the scope of the project.

The title explains the primary idea(s) of your work. A excellent title uses the fewest words possible to adequately convey the contents and/or purpose of your research paper [11].

We categorized our collection of frequently used scientific terms and phrases into functional classes based on the suggested discourse operations list. Every word and word combination that is replaceable and semantically similar in the texts was collected into a group inside each class to create a subclass of functionally equivalent markers. Depending on the language, each group of functional equivalency can include two to nine units, with words from various parts of speech frequently included. The English result group of the consequence relationship, for instance, has the following sentences: therefore, therefore, as a result, consequently, it follows that, we conclude that, etc.; the Russian result group contains the following sentences: значит, итак, таким образом, тем самым, как видим, etc.; the Uzbek result group contains: misol uchun, shunday qilib, shuningdek, ko'rib turganimizdek, etc.

Conclusion. Scientific communication requires qualities that are understandable to specialists. Professional training for specific fields does not include them as a study subject. In language classes, it is important to prioritize scientific communication issues. The research focuses on scientific texts, discourses, organizational ideas, and terminology. Scientific and technical literature is presented as a unit of information, with a focus on syntagmatics to better understand the content and context of use. The key for comprehension is vocabulary. The characteristics of scientific discourse as well as the range of typical scientific terms and expressions and their functions in scientific discourse have been reviewed. We outlined the primary organizational concepts of the common scientific lexicon dictionary, which offers a variety of useful data for the automated analysis of scientific writings. There is one more vital point to make. Scientific literature sometimes include complex concepts that are difficult to communicate in non-native languages. In this instance, dependence on the native tongue is required. In education, lexical work that explains abstract concepts is the most important aspect.

REFERENCE

1. Bell D. "The Coming of Post-Industrial Society: A Venture in Social Forecasting" 1999. - 616 p.
2. Bolshakova E.I. Phraseological Database Extended by Educational Material for Learning Scientific Style // In: ACH/ALLC 2001: The 2001 Joint Int. Conference. Conf. Abstracts, Posters and Demonstrations, New York, 2001, - P. 147-149.
3. Bolshakova E.I. Lexicon of common scientific words and expressions for automatic discourse analysis of scientific and technical texts // Moscow, 2007 - P. 5.
4. Chernyavskaya V.E. Interpretation of scientific text. Moscow: URSS, 2007. – 128 p. (Чернявская В.Е. Интерпретация научного текста. Москва: УРСС, 2007. – 128 с.).
5. Galperin I.R. Text as an object of linguistic research. Moscow: URSS, 2008. – 147 p. (Гальперин И.Р. Текст как объект лингвистического исследования. Москва: УРСС, 2008. – 147 с.).
6. Ivanitskaya E.V. Transformation of scientific style in a changing communication environment // Features of a modern scientific article, Language and text, 2016. - pp. 62-75. (Иваницкая Е.В. Трансформация научного стиля в условиях меняющейся коммуникационной среды // Особенности современной научной статьи, Язык и текст, 2016. - С. 62-75).
7. Kubryakova E.S., Demyankov V.Z., Luzina L.G., Pankrats Yu.G. Brief dictionary of cognitive terms. M.: Publishing house of Moscow State University named after. M.V. Lomonosova, 1996. (Кубрякова Е.С., Демьянков В.З., Лузина Л.Г., Панкрац Ю.Г. Краткий словарь когнитивных терминов. М.: Изд-во МГУ им. М.В. Ломоносова, 1996.)
8. Leichik V.M. Terminology: Subject, methods, structure. Ed. 4th. - M.: Book house "LIBROKOM", 2009. — 256 p. (Лейчик В.М. Терминоведение: Предмет, методы, структура. Изд. 4-е. — М.: Книжный дом «ЛИБРОКОМ», 2009. — 256 с.)
9. Miroshkina N.N. Formation of linguistic and stylistic competence of students when studying scientific style, https://pglu.ru/upload/iblock/ae3/uch_2010_viii_00020.pdf, access: 05/3/2019. (Мирошкина Н.Н. Формирование лингвостилистической компетенции студентов при изучении научного стиля, https://pglu.ru/upload/iblock/ae3/uch_2010_viii_00020.pdf, доступ: 3.05.2019.)
10. Dictionary of Word Combinations Frequently Used in English Scientific Literature. Nauka Publ., Moscow, 1968.
11. Dictionary of Verb-Noun Combinations of the Common Scientific Speech. Nauka Publ., Moscow, 1973 (in Russian).