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LINGUISTIC CHARACTERISTICS OF ENGLISH SCIENTIFIC STYLISTICS

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Summary

The factors that shape the style of scientific literature include the necessity for a logical flow in presenting intricate content and a rich tradition. Consequently, the syntactic structure is expected to be comprehensive, cohesive, and ideally standardized. Notably, mathematical articles in English exhibit a characteristic feature of intricate syntax, often employing diverse sentence structures and various types of coordination and subordination. However, there has been a recent inclination towards simplification within the English scientific style.

Keywords

academic style, textual examination, grammatical integration, specialized vocabulary

Depending on the mode of communication, genres vary in subject matter, structural attributes, and the prevalence of specific speech types, as well as the sequence in which they are presented. This study examines the linguistic and stylistic characteristics of scientific texts through the lens of English master's dissertations. Scientific discourse holds a distinctive position within social communication. It is based on scientific knowledge, encapsulated within textual forms. Knowledge comprises organized information rather than arbitrary facts, forming a coherent system through cognitive processes. Cognitive science, with its unique attributes, delves into the interpretation of cognitive mechanisms. Globalization, the democratization of public discourse, and the accessibility of cutting-edge scientific advancements enable widespread dissemination and exchange of scientific and technical information. Scientific texts are crafted with the objective of delineating a structured reflection of reality, describing objects, phenomena, knowledge systems, and substantiating the existence of entities, their interrelations, or their absence.

The scientific text, encompassing characteristics of both oral and written communication, emerges as the culmination of scholarly investigation. Numerous

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scholars have delved into the study of scientific texts, yet a defining definition emerges: "A scientific text embodies a fusion of content, form, and expressive means. It belongs to the functional style of literary language, characterized by traits such as premeditated formulation, monological nature, meticulous selection of linguistic tools, and adherence to standardized speech norms." The style of scientific discourse bears resemblance to artistic speech. During the Alexandrian era, the artistic style diverged from the scientific, marking the genesis of scientific terminology within the Greek language.

Incomplete grammatical assimilation of borrowed book words is evident in instances where the plural form remains unchanged from the language of origin. Illustrations of this phenomenon can be seen in Latin scientific borrowings in English, such as "automaton - automata" and "phenomenon - phenomena." Book words constitute a significant portion of the lexical inventory in English mathematical articles and maintain international recognition across various languages. Examples include "theorem," "axiom," "lemma," "analysis," "synthesis," "statistics," "combinatorics," "geometrical," "stereometry," "endomorphism," "parallelogram," "parallelepiped," "parabolical," "extrapolate," "factorial," "gradient," and "homomorphism."

Another defining trait of scientific writing is the emergence of neologisms. Neologisms, as defined by Halperin I.R., encompass "any newly coined vocabulary and phraseological units that emerge in a language during its developmental phase, denoting fresh concepts arising from scientific and technological advancements, evolving societal conditions, and socio-political shifts." The evolution of new concepts through research necessitates the creation of novel terms for their representation, making scientific prose the primary breeding ground for neologisms. For instance, mathematical articles introduce vocabulary not yet documented in English dictionaries, such as "poset" for partially ordered set and "half-life" for the period of semi decay.

Certainly, the predominant feature of scientific texts on a lexical level lies in the utilization of scientific terminology. V. N. Komissarov characterizes terms as "words and phrases denoting specific objects and concepts employed by specialists within a distinct domain of science or technology." Key attributes of terms include objectivity, precision, and monosemy, signifying their independence from context. Mathematical articles in English exemplify a high density of terminological usage, featuring terms like function, theory, equation, segment, solution, graph, period, series, sequence, set, fraction, divergence, proof, theorem, endomorphism, factorial, and matrix. It's worth noting that, akin to other styles, a majority of the vocabulary

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in scientific literature comprises neutral terms. Given that the scientific style serves to convey cognitive information, the diverse linguistic tools employed in scientific texts uphold their objectivity. The imperative to convey reliable information at the textual level manifests in its timeless quality. Thus, in math-oriented articles, the predominant tense is the simple present (Present Simple).

The principal characteristics of style can be categorized across linguistic levels as lexical (1), grammatical (2), and syntactic (3).

The primary lexical characteristic of scientific style can be delineated as the abstract and generalized nature of presentation, primarily realized through extensive use of abstract vocabulary. For instance, consider the following examples: "... generally, literature on adopted children indicates an overall greater risk for poor developmental outcomes when compared to their non-adopted peers of the same age" (rephrased as "... generally, information about adopted children indicates that these young individuals face a heightened risk of adverse developmental outcomes compared to their non-adopted peers"); "... Furthermore, amidst the myriad changes accompanying adolescence, adopted children, whether internationally or domestically, must integrate their adoption status into their self-perception."

The lexical characteristic underscores the precise articulation of statements, achieved through the utilization of specialized terms. For instance, consider the following examples: "... The term 'asset' denotes the capacity of a characteristic to yield favorable outcomes; ... Peer victimization (defined as repeated instances of physical and relational aggression from peers); gratitude (a transient cognitive and affective state resulting from experiencing positive events); dual-factor model of mental health (a conceptual framework integrating conventional indicators of poor mental health, such as anxiety or depression, alongside indicators of positive psychological well-being, such as life satisfaction) ..." (rephrased as "... The term 'asset' is defined as the capacity of a particular trait to produce positive outcomes; peer victimization (comprising repeated acts of physical and relational aggression by peers); gratitude (a temporary cognitive and emotional state stemming from positive experiences); dual-factor model of mental health (a theoretical construct that incorporates traditional indicators of mental health issues, such as anxiety or depression, along with positive psychological indicators, such as life satisfaction) ...").

2. The initial grammatical aspect involves a prevalence of nouns within the text, as highlighted in the examples below:

"... The current investigation explored positive experiences (such as gratitude, life satisfaction, and hope) along with character strengths (including social competence, self-regulation, responsibility, and empathy), categorizing them based on whether they represent psychological states or traits. A psychological state denotes a transient experience stemming from a stimulus or biological occurrence, while a psychological trait remains stable over time ...";

"... The aim of this study is to explore the correlation between alliance and outcomes in couple therapy" (revised as "... this study explored positive experiences (e.g., gratitude, life satisfaction) alongside character strengths (e.g., social competence, self-regulation, responsibility, empathy), categorizing them according to whether they represent psychological states or traits. While a psychological state refers to a transient experience resulting from a stimulus or biological event, a psychological trait signifies stability over time ...").

The second grammatical trait involves the utilization of verbs in personal forms, as exemplified in the following instances:

"... This concept, known as the 'Dual Factor Model' of mental health, offers a perspective that could facilitate the integration of positive psychological research into mental health practice. This model is particularly pertinent in educational settings, as students experiencing optimal mental health typically achieve greater academic success compared to those merely devoid of symptoms of psychological disorders (Suldo & Shaffer, 2008). Positive experiences are most frequently operationalized to encompass indicators of subjective well-being" (revised as "... This concept, termed the 'double coefficient' model of mental health, suggested the possibility of integrating positive psychological research into mental health practice. This model holds particular relevance in educational contexts, where students generally achieve greater success than those who exhibit symptoms of psychological issues ...").

The syntactic aspects of a scientific text encompass the coherent arrangement of interrelated facts, achieved through the utilization of complex forms of conjunctions, adverbs, and introductory words, as exemplified in the following instances:

"... Furthermore, aggressive and withdrawn behaviors are more prevalent in rejected children, whereas compliance and social behavior are more prevalent in socially accepted children. Moreover, the acknowledgment of social issues and their associated negative outcomes holds significance; the third pillar of positive psychology underscores the importance of fostering positive social circumstances. For instance, healthy development is operationalized as social competence and life

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satisfaction ..." (revised as "... Additionally, aggressive behavior is more frequent among rejected children, and the recognition of social issues and their adverse consequences is crucial. The third facet of positive psychology stresses the significance of cultivating positive social conditions. For example, healthy development is defined in terms of social competence and life satisfaction ...").

The stylistic elements that shape a scientific text, such as sequence and coherence, are inherently linked to logical presentation. Consequently, English-language mathematical articles are rich in formal and semantic cohesion mechanisms, often exhibiting redundancy in these features. A considerable portion of these mechanisms comprises conjunctions and adverbs that serve as connecting elements within speech, including terms such as "according to," "also," "again," "instead of," "in consequence of," "as a result," "in connection with," "thanks to," "by means of," "however," "now," "thus," "alternatively," "on the other hand," and so forth.

Therefore, the scientific functional style in English exhibits numerous linguistic and stylistic features, many of which are akin to their counterparts in Russian. However, English scientific texts tend to be more condensed and streamlined in presentation compared to their Russian counterparts.

BIBLIOGRAPHY

1. Andryukhina, E. A., & Volkova, E. A. "Scientific Discourse in English: Linguistic Analysis." LAP Lambert Academic Publishing. 2022
2. Bazerman, C. Shaping Written Knowledge: The Genre and Activity of the Experimental Article in Science. University of Wisconsin Press. 1988
3. Flowerdew, J. "Corpus-based Sociolinguistics: A Guide for Students." Routledge. 2020
4. Hyland, K. "Academic Publishing: Issues and Challenges in the Construction of Knowledge." Oxford University Press. 2020
5. Serebryakova, A. V., & Savinova, E. Y. "Linguistic Stylistics of Scientific English Texts." LAP Lambert Academic Publishing. 2022
6. Kavilova, Laura A Q U I L I N A. “THE CASE OF PREFIXATION IN UZBEK AND FRENCH NEOLOGISMS.” PEDAGOGICAL SCIENCES AND TEACHING METHODS (2023): n. pag. Print.
7. Kavilova, T. (2022). A MODERN TECHNOLOGIES IN TEACHING FOREIGN LANGUAGES DIGITAL GENERATION OF STUDENTS: MODERN TECHNOLOGIES IN TEACHING FOREIGN LANGUAGES DIGITAL

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