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ANALYZING RAILROAD TERMINOLOGY IN ENGLISH

Abstract: This study delves into methodologies for examining railway terminology as a specialized language. Railway terminology is a significant component of English terminological systems, and this research explores various approaches to its analysis. These include semantic, structural, and etymological perspectives. The semantic approach involves categorizing terms by their meanings, while the structural approach investigates the composition of terminological units within the field of language for specific purposes (LSP). This study contributes a comprehensive overview of these approaches within the context of railway transport, employing methodologies such as literature analysis, dictionary scrutiny, comparison, and historical analysis.

Keywords: review, terminology, LSP, railway transport, research, semantic approach, structural approach, etymological approach, term, vocabulary.

Introduction

In contemporary linguistics, an essential focus lies on the examination of language tailored for specific contexts and its associated terminology. E.S. Zakirova highlights the relevance of understanding the interplay between language and the professional knowledge it represents, emphasizing the exploration of national-specific perspectives within cognitive and anthropocentric frameworks. Zakirova underscores that terms within a given social sphere are purposefully crafted for practical use among professionals.

Within the realm of language for specific purposes, as per Zakirova's perspective, lies the means of communication among individuals sharing specialized knowledge [1].

Transport, notably railway terminology, holds a significant position within the English terminological framework. This article discusses methodologies for studying specialized language within this professional domain. The objective is to comprehensively delineate research in English railway terminology, employing methods such as literature analysis, dictionary scrutiny, comparison, and historical analysis[3]. Given the inseparable link between railway-specific language and language for specific purposes overall, it is prudent to initially examine general approaches to studying specialized language before delving into those specific to the railway domain.

It's worth noting that the exploration of language tailored for specific contexts is closely intertwined with scientific and technological advancements, particularly the expansion of international scientific and economic interactions throughout the 20th century. N.B. Gvishiani observes that the diversification of scientific knowledge fueled the necessity for global communication, leading to the conceptualization of "language for specific purposes." The inaugural European symposium addressing these concerns took place in Vienna in 1977 [5]. Presently, it's widely acknowledged that each professional domain possesses its own linguistic structure, comprising specialized terminology facilitating communication grounded in domain-specific knowledge—what is commonly termed as "language for specific purposes." In contemporary linguistics, various definitions of language for specific purposes exist. A.I. Komarova defines it as a distinct subset of language employed when discussing specific professional topics . In V.A. Tatarinov's terminological dictionary, it's described as a functional stylistic concept linked with terminology, representing a specialized variation of natural language confined to particular industries. I.S. Kudashev defines it as a collection of linguistic tools employed predominantly for

conveying subject-specific information across various fields of knowledge or activity, encapsulating conceptual frameworks beyond the scope of the majority of native speakers of that language.

V.F. Novodranova provides a cognitive perspective on the definition of "language for specific purposes," viewing it as a system of linguistic tools within a national language that embodies knowledge structures developed within specific periods of scientific progress[2]. This system reflects the advancement achieved in particular areas of knowledge crucial for societal development and progress. The concept of "language for specific purposes" is closely linked with that of "terms." In the "Dictionary-reference book of linguistic terms" by D.E. Rosenthal and M.A. Telenkova, a term is described as a word or phrase accurately representing any concept employed in science, technology, or art[4].

L.A. Chernyshova emphasizes that terms, as linguistic symbols, are integral to the national language and serve as tools for understanding the surrounding world. They reflect a scientific mode of thought and are essential components of language tailored for specific purposes[6].

Methods

This study employs a multifaceted approach to analyze railway terminology in English, drawing from established methodologies in linguistic research. The following methods were employed to systematically examine and categorize the specialized language used within the railway transport sector:

Literature Analysis: A comprehensive review of existing literature on railway terminology, linguistic theories, and methodologies relevant to the study was conducted. This involved consulting academic journals, books, and other scholarly resources to gather background information and establish a foundation for the research.

Dictionary Scrutiny: Multiple dictionaries and terminological resources focusing on railway terminology were consulted to compile a comprehensive list of terms used within the domain. This involved scrutinizing definitions, origins,

and usage contexts of relevant terms to understand their semantic nuances and linguistic characteristics.

Comparative Analysis: A comparative analysis was conducted to identify similarities and differences between railway terminology in English and other languages, particularly those with historical or cultural connections to the railway transport industry. This comparative approach helped contextualize the findings within a broader linguistic and cultural framework.

Historical Analysis: The historical development of railway terminology in English was examined to trace the evolution of key terms and concepts within the domain. This involved studying historical documents, archival records, and other historical sources to understand how terminology has evolved over time in response to technological advancements, social changes, and linguistic influences.

Statistical Analysis: Quantitative data analysis techniques were employed to quantify and categorize the frequency and distribution of terms within different thematic groups identified in the study. This involved compiling a dataset of railway terminology terms and applying statistical methods to analyze patterns, trends, and relationships within the data.

By employing these methodological approaches in combination, this study aims to provide a comprehensive and systematic analysis of railway terminology in English, offering valuable insights into the structure, evolution, and significance of specialized language within the railway transport sector.

Results

Discussing the interplay between everyday and specialized vocabularies in professional texts, V.P. Danilenko distinguishes three distinct layers within the scientific style's lexicon[8]:

- Non-terminological vocabulary, comprising significant and functional words from the general literary language.

- General scientific vocabulary, encompassing specialized terms used in various scientific disciplines.

- Terminological vocabulary, rooted in specialized terms specific to individual terminological systems.

Sh.S. Olmatova asserts that the terminology within any scientific field is a result of individual term creation, shaped by personal perception and linguistic conditions. This suggests that different languages offer unique professional perspectives. Terminological systems across industries, aimed at conveying specialized information, serve specific societal segments and exhibit strong utilitarian characteristics.

The development of scientific knowledge leads to the emergence of terminology in various fields, comprising specialized lexical units that designate professional concepts. E.S. Zakirova's view resonates with the notion that professional knowledge is verbalized through lexico-semantic structures within language for specific purposes, conveying core scientific, technological, and professional concepts.

Regarding railway transport terminology, Sh.S. Olmatova highlights specific challenges arising from continuous modification, driven by technological advancements and evolving language conventions. Despite overlaps with other terminological systems, railway transport terminology belongs to technical domains characterized by precise concepts.

E.V. Demishkevich extensively covers approaches to describing railway terminology, including the semantic, structural, and etymological methods. The semantic approach involves grouping terms by meaning, while the structural approach analyzes their composition. The etymological approach examines the evolution of term meanings. Semantic classification within English railway terms identifies five thematic groups: cars and rolling stock, instruments and devices, technical operations, organization of transportation, and track infrastructure.

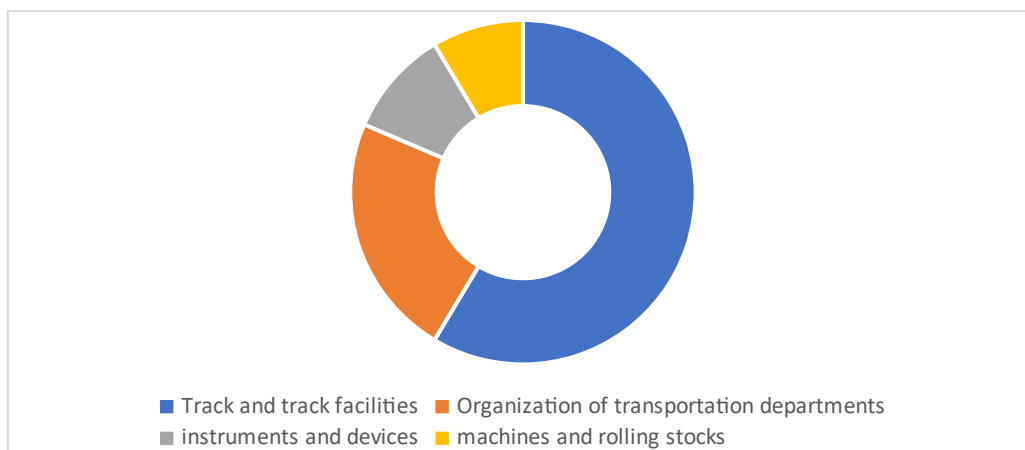


Diagram 1: Statistical Analysis of Thematic Groups in English Railway Terminology[8]

Upon analyzing the diagram:

The category "Travel and track facilities" constitutes 46% (1436 terms) of the total sample size of 3264 terms, placing it first in terms of term count.

The group "Organization of the transportation process" encompasses 22% (718 terms) of the total terms, ranking second.

"Instruments and devices" comprise 17% (554 terms), securing the third position.

"Machinery and rolling stock" comprises 9.2% (293 terms).

The smallest group, "Technical operations," consists of 263 terms, representing 8.8% of the total.

This analysis suggests a systemic structure within English railway terminology, characterized by interrelated elements forming a cohesive system. The structure exhibits semantic connections and a hierarchical arrangement across thematic groups. Terms are categorized into four groups based on their structure: simple, complex, phrasal, and terminological combinations, the latter being further subdivided into bound and free.

E.V. Demishkevich's research highlights that 20% of railway transport terms are simple, such as "ballast" and "sleeper." Complex terms, representing 7%, include examples like "maglev" and "high-speed." Free terminological combinations, constituting 2%, feature phrases like "transfer station." The

largest group, making up 67% of terms, comprises related terminological combinations, including "level crossing" and "classification yard." [7]

Additionally, 4% of terms are phrasal combinations, ranging from two to six elements, exemplified by phrases like "signal on post" and "train safety in operation."

It is worth noting that a significant portion of English railway terminology comprises borrowed terms. E.V. Demishkevich identifies 64% of borrowings, notably from Latin, French, and German, as well as unique borrowings from Dutch, Italian, and Spanish. Similarly, Sh.S. Olatova reports that 31.4% of English terminology originates from Anglo-Saxon roots.

Regarding original English terms, these include commonly used words such as "gate" and "barrier" (referred to as gates) and "yard" and "station" (referred to as yards) in the terminological context.

The examination of railway terminology employs similar methodologies to those used in analyzing language for specific purposes across various professional domains. As demonstrated earlier, the systematic and hierarchical classifications observed in this analysis indicate a sophisticated level of development and organization within industry-specific terminology. This reflects the intricate nature of the industrial and economic systems it represents, emphasizing its role as a linguistic expression tailored to these contexts.

Conclusion

In conclusion, this study has provided a comprehensive analysis of railway terminology within the context of language for specific purposes. By examining the semantic, structural, and etymological approaches to studying specialized language, this research has shed light on the complex nature of railway terminology and its significance within the English terminological system.

The study has revealed that railway terminology is a specialized language that is closely intertwined with scientific and technological advancements, particularly in the field of transportation. The terminology is constantly evolving, shaped by personal perception, linguistic conditions, and evolving language conventions. The analysis of the structure of English railway terminology has shown a systemic structure characterized by interrelated elements forming a cohesive system with semantic connections and a hierarchical arrangement across thematic groups.

Furthermore, the study has highlighted the significant proportion of borrowed terms in English railway terminology, with 64% of borrowings from Latin, French, and German, as well as unique borrowings from Dutch, Italian, and Spanish. Additionally, 31.4% of English terminology originates from Anglo-Saxon roots. These findings suggest that the study of railway terminology requires an understanding of the interplay between language and the professional knowledge it represents, as well as an exploration of national-specific perspectives within cognitive and anthropocentric frameworks.

Overall, this study has contributed to the understanding of railway terminology as a specialized language within the context of language for specific purposes. By employing methods such as literature analysis, dictionary scrutiny, comparison, and historical analysis, this research has provided a comprehensive overview of the approaches to analyzing railway terminology. As such, this study has important implications for the teaching and learning of specialized language, particularly in the field of transportation and engineering.

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