



## "INNOVATIVE ACHIEVEMENTS IN SCIENCE 2025"

### ENHANCING STUDENTS' READING SKILLS THROUGH CORPUS ANALYSIS TOOLS

Barnoyeva Nilufar Yoqubovna

Associate professor (PhD), Department of Foreign Languages Tashkent University of Information Technologies named after Muhammad al-Khwarizmi barnoyevanilufar1984@gmail.com Tel: 977763058

**Abstract:** *Reading comprehension is a fundamental component of foreign language proficiency and a critical skill for academic success in higher education. In recent years, corpus linguistics has emerged as an effective methodological framework for developing reading skills through the analysis of authentic language data. This article examines the potential of corpus analysis tools to improve students' reading skills by fostering deeper text comprehension, vocabulary awareness, and strategic reading behaviour. Drawing on data-driven learning principles, the study demonstrates how online corpora, concordance, keyword analysis, and collocation tools can be integrated into reading instruction. Examples from the British National Corpus illustrate how corpus-based tasks support learners in interpreting texts, recognizing discourse patterns, and constructing meaning more effectively. The findings suggest that corpus analysis tools contribute to improved reading comprehension, learner autonomy, and critical engagement with texts.*

**Keywords:** *reading skills, corpus linguistics, corpus analysis tools, reading comprehension, data-driven learning, foreign language education.*

Reading is one of the most important receptive skills in foreign language learning, as it provides learners with access to academic knowledge and professional information. University students are required to process large volumes of written texts, including textbooks, research articles, and professional documentation. However, many learners experience difficulties in understanding authentic texts due to limited vocabulary knowledge, unfamiliar collocations, and insufficient awareness of discourse structures.

Traditional reading instruction often focuses on surface-level comprehension and translation, which may not adequately prepare students for independent academic reading. Therefore, innovative instructional approaches are needed to help learners interact with texts more actively and analytically. Corpus linguistics offers such an approach by enabling students to explore real language use through empirical data.

The purpose of this article is to investigate how corpus analysis tools can be used to improve students' reading skills and to justify their effectiveness as an innovative technology in foreign language education. The study is based on the principles of corpus-based pedagogy and data-driven learning. The instructional framework was implemented with undergraduate students studying English as a foreign language. During the course, students were introduced to corpus analysis tools, including online corpora, concordance, keyword analysis tools, and collocation extractors.



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Students completed a series of reading-oriented tasks based on authentic texts. Before reading, learners used corpus tools to explore key vocabulary and collocations related to the topic. During reading, concordance lines were employed to clarify ambiguous words and phrases. After reading, students analyzed discourse patterns and lexical repetition using corpus data. Classroom observation and analysis of students' written responses were used to evaluate changes in reading comprehension and strategy use.

The use of corpus-based technologies produced noticeable improvements in students' analytical and interpretative abilities. One example involved a concordance analysis of the noun system in the BNC. Students examined concordance lines such as:

- the operating system was upgraded last year
- a secure system for managing information
- the system failed due to a software error

Based on these data, students identified typical collocational patterns and concluded that system frequently occurs in evaluative and process-oriented technical contexts.

Another task focused on collocation extraction for the noun data. Analysis of BNC data revealed frequent combinations including data processing, data storage, data analysis, and data security. Students justified the acceptability of these collocations by referring to frequency and contextual consistency in the corpus.

Students also compared near-synonymous verbs commonly used in ICT discourse. Concordance evidence showed that install is associated with local software or hardware setup, deploy with network or server-level actions, and implement with abstract procedures or solutions. These distinctions were formulated and defended using corpus examples rather than intuition.

Additional examples included analyzing the noun network in technical contexts. Students observed concordance lines such as:

- the network was configured to ensure security
- data was transmitted across the network efficiently
- the wireless network required troubleshooting

From these lines, learners identified collocational patterns like configure a network, troubleshoot a network, and secure network, demonstrating the typical usage of the word in ICT-related contexts.

Another task involved the verb access and its common objects. Concordance lines included:

- users can access the database remotely
- the system allows access to secure files
- employees are granted access privileges

Students analyzed these examples to understand the syntactic and semantic constraints of the verb in professional ICT texts, enhancing their reading comprehension and analytical reasoning skills.



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Finally, learners explored adjective-noun combinations relevant to IT documentation, such as critical error, backup system, and network latency. By examining their frequency and context in the corpus, students could infer meaning and typical usage patterns, improving both vocabulary acquisition and critical reading skills. Students also demonstrated improved ability to identify main ideas and supporting details by analyzing keyword frequency and lexical chains in texts. These findings indicate that corpus-based instruction supports deeper and more strategic reading.

The results confirm that corpus analysis tools enhance reading skills by encouraging active engagement with texts. Instead of relying solely on dictionaries or translations, students learn to infer meaning from context, recognize recurring patterns, and interpret texts critically. This approach aligns with interactive and cognitive models of reading, which emphasize the role of the reader as an active meaning-maker.

Furthermore, corpus-based reading instruction promotes learner autonomy. Students gain practical skills in using digital tools to resolve comprehension difficulties independently. The use of authentic corpus data also increases motivation and prepares learners for real academic and professional reading tasks.

The study demonstrates that corpus analysis tools are an effective means of improving students' reading skills in foreign language education. By integrating corpus-based activities into reading instruction, educators can enhance learners' vocabulary awareness, discourse comprehension, and strategic reading abilities. Corpus-based approaches transform reading from a passive activity into an analytical and exploratory process, supporting both linguistic development and higher-order cognitive skills. Therefore, corpus analysis tools are recommended as an innovative and pedagogically sound resource for reading instruction in higher education.

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