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READING THROUGH CORPUS ANALYSIS TOOLS: DEVELOPING READING COMPREHENSION AND LEXICAL AWARENESS IN ENGLISH LANGUAGE TEACHING

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Abstract

The integration of corpus analysis tools into English language teaching provides opportunities to develop reading comprehension, vocabulary knowledge, and critical language awareness through the analysis of authentic language data. Traditional reading instruction frequently emphasizes the identification of main ideas, the comprehension of explicit information, and the memorization of vocabulary. Although these activities remain important, learners also need to understand how words function in context, how lexical items combine, and how linguistic choices contribute to meaning. Corpus analysis tools address these needs by enabling learners to investigate authentic texts, examine concordance lines, identify frequent lexical patterns, and explore collocations. This article examines the pedagogical potential of corpus analysis tools for developing reading skills, with particular attention to data-driven learning, contextual vocabulary acquisition, and learner autonomy. It discusses the functions of concordancers, frequency lists, collocation analysis, and keyword analysis in reading instruction. The article also proposes practical classroom applications for English for Specific Purposes (ESP), particularly for students studying information and communication technologies (ICT). It argues that the effective



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integration of corpus-based activities can support more analytical, contextualized, and independent approaches to reading, provided that teachers offer appropriate guidance and select materials suited to learners' proficiency levels.

Keywords: Corpus linguistics, corpus analysis tools, reading comprehension, data-driven learning, concordance, collocations, vocabulary acquisition, English language teaching, ESP, ICT students.

Reading is a fundamental receptive skill in foreign language learning because it enables learners to access information, develop vocabulary, understand grammatical structures, and engage with different forms of written discourse. In contemporary educational environments, students encounter English-language materials through academic articles, electronic textbooks, professional websites, online news, technical documentation, and digital communication platforms. Consequently, successful reading requires more than understanding individual words or identifying explicitly stated information. Learners must also interpret meaning in context, recognize relationships between lexical items, distinguish relevant information from unnecessary details, and evaluate how language is used to communicate particular ideas.

Despite the importance of these abilities, reading instruction may remain largely dependent on textbook exercises, dictionary consultation, and teacher explanations. Such practices can help learners understand a text, but they may provide limited opportunities to investigate how English is actually used across different contexts. Students may understand the meaning of an individual word without recognizing its typical collocations, grammatical patterns, or contextual restrictions. These limitations are particularly relevant to English for Specific



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Purposes (ESP), where learners need to comprehend specialized texts and acquire vocabulary associated with their academic disciplines.

Corpus linguistics offers an alternative approach by examining language through systematically collected electronic texts. Corpus analysis tools allow learners and teachers to explore authentic examples of language use, identify recurring patterns, and investigate the relationships between vocabulary and context. Within language education, this approach is closely associated with data-driven learning (DDL), in which learners examine language data to discover patterns and develop their understanding of linguistic structures. Johns (1990) established an influential foundation for this approach by advocating the use of corpus evidence in grammar and vocabulary teaching.

The relevance of corpus-based learning is supported by Boulton and Cobb's (2017) meta-analysis, which reported positive overall effects of data-driven learning across the studies included in their investigation. Nevertheless, the educational value of corpus analysis depends on appropriate task design, learner preparation, and teacher guidance.

The purpose of this article is to examine how corpus analysis tools can be integrated into English reading instruction to improve reading comprehension, contextual vocabulary knowledge, collocation awareness, and learner autonomy. Particular attention is given to practical applications in ESP and ICT education.

A language corpus is a systematically compiled collection of spoken or written texts that can be analyzed to investigate patterns of language use. Depending on its design, a corpus may contain academic writing, newspaper articles, conversational language, technical documents, or texts representing several genres and registers.

Corpus linguistics contributes to reading instruction by providing evidence of how linguistic forms operate in authentic contexts. Instead of relying exclusively



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on definitions or isolated examples, learners can examine multiple instances of a word or phrase and compare their meanings and functions.

Hunston (2002) explains the relevance of corpora to applied linguistics, demonstrating their value for investigating vocabulary, grammar, discourse, and language variation. In reading instruction, this perspective encourages learners to consider words not as isolated units but as elements of larger linguistic patterns. For example, students who encounter the word network in an ICT text may investigate expressions such as computer network, wireless network, network security, and network infrastructure. Examining these expressions in authentic contexts helps learners understand how the same lexical item participates in different technical concepts.

Corpus-based reading instruction can therefore support three interconnected processes:

Text comprehension: identifying the meaning of words and expressions within their immediate and wider contexts.

Lexical development: recognizing frequent words, collocations, grammatical patterns, and specialized terminology.

Analytical reading: comparing examples, identifying recurring patterns, and evaluating how language conveys meaning.

These processes can complement conventional reading activities and provide learners with opportunities to develop a more systematic understanding of English.

Different corpus analysis tools support different aspects of reading instruction. Their effectiveness depends on the learning objectives, the corpus selected, and the proficiency level of the learners.

A concordancer displays examples of a particular word or phrase within its surrounding context. One common format is Keywords in Context (KWIC), in



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which the target item appears alongside the words immediately preceding and following it.

Concordance lines help learners compare contexts and identify recurring patterns. For example, students can investigate how the verb access is used in ICT-related texts:

access a database

access information

access a server

gain access to a system

By examining these expressions, learners can recognize grammatical structures and collocational patterns that may not be immediately apparent from a dictionary definition. Frequency lists show how often words occur in a corpus. They can help teachers identify useful vocabulary for pre-reading activities and enable learners to prioritize unfamiliar words according to their relevance and frequency. For ESP students, frequency information can be combined with disciplinary relevance. A frequent general word may be useful for overall comprehension, while a less frequent technical term may be essential for understanding a specialized passage.

Collocation analysis examines words that regularly occur together. It is especially valuable for reading because learners often encounter unfamiliar combinations whose meanings cannot be fully understood by interpreting each word separately. Examples from ICT include data security, software development, install an application, run a program, and protect sensitive information. Learning these combinations helps students recognize technical expressions more efficiently and understand how specialized vocabulary functions in authentic texts.

Keyword analysis identifies words that are unusually frequent in one collection of texts compared with a reference corpus. This tool can help learners identify the



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central concepts of a technical article or distinguish the characteristic vocabulary of a particular discipline.

For example, when examining an article about cybersecurity, students may investigate keywords related to encryption, authentication, vulnerability, and threat detection. These words can guide attention toward the text's principal themes, although their significance must always be interpreted in context.

Tools such as AntConc, Sketch Engine, and online corpus interfaces can facilitate these activities. However, teachers should select tools according to accessibility, available functions, corpus coverage, and the learners' ability to interpret the displayed information.

Data-driven learning encourages students to investigate language evidence rather than depend exclusively on explanations supplied by teachers. In this approach, learners formulate questions, examine examples, identify patterns, and develop conclusions based on the data.

Boulton (2017) describes DDL as an approach in which learners use software to explore collections of authentic texts and answer language-related questions. This process can promote language awareness and encourage learners to take greater responsibility for their learning.

In reading instruction, DDL can be organized into five stages.

Stage 1: Preparation. The teacher introduces the reading topic, activates learners' prior knowledge, and identifies the principal reading objectives. Difficult technical terms may be introduced selectively.

Stage 2: Corpus exploration. Students examine selected concordance lines, frequency lists, or examples of target expressions connected with the reading topic.

Stage 3: Pattern identification. Learners compare examples and identify recurring lexical combinations, grammatical structures, or contextual meanings.



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Stage 4: Text interpretation. Students return to the original text and use their observations to clarify unfamiliar expressions, understand relationships between ideas, and interpret the author's message.

Stage 5: Reflection and application. Learners explain their findings, complete comprehension tasks, and apply the newly acquired vocabulary in summaries or discussions.

This sequence connects linguistic investigation with meaningful reading. Nevertheless, corpus analysis should not replace the reading of complete texts. Concordance lines provide useful evidence, but they may omit the broader discourse context necessary for understanding an argument, evaluating an author's position, or identifying the purpose of a passage.

One of the main advantages of corpus-based reading instruction is the opportunity to investigate vocabulary in context. Vocabulary knowledge involves not only recognizing word meanings but also understanding grammatical behaviour, common combinations, register, and contextual appropriateness.

When learners repeatedly encounter a word in authentic examples, they can compare its meanings and determine which interpretation is appropriate in a particular passage. This process can also help them distinguish general meanings from specialized uses. For example, the word cloud may refer to a visible formation in the atmosphere or to a technological environment for storing and processing data. By examining expressions such as cloud computing, cloud storage, and cloud services, ICT students can identify the relevant meaning in a technical text.

Corpus analysis can also support the recognition of collocations and multiword expressions. Such knowledge is important because readers do not always process texts as sequences of unrelated words. Familiar lexical combinations may help them recognize concepts and interpret technical information more efficiently.



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Thurston and Candlin (1998) examined concordancing as a means of teaching academic vocabulary and emphasized its potential for vocabulary and grammar learning. Their work illustrates how corpus evidence can be incorporated into instructional materials to connect linguistic forms with their actual use. The relationship between corpus analysis and reading comprehension can be summarized as follows: corpus evidence supports contextual vocabulary interpretation; contextual interpretation facilitates understanding of sentences and paragraphs; and improved understanding of lexical and grammatical relationships can contribute to more effective text comprehension. However, this relationship should not be interpreted as automatic. Learners also require background knowledge, reading strategies, grammatical competence, and an understanding of discourse organization.

Corpus analysis is particularly relevant to ICT students because they regularly encounter specialized English terminology in technical documentation, online resources, software instructions, and professional communication.

A corpus-based reading lesson can be developed around a topic such as Cybersecurity and Data Protection. The teacher selects an authentic text and identifies several target expressions, including protect sensitive data, detect security threats, prevent unauthorized access, and encrypt confidential information.

Students first read the text to identify its main idea and supporting details. They then examine selected corpus examples containing the target expressions. Their task is to identify the words that typically accompany the verbs, compare their use across contexts, and explain how the expressions contribute to the meaning of the text.

Corpus analysis offers several pedagogical benefits. First, it exposes learners to authentic language and provides multiple examples of how words and



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expressions are used. Second, it supports contextual vocabulary acquisition by showing relationships between lexical items. Third, it encourages inductive learning, in which learners develop conclusions by observing linguistic evidence. Finally, it can promote learner autonomy by enabling students to investigate language questions independently. Research reviewed by Boulton and Cobb (2017) provides broader support for the effectiveness of corpus-based learning approaches. However, their findings concern data-driven learning across a range of language-learning contexts rather than reading instruction alone. Therefore, the benefits for particular reading outcomes should be evaluated in relation to the specific learners, tasks, and instructional conditions. Effective implementation therefore requires a balanced approach in which corpus tools complement, rather than replace, teacher guidance, systematic reading strategies, and engagement with complete texts.

Corpus analysis tools provide valuable opportunities to enrich English reading instruction through authentic language evidence, contextual vocabulary learning, and systematic investigation of lexical patterns. Concordancers, frequency lists, collocation analysis, and keyword analysis enable learners to examine how words function in context and how recurring linguistic combinations contribute to meaning.

The integration of corpus analysis with data-driven learning can encourage students to become active participants in the learning process. Rather than depending exclusively on dictionary definitions or teacher explanations, learners can investigate language patterns, formulate hypotheses, compare examples, and support their interpretations with evidence. These practices are particularly relevant to ESP and ICT education, where comprehension of technical vocabulary and specialized collocations is essential.



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In conclusion, reading through corpus analysis tools represents a practical approach to connecting authentic language data with meaningful reading activities. When implemented appropriately, it can contribute to contextual vocabulary knowledge, collocation awareness, analytical reading, and learner autonomy. Further empirical research is needed to establish how different corpus tools and instructional designs affect specific reading outcomes across learner proficiency levels and educational contexts.

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