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CORPUS-BASED APPROACHES TO ACADEMIC WRITING INSTRUCTION: A DATA-DRIVEN LEARNING PERSPECTIVE FOR FUTURE ENGLISH TEACHERS

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Abstract
Academic writing represents one of the most demanding competencies for EFL learners, requiring simultaneous control over lexical accuracy, grammatical complexity, cohesion, and register. This study investigates the effectiveness of corpus-based analysis, specifically data-driven learning through the Corpus of Contemporary American English (COCA), in developing academic writing skills among future English teachers at Chirchiq State Pedagogical University. Using a mixed-methods experimental design, the research evaluates a corpus-integrated worksheet targeting six key writing subskills: cohesive phrase use, avoidance of repetition, phrase-level complexity, collocational competence, register awareness, and lexical precision. Reflective questionnaire data from 32 B2-level EFL students and evaluative data from six experienced EFL academic writing teachers reveal that corpus-based instruction significantly enhances collocational competence and cohesive phrase use, while also improving register awareness and lexical precision. The findings confirm that data-driven learning constitutes a powerful and innovative complement to traditional academic writing instruction, with important implications for teacher education programs in Uzbekistan and similar educational contexts.

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Introduction

The rapid development of digital technologies and the global expansion of academic communication have fundamentally transformed the expectations placed on future English teachers. Academic writing, as one of the most complex aspects of language competence, demands not only grammatical correctness but also advanced control over lexical patterns, discourse organization, and stylistic appropriateness. For EFL learners in Uzbekistan, mastering these dimensions of academic writing presents a significant challenge, as traditional instructional approaches often prioritize prescriptive rules over authentic language exposure.

Corpus linguistics has emerged as a powerful methodological framework for addressing this challenge. By enabling systematic analysis of large collections of authentic language data, corpus tools provide learners with direct access to the patterns, collocations, and discourse conventions that characterize effective academic writing. The concept of data-driven learning, introduced by Johns, positions the learner as an active investigator of linguistic data rather than a passive recipient of grammatical rules. This approach has been widely recognized as effective for developing lexical accuracy, phraseological competence, and genre awareness in academic writing contexts.

Despite the growing body of international research on corpus-based academic writing instruction, empirical evidence regarding its effectiveness in Central Asian EFL contexts remains limited. Future English teachers in Uzbekistan require both advanced writing competence and the pedagogical tools to develop similar skills in their own students. The integration of corpus-based methods into teacher education programs therefore represents a dual opportunity: to enhance pre-service teachers' own academic literacy and to equip them with innovative data-driven instructional strategies.

The present study investigates this opportunity through an experimental corpus-integrated lesson conducted with third-year English Language and Literature students at Chirchiq State Pedagogical University. The research aims to evaluate the effectiveness of COCA-based instruction in developing six core academic

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writing subskills and to identify the conditions under which corpus-based pedagogy yields the most significant learning outcomes. The study further contributes to the broader discussion of how corpus linguistics can be systematically embedded in language teacher education in Uzbekistan.

Methods

The study employed a mixed-methods experimental design integrating quantitative reflective assessment and qualitative teacher evaluation. The research was conducted at Chirchiq State Pedagogical University with 32 third-year students majoring in English Language and Literature, all assessed at the B2 level of English proficiency according to the Common European Framework of Reference. Participants had prior experience in general essay writing but consistently demonstrated difficulties in academic lexical choice, register control, and phraseological accuracy.

The experimental intervention consisted of an 80-minute guided data-driven learning session structured around a specially designed corpus-integrated worksheet. The worksheet guided students through a sequential series of tasks using the COCA concordancer, targeting six academic writing subskills: cohesive phrase use, avoidance of repetition, phrase-level complexity, collocational competence, register awareness, and lexical precision. Tasks included searching academic collocations such as conduct research, analyze data, and provide evidence; comparing informal and formal lexical alternatives; identifying cohesive expressions in concordance lines; and applying corpus evidence to revise academically inappropriate sentences. The teacher adopted a facilitative role throughout the session, guiding students in interpreting concordance outputs and transferring corpus observations to their own writing.

Data collection proceeded in two stages. In the first stage, immediately following the lesson, students completed a reflective questionnaire comprising 20 items rated on a 1-to-10 Likert scale, with each item measuring perceived improvement in one of the six targeted subskills or in overall academic writing performance. In the second stage, six experienced EFL academic writing teachers from different institutions in Uzbekistan evaluated the same worksheet using a 23-item scaled questionnaire supplemented by five open-ended questions addressing pedagogical value, implementation feasibility, and recommendations for further

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development. Descriptive statistical analysis was applied to both quantitative datasets, and thematic analysis was used to interpret the qualitative teacher responses.

Results

Collocational Competence and Cohesive Phrase Use:

Collocational competence emerged as the most positively evaluated subskill in both the student and teacher datasets. The student questionnaire produced the highest mean score for collocation-related items, with students reporting that observing authentic examples of academic collocations such as conduct research, draw conclusions, significant findings, and strong evidence in COCA concordance lines enabled them to internalize phraseological patterns more effectively than any prior instructional approach. Teacher evaluations confirmed this finding, with collocation-related items receiving a mean score of 6.95 — the highest among all pedagogical focus areas in the teacher questionnaire.

Cohesive phrase use was the second most positively evaluated subskill in student reflections. Students indicated that working with concordance examples of cohesive expressions such as in addition to, in contrast to, as a result of, this suggests that, and in terms of provided them with a concrete understanding of how academic writers connect ideas and signal logical relationships within texts. This finding underscores the value of corpus tools for developing discourse-level competence, which is often inadequately addressed in traditional writing instruction focused primarily on sentence-level accuracy.

Register Awareness and Lexical Precision:

Register awareness and lexical precision received equal mean scores of 7.78 in the student questionnaire, reflecting strongly positive perceptions of the corpus-integrated approach for developing these closely interrelated subskills. Students reported that comparing informal and academic lexical alternatives within authentic concordance lines — such as a lot of versus a significant number of, get better versus improve, and bad sources versus unreliable sources — provided a more concrete and convincing basis for understanding register distinctions than prescriptive stylistic rules.

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Teacher evaluations similarly recognized the effectiveness of corpus instruction for register awareness and lexical precision, noting that concordance-based comparison of lexical alternatives enables learners to move beyond intuitive judgments toward evidence-based linguistic choices. Several teachers emphasized that this dimension of the worksheet was particularly valuable for B2-level students who possess general communicative competence but struggle to consistently maintain academic register in extended writing tasks.

Phrase-Level Complexity and Avoidance of Repetition:

Phrase-level complexity and avoidance of repetition received slightly lower but still positive mean scores in both questionnaires, indicating that these subskills benefit from corpus-based instruction but may require more sustained practice than a single 80-minute session can provide. Students acknowledged that tasks involving the construction of complex noun phrases such as the role of, the development of, the extent to which, and a significant effect on enhanced their awareness of phraseological structures, yet many noted that producing such structures independently remained challenging.

Teacher responses in this area were particularly informative. Open-ended comments suggested that phrase-level complexity and avoidance of repetition require not only awareness of patterns but also higher-order reformulation skills that develop gradually through repeated writing and revision practice. Teachers recommended that corpus-integrated lessons targeting these subskills should be followed by extended writing tasks in which students apply corpus evidence to revise their own essay paragraphs, thereby bridging the gap between controlled practice and independent academic production.

Overall Evaluation and Comparative Findings:

The student questionnaire produced an overall mean score of 7.86 out of 10, reflecting a strongly positive overall assessment of the corpus-integrated worksheet. The teacher questionnaire produced a more moderate overall mean of 6.83, reflecting professional recognition of the worksheet's pedagogical value alongside awareness of practical implementation challenges. The divergence between student enthusiasm and teacher caution is itself a significant finding, indicating that the worksheet functions effectively as an introductory corpus-

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based learning experience while also highlighting the need for scaffolding, teacher preparation, and sustained curricular integration.

When results were grouped by pedagogical focus, collocational competence and COCA tool usefulness received the highest teacher scores (6.95 and 6.90 respectively), while phrase-level complexity received the lowest (6.72). This pattern confirms that corpus tools are especially powerful for developing phraseological and lexical dimensions of academic writing, while more complex structural competencies may require additional instructional support beyond concordance-based discovery tasks.

Discussion

The results of this study confirm that corpus-based instruction through data-driven learning represents a highly effective and innovative approach to academic writing development among future English teachers. The particular strength of corpus tools in developing collocational competence and cohesive phrase use aligns with established findings in corpus linguistics, which consistently demonstrate that concordance analysis accelerates the noticing of phraseological patterns — a prerequisite for their productive use in writing. Unlike vocabulary lists or grammar rules, concordance data present lexical items in multiple authentic contexts simultaneously, enabling learners to observe the full range of collocational behavior and register-specific usage that characterizes academic discourse.

The equal scoring of register awareness and lexical precision in student perceptions is theoretically significant, as it suggests that learners themselves intuitively recognize the close relationship between these dimensions of academic writing competence. Corpus tools appear to be particularly effective at bridging the gap between passive stylistic awareness and active language production, because they enable learners to observe not merely that a word is academic, but precisely how, when, and in which combinations it is used by proficient academic writers.

The divergence between student and teacher evaluations reflects a productive tension that enriches the interpretation of the findings. Students experienced the corpus-integrated lesson as immediately engaging and practically useful, while teachers assessed its long-term pedagogical potential more cautiously. This

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contrast aligns with broader findings in educational research showing that learner perception of effectiveness and expert pedagogical judgment often differ, particularly in the case of innovative instructional methods that require both learner preparation and teacher expertise. The teacher responses in this study identified five key conditions for effective corpus integration: adequate teacher guidance during initial concordancer use; appropriate scaffolding for search and interpretation tasks; direct connection of corpus activities to actual writing output; sufficient lesson time and technological readiness; and follow-up revision tasks in which students apply corpus evidence to their own essays.

From a broader perspective, the study highlights the dual value of corpus-based instruction in teacher education. Future English teachers who engage with corpus tools as learners simultaneously develop their own academic writing competence and acquire an evidence-based pedagogical methodology that they can adapt for use with their own students. This dual function makes corpus integration particularly strategic for teacher education programs in Uzbekistan, where the development of both advanced academic literacy and innovative pedagogical skills among pre-service teachers constitutes a pressing educational priority.

Conclusion

This study demonstrates that corpus-based analysis, implemented through data-driven learning with the COCA concordancer, constitutes a highly effective approach to developing academic writing skills among future English teachers at the B2 level. The experimental intervention successfully targeted six core academic writing subskills, with collocational competence and cohesive phrase use emerging as the dimensions most significantly enhanced by corpus-integrated instruction. Register awareness and lexical precision also benefited substantially, while phrase-level complexity and avoidance of repetition showed positive but more modest gains requiring sustained practice.

The dual-perspective evaluation design, combining immediate learner reflection with expert teacher assessment, provides a nuanced and reliable picture of both the pedagogical potential and the practical conditions of corpus tool integration. The findings confirm that corpus-based instruction is most effective when accompanied by explicit teacher guidance, carefully scaffolded tasks, adequate

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technological resources, and sustained curricular embedding that connects corpus-based discovery to authentic academic writing and revision.

For teacher education programs in Uzbekistan and similar EFL contexts, the integration of corpus linguistics methodology into academic writing instruction should be treated not as an optional supplementary activity but as a systematic curricular component. Future English teachers who develop corpus literacy alongside academic writing competence are equipped not only to produce more accurate and rhetorically effective texts but also to implement data-driven learning strategies with their own students, thereby contributing to the broader improvement of English language education. The present study thus confirms that corpus-based analysis represents a strategically important and practically viable innovation in the preparation of future English teachers.

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