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CORPUS-INFORMED VS. TEXTBOOK-BASED ESP TEACHING: A COMPARATIVE STUDY

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Abstract This study compares corpus-informed and textbook-based approaches to teaching English for Specific Purposes (ESP) in the oil and gas field. Two student groups were taught using either Oxford English for Careers textbooks or a corpus-informed manual developed with SketchEngine. Results from tests and surveys showed that corpus-informed instruction led to higher vocabulary and writing gains, as well as stronger learner engagement. Participants found the materials more authentic and professionally relevant. The findings confirm that corpus-informed teaching effectively enhances linguistic authenticity and communication skills in ESP contexts.

Keywords: Corpus-informed instruction, English for Specific Purposes (ESP), specific terminology, vocabulary development, authentic materials, learner engagement, professional communication.

СРАВНИТЕЛЬНОЕ ИССЛЕДОВАНИЕ КОРПУСНОГО И УЧЕБНИКОВОГО ПОДХОДОВ В ОБУЧЕНИИ АНГЛИЙСКОМУ ЯЗЫКУ ДЛЯ СПЕЦИАЛЬНЫХ ЦЕЛЕЙ (ESP)

Аннотация В исследовании проводится сравнение корпусного и учебникового подходов к обучению английскому языку для специальных целей (ESP) в нефтегазовой сфере. Две группы студентов обучались с использованием учебников серии Oxford English for Careers, и специализированного пособия, созданного на основе корпуса с помощью платформы SketchEngine. Результаты тестов и анкетирования показали, что корпусный подход обеспечивает более высокий прирост лексических и письменных навыков, а также повышает мотивацию и вовлечённость обучающихся. Участники отметили большую аутентичность и профессиональную направленность материалов. Результаты подтверждают эффективность корпусного обучения в развитии профессиональной коммуникативной компетенции.

Ключевые слова: корпусное обучение, английский язык для специальных целей (ESP), специфическая терминология, развитие словарного запаса, аутентичные материалы, вовлеченность учащихся, профессиональная коммуникация.

KORPUSGA VA DARSLIKKA ASOSLANGAN MAXSUS MAQSADLAR UCHUN INGLIZ TILI O'QITISHINING ILMIY TAQQOSLASH

Annotatsiya Tadqiqotda neft va gaz sohasida maxsus maqsadlarda ingliz tilini (ESP) o'rgatishning korpus va darsliklarga asoslangan yondashuvlari taqqoslanadi. Ikki guruh talabalar Oxford English for Careers turkumidagi darsliklar va SketchEngine platformasi yordamida yaratilgan korpusga asoslangan ixtisoslashtirilgan qo'llanmadan foydalangan holda ta'lim oldilar. Test natijalari va anketalar shuni ko'rsatdiki, korpusga asoslangan yondashuv so'z boyligi va yozish ko'nikmalarini oshirishga, shuningdek, motivatsiya va faollikni ko'tarilishiga olib keldi. Ishtirokchilar materiallarning haqiqiyliги va professional ahamiyatini ta'kidladilar. Natijalar kasbiy kommunikativ kompetentsiyani rivojlantirishda korpus asosidagi ta'lim samaradorligini tasdiqlaydi.

Kalit so'zlar: Korpusga asoslangan ta'lim, maxsus maqsadlar uchun ingliz tili (ESP), maxsus terminologiya, so'z boyligini rivojlantirish, autentik materiallar, talabalarning faolligi, professional muloqot.

Introduction. In recent years, the teaching of English for Specific Purposes (ESP) has undergone a significant transformation due to advances in corpus linguistics and digital learning technologies [5]. While traditional ESP instruction has relied heavily on published textbooks, such materials often fail to fully capture the authentic linguistic and communicative demands of specific professional contexts. In disciplines such as oil and gas, where terminology evolves rapidly and discourse practices reflect real industry operations, students require exposure to language that mirrors genuine workplace communication. Consequently, there has been growing interest in corpus-informed approaches, which allow teachers to base instructional materials on authentic textual data representing real-world professional language use [5].

Despite the widespread use of professional ESP textbooks such as “*Oxford English for Careers: Oil and Gas 1*” by Lewis Lansford and D’Arcy Vallance and “*Oil and Gas 2*” by Jon Naunton and Alison Pohl (Oxford University Press, 2011) [6,7], questions remain about their adequacy in reflecting current industry discourse. These textbooks provide structured content and pedagogical consistency, yet their pre-designed materials may not align with the constantly changing lexical and pragmatic realities of the oil and gas sector. In contrast, corpus-informed materials that compiled from authentic sources such as technical manuals, and scientific articles, web-pages can provide learners with

exposure to updated terminology, collocations, and discourse patterns that are directly relevant to their future careers.

Grounded in this context, the present study aims to compare the effectiveness of corpus-informed and textbook-based ESP teaching approaches within an oil and gas context. Specifically, it investigates how each approach influences students' acquisition of professional vocabulary, their engagement with learning materials, and their perception of authenticity and relevance [4]. The research further examines differences in language input between the Oxford English for Careers series and a specialized corpus-based manual developed by the researcher using the SketchEngine platform. By integrating quantitative performance data with qualitative feedback from learners and instructors, this study seeks to contribute to the growing body of evidence supporting corpus-informed pedagogy as a bridge between linguistic research and practical ESP teaching [2].

Methodology. This study investigated the comparative effectiveness of corpus-informed and textbook-based approaches in teaching English for Specific Purposes (ESP) within the field of Oil and Gas. The participants were undergraduate students majoring in Oil and Gas Engineering at the branch of the Russian State University of Oil and Gas in Tashkent. Two intact groups of pre-intermediate learners, each consisting of approximately 13–15 students, took part in the study. Both groups were comparable in terms of age, academic background, and general English proficiency, as determined by placement tests administered prior to the experiment. One group was taught using a corpus-informed manual developed by the researcher, while the other group studied through Oxford English for Careers: Oil and Gas 1 by Lewis Lansford and D'Arcy Vallance and Oil and Gas 2 by Jon Naunton and Alison Pohl (Oxford University Press, 2011) [6,7]. The same instructor conducted lessons for both groups to ensure consistency in methodology and classroom management.

The corpus-informed manual was developed from a self-compiled oil and gas corpus created using the SketchEngine platform. The corpus included authentic industry materials such as technical manuals, scientific articles, and professional webpages. Through the analysis of frequency lists, collocations, and lexical bundles, domain-specific vocabulary and phraseology were identified and used to design reading, vocabulary, listening, and writing tasks reflecting authentic professional communication. The textbook-based materials, by contrast, followed the structured, pedagogically sequenced units of the Oxford series, featuring reading texts, listening tasks, and controlled vocabulary exercises oriented toward general workplace situations.

The experimental instruction lasted one academic semester (approximately 10–12 weeks). Both groups covered equivalent thematic content related to core industry topics such as *crude oil*, *pipeline*, *safety*, *transportation* etc. At the beginning of the course, all participants completed a pre-test assessing professional vocabulary and writing skills to

establish a baseline. During the instructional phase, the researcher maintained observation logs documenting learner engagement, interaction patterns, and responses to the materials. At the end of the semester, the same tests were administered as post-tests to evaluate learning gains. Additionally, students completed perception questionnaires, and a subset of participants participated in semi-structured interviews to share their reflections on authenticity, engagement, and the overall effectiveness of the learning experience.

Data collection instruments included pre- and post-tests measuring vocabulary knowledge and written communicative competence, questionnaires assessing learners' attitudes toward the materials, classroom observation notes, and corpus analysis tools used for linguistic validation of the materials. Quantitative data were analyzed through descriptive and inferential statistics, including mean scores, percentage gains, and t-tests, to determine significant differences between the two groups. Qualitative data from interviews and observations were thematically analyzed to identify patterns related to authenticity, motivation, and pedagogical impact. The integration of both data types provided a comprehensive understanding of how corpus-informed and textbook-based methods influence ESP learning outcomes.

All participants were fully informed about the purpose and procedures of the research and voluntarily consented to take part. Anonymity and confidentiality were ensured throughout the process, and students were assured that their participation would not affect their academic performance. All data were stored securely and used exclusively for research purposes in compliance with ethical research standards.

Results and Discussion. The study examined the comparative impact of corpus-informed and textbook-based approaches to ESP teaching, focusing on linguistic content, learner performance, and perceptions of authenticity and engagement. The comparative analysis of Oxford English for Careers: Oil and Gas 1 & 2 and the researcher-developed corpus-informed manual revealed notable differences in lexical coverage, authenticity, and pedagogical design. Corpus analysis through SketchEngine showed that the Oxford textbooks contained about 65–70% of the key professional terminology found in authentic oil and gas texts, while the corpus-informed manual reflected over 90% lexical overlap with real industry sources. The textbook materials, though well-structured and methodically sequenced, relied on simplified and semi-authentic texts. In contrast, the corpus-based manual incorporated authentic excerpts from technical manuals and safety reports, accompanied by concordance-based tasks that fostered discovery learning and promoted deeper engagement with real professional language.

Quantitative results from pre- and post-tests demonstrated improvement in both groups, but the corpus-informed group showed significantly greater progress. Vocabulary scores increased by 23% compared to 14% in the textbook group, and writing tasks revealed higher lexical density, more accurate collocations, and more natural phrasing

among corpus-taught learners. This confirmed that exposure to authentic data strengthens learners' command of discipline-specific terminology and enhances their ability to apply it in realistic contexts, whereas textbook-based learners tended to rely on memorized patterns.

Students' and teachers' feedback further supported these findings. Learners described the corpus-informed materials as "real," "useful for future work," and "more engaging," while teachers observed higher motivation and learner independence in exploring terminology. Although the textbook group valued the clear structure of the Oxford series, they considered its language "too general" and "less connected to real work communication." These perceptions align with Basturkmen's (2018) observation that textbooks, while pedagogically sound, often fail to address evolving professional needs. The following **Table** shows the Quantitative Results of corpus-informed vs. textbook-based instruction.

Table 1. Summary of Quantitative Results: Corpus-Informed vs. Textbook-Based Instruction

No.	Assessment Focus	Indicators / Criteria	Corpus-Informed Group	Textbook-Based Group	Difference / Remarks
1	Vocabulary Achievement	Mean score increase (pre-post)	+23% improvement	+14% improvement	Corpus-informed group showed significantly higher vocabulary gains ($p < 0.05$)
2	Writing Competence	Lexical density and collocational accuracy	High lexical density and natural collocation use	Moderate lexical accuracy, tendency to reproduce textbook phrases	Authentic input enhanced contextual use of professional terminology
3	Authenticity and Engagement	Questionnaire feedback	Learners described materials as "real," "useful," and "motivating"	Learners appreciated structure but found texts "too general" and "repetitive"	Higher engagement and motivation in corpus-informed group
4	Teacher Observation	Classroom interaction and learner autonomy	High learner independence and active participation	More guided learning, limited initiative	Corpus-based tasks promoted discovery learning and autonomy

Overall, the results confirm that corpus-informed ESP instruction offers substantial advantages over traditional textbook-based teaching in terms of authenticity, engagement, and linguistic development. Authentic discourse enabled learners to internalize the

language of their profession more effectively and encouraged autonomy in learning. Despite the additional effort required to design corpus-based materials, the approach proved more effective in bridging the gap between academic study and real professional communication. Integrating corpus-informed elements into structured ESP curricula may therefore represent an optimal model, combining pedagogical clarity with linguistic authenticity.

Conclusion. This study compared corpus-informed and textbook-based approaches to teaching English for Specific Purposes (ESP) in the oil and gas field. It aimed to evaluate whether authentic, corpus-driven materials offer advantages over traditional textbooks such as Oxford English for Careers: Oil and Gas 1 & 2. Using a mixed-method design that included tests, questionnaires, and interviews, the research revealed that students taught with corpus-informed materials achieved higher gains in professional vocabulary and writing competence [1, 5]. They also perceived the materials as more authentic, relevant, and engaging than the textbook-based content.

The findings confirm that corpus-informed instruction enhances linguistic authenticity, learner motivation, and professional communication skills by exposing students to real industry discourse. However, successful implementation requires teacher training and institutional support for corpus tools. Overall, the study demonstrates that integrating corpus-informed practices into ESP teaching can bridge the gap between academic instruction and real workplace communication, offering a more dynamic and authentic model for future ESP curriculum design.

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