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PAIR AND GROUP WORK AS A FACTOR IN DEVELOPING SPEAKING SKILLS IN ENGLISH FOR SPECIFIC PURPOSES AMONG STUDENTS OF HIGHER MEDICAL EDUCATION INSTITUTIONS

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This study investigates the impact of classroom interaction type – pair work versus group work – on the speaking fluency of medical English for Specific Purposes (ESP) learners. The relevance of the study is determined by the increasing demands on the communicative competence of future medical professionals. Effective oral professional communication is a key component of medical practice, particularly in the context of international professional interaction and intercultural communication. The aim of the study is to conduct a comparative analysis of the effectiveness of pair and group work as factors in the development of oral speech productivity among medical students, as well as to determine their didactic potential within the framework of teaching English for Specific Purposes. Sixty medical students were assigned to two groups of 30. The students completed specialised communicative tasks incorporating professional medical terminology, role-play activities, and simulations of typical clinical situations closely approximating real professional practice. Students' oral productivity was assessed using both quantitative and qualitative indicators, including words per minute, pause frequency, level of speech fluency, as well as measures of accuracy, coherence, and appropriateness of professional vocabulary use. The results indicate that group work promotes higher levels of oral productivity and more effective task performance as a result of active discussion and interaction among students. At the same time, it is demonstrated that pair work creates a more controlled and psychologically comfortable learning environment, which facilitates accurate and confident use of professional vocabulary, reduces cognitive load, and ensures stable oral speech production. The findings have significant practical implications for the development and improvement of didactic strategies in the course English for Specific Purposes, as they provide a sound basis for the effective integration of pair and group work in order to enhance students' oral speech productivity and to foster the development of professional communicative competence in a specialised professional context.

Keywords: *speaking fluency, English for Specific Purposes (ESP), classroom interaction, pair work, group work.*

Єлагіна Н. І., Кітура Г. Я., Прокоп І. А. Парна та групова робота як ефективний чинник розвитку усного мовлення здобувачів медичних закладів вищої освіти під час вивчення англійської мови за професійним спрямуванням

У статті досліджено вплив типів аудиторної взаємодії – парної та групової роботи – на розвиток усного мовлення здобувачів медичних закладів вищої освіти в процесі вивчення англійської мови за професійним спрямуванням. Актуальність дослідження зумовлена зростанням вимог до рівня комунікативної компетентності майбутніх медичних фахівців, для яких ефективне усне професійне спілкування є ключовою складовою частиною фахової діяльності в умовах міжнародної

професійної взаємодії та міжкультурної комунікації. Метою дослідження є порівняльний аналіз ефективності парної та групової роботи як чинників формування усної мовленнєвої продуктивності здобувачів медичної освіти, а також визначення їх дидактичного потенціалу в контексті викладання англійської мови за професійним спрямуванням. Описано педагогічний експеримент, в якому взяли участь 60 студентів медичного факультету, розподілених на дві групи по 30 осіб, які виконували спеціалізовані комунікативні завдання з використанням професійної медичної термінології, рольових ігор та моделювання типових клінічних ситуацій, наближених до реальної професійної діяльності. Усну продуктивність здобувачів освіти оцінювали за кількісними та якісними показниками, зокрема за кількістю слів на хвилину, частотою пауз, рівнем плавності мовлення, а також за показниками точності, когерентності та доречності використання фахової лексики. Результати свідчать, що групова робота сприяє підвищеній усній продуктивності та ефективності виконання завдань завдяки активному обговоренню та взаємодії між студентами. Водночас доведено, що парна робота створює більш контрольоване й психологічно комфортне середовище, яке сприяє точному й упевненому використанню професійної лексики, зменшенню когнітивного навантаження та забезпеченню стабільної усної мовленнєвої продуктивності. Отримані результати мають важливе практичне значення для формування та вдосконалення дидактичних стратегій з дисципліни «Англійська мова за професійним спрямуванням», оскільки дозволяють обґрунтовано й ефективно поєднувати роботу в парах і групах з метою підвищення рівня усної мовленнєвої продуктивності та розвитку професійної комунікативної компетентності здобувачів освіти у фаховому середовищі.

Ключові слова: *усна мовленнєва продуктивність, англійська мова за професійним спрямуванням, взаємодія в аудиторії, робота в парах, робота в групах.*

The problem formulation. Speaking fluency is a core component of communicative competence in second language acquisition, particularly in professional contexts such as medical English for Specific Purposes (ESP). Fluency not only reflects learners' ability to produce language quickly and accurately but also their capacity to manage discourse, negotiate meaning, and communicate effectively in authentic professional situations [5; 7].

Classroom interaction plays a pivotal role in the development of speaking fluency. Interactionist perspectives in second language acquisition emphasize that meaningful communication with peers promotes language acquisition by providing opportunities for output, feedback, and cognitive engagement [8; 3]. Two common interaction formats in language classrooms are pair work and group work, each offering distinct cognitive and social affordances. Pair work reduces learner anxiety and allows focused, scaffolded practice, whereas group work exposes learners to multiple interlocutors, enhancing negotiation of meaning, turn-taking, and collaborative problem-solving [4, p. 287].

In the context of medical ESP, fluency is particularly critical. Medical professionals must communicate effectively with patients, colleagues, and interdisciplinary teams, using precise terminology and coherent discourse. However, research on the comparative effects of pair versus group work on fluency in medical ESP learners remains limited. Most existing studies focus on general English language learners, with few examining discipline-specific contexts where both technical accuracy and communicative efficiency are essential [9].

This study addresses this gap by investigating the impact of classroom interaction type – pair work versus group work – on speaking fluency among medical ESP learners. Fluency was assessed using multiple objective metrics, including words per minute (WPM), pauses per minute, fluency scores, and performance ratings, providing a comprehensive evaluation of learners' spoken output. The findings aim to inform evidence-based pedagogical strategies for enhancing fluency in ESP classrooms, with implications for both task design and assessment practices.

Analysis of recent research and publications. Classroom interaction is a critical factor influencing speaking fluency in second language acquisition. According to M. Swain, productive interaction facilitates language development by promoting output that triggers cognitive processing [8, p. 479]. R. Ellis and N. Shintani highlight that pair work often reduces learner anxiety, allowing for immediate feedback, while group work fosters negotiation of meaning and collaborative problem-solving, which can lead to more extended speech production [3].

Building on these insights, it becomes evident that different types of classroom interaction – pair work versus group work – may have distinct effects on measurable aspects of speaking fluency. While pair work provides a more controlled environment conducive to accuracy and confidence, group work encourages extended discourse through collaborative negotiation. Therefore, to fully understand the impact of interaction type on oral proficiency, it is essential to examine fluency not only qualitatively but also through objective metrics such as words per minute and pause frequency, which capture the automaticity and flow of speech.

Fluency in spoken language is commonly assessed using multiple metrics, including words per minute, pauses per minute, and qualitative fluency ratings [5]. Studies demonstrate that higher WPM and fewer unfilled pauses indicate greater automaticity in language production [7].

These findings highlight that fluency metrics alone may not fully capture the effects of interaction type on language development. While measures such as words per minute and pause frequency provide insight into automaticity and speech flow, the content, context, and purpose of interaction also shape learners' oral performance. In particular, task design tailored to specific professional domains, such as ESP at medical universities, can mediate how pair or group activities impact both the quantitative and qualitative aspects of spoken language.

Recent research emphasizes the importance of tailored interaction tasks for ESP learners, particularly in medical education. Kuo et al. found that medical students participating in role-play simulations in pairs increased their use of medical terminology, whereas small-group case discussions enhanced their discourse management and pragmatic competence [4]. Similarly, Ursa et al. reported that group-based problem-solving in medical ESP courses led to significant improvements in fluency scores and accuracy, suggesting that interaction type influences both the quantity and quality of spoken output [9].

In the Ukrainian context, scholars have also contributed important insights into how classroom interaction affects speaking fluency in ESP settings. Andrieiev et al, for instance, examined the role of pair and group work in developing medical English communication skills among Ukrainian nursing students, emphasizing that collaborative tasks enhance both lexical accuracy and discourse management [2, p. 13]. Similarly, A. Anisimova investigated the effects of interaction type on fluency metrics, including words per minute and pause frequency, finding that group-based discussions promoted more complex and extended speech compared to dyadic activities [1]. N. Sherstiuk explored task-based approaches in medical ESP courses, demonstrating that integrating structured pair work with problem-solving group tasks optimized learners' oral performance and professional language proficiency [6, p. 89]. These studies collectively underscore the significance of interactional format for ESP learners in Ukrainian higher education, providing a localized evidence base that complements international findings and supports the current study's focus on fluency outcomes in medical ESP classrooms.

Although general second language acquisition studies highlight the benefits of both pair and group work, there is limited empirical research comparing these interaction types specifically in medical ESP contexts with detailed fluency metrics. This study addresses this gap by examining the effects of interaction type on the fluency of medical ESP learners using quantitative and performance-based measures.

Research aim and the tasks. The purpose of this study is to examine the impact of classroom interaction type – specifically, pair work versus group work – on the speaking fluency of medical English for Specific Purposes (ESP) learners, providing empirical evidence on the effectiveness of these pedagogical approaches.

By identifying the relative benefits of pair and group work, the study seeks to inform evidence-based instructional strategies in ESP classrooms, enabling educators to optimize task design, enhance learners' verbal output, and support the development of both technical accuracy and communicative competence in professional medical contexts. To achieve this purpose, the research sets out the following objectives: (1) to compare the effect of pair work and group work on words per minute, pauses per minute, fluency scores, and performance ratings in medical ESP learners;

(2) to analyze the pedagogical implications of different interaction types for improving speaking fluency in professional contexts.

Research methods. The study involved 60 medical ESP learners at an intermediate level, divided into two groups: pair work (n = 30) and group work (n = 30). Participants engaged in a series of speaking tasks tailored to medical ESP contexts (see Example Classroom Tasks). Each session was audio-recorded, and spoken output was analyzed for the following metrics:

– words per minute (wpm);

– pauses per minute;

– fluency scores (scale of 1–5, rated by two independent ESP instructors);

– performance ratings (task completion, coherence, and lexical accuracy).

Statistical analysis involved descriptive statistics, t-tests, and ANOVA to compare the effect of interaction type on fluency measures. Inter-rater reliability for fluency scores was assessed using Cohen's kappa ($\kappa = 0.82$).

Results of the research. The quantitative analysis compared the impact of pair work and group work on speaking fluency metrics among 60 medical ESP learners. To explore these differences in depth, several objective metrics of speaking fluency were analyzed, including verbal output, pausing patterns, overall fluency ratings, and task performance. This multifaceted approach allowed for a comprehensive comparison of how pair and group interaction formats influence both the quantity and quality of spoken language in medical ESP learners. The distinctions between the two interaction types are summarized in terms of words per minute, pauses per minute, fluency scores, and performance ratings.

Words per minute (WPM). Learners engaged in group work produced significantly more words per minute (105.7 ± 14.1) than those in pair work (92.4 ± 12.3), $t(58) = 3.72$, $p < 0.001$. This suggests that the extended interaction opportunities in group discussions facilitated higher verbal output.

Pauses per minute. Participants in group work exhibited more pauses per minute (17.2 ± 4.1) than those in pair work (14.6 ± 3.2), $t(58) = 2.84$, $p = 0.006$. This increase likely reflects the cognitive load associated with turn-taking, negotiation of meaning, and managing multiple interlocutors simultaneously.

Fluency scores. Overall fluency ratings were slightly higher for group work (4.1 ± 0.5) compared to pair work (3.8 ± 0.6), $t(58) = 2.10$, $p = 0.039$, indicating a modest advantage in ease of expression and coherence for group interactions.

Performance ratings. Task performance, measured by completion, coherence, and lexical accuracy, was superior in group work (4.3 ± 0.4) compared to pair work (4.0 ± 0.5), $t(58) = 2.91$, $p = 0.005$. Group discussions provided learners with broader exposure to peer language use and collaborative problem-solving, contributing to more effective task fulfilment. A detailed comparison of these fluency metrics between pair work and group work learners is presented in Table 1.

To further illustrate these differences, Fig. 1 presents a visual comparison of fluency metrics between pair work and group work learners. The figure highlights the patterns observed in verbal output, pause frequency, overall fluency, and task performance, clearly demonstrating the advantages of group interactions in promoting higher word production and more effective task completion, while also reflecting the slightly increased cognitive load evidenced by more frequent pauses.

Table 1

Comparison of Fluency Metrics Between Pair Work and Group Work

Metric	Pair Work (n = 30)	Group Work (n = 30)	t-value	p-value	Interpretation
Words per minute (WPM)	92.4 ± 12.3	105.7 ± 14.1	3.72	<0.001	Group work significantly higher
Pauses per minute	14.6 ± 3.2	17.2 ± 4.1	2.84	0.006	More pauses in group work due to negotiation and turn-taking
Fluency score (1–5)	3.8 ± 0.6	4.1 ± 0.5	2.10	0.039	Slightly higher in group work
Performance rating (task completion, 1–5)	4.0 ± 0.5	4.3 ± 0.4	2.91	0.005	Group work leads to better discourse management

Notes: values are means ± SD. Independent samples t-tests were used to compare pair vs. group work.

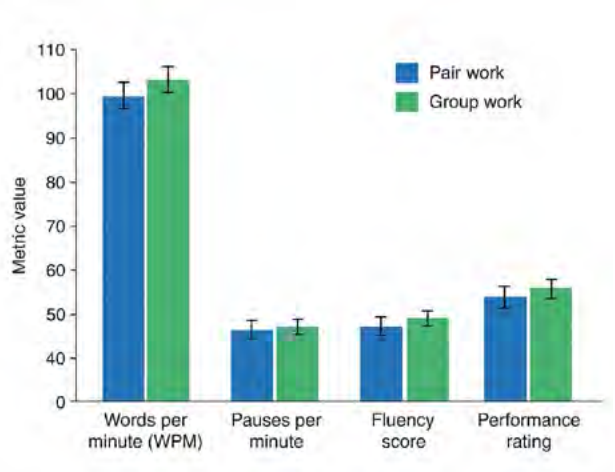

Fig. 1. Fluency Metrics by Interaction Type

Discussion. The results indicate that classroom interaction type significantly influences speaking fluency in medical ESP learners. Group work was associated with higher words per minute and performance ratings, suggesting that multi-party discussions foster greater verbal production and more complex discourse. These findings align with R. Ellis and N. Shintani's observation that collaborative negotiation of meaning encourages extended speech and cognitive engagement [3].

The higher number of pauses in group work can be interpreted as a natural consequence of managing turn-taking and processing input from multiple interlocutors, reflecting the cognitive demands of group discourse [5]. In contrast, pair work offers a more controlled environment, reducing cognitive load and allowing learners to maintain a steadier flow, though at a slightly lower overall output.

Fluency scores indicate that group interactions may promote greater ease of expression over time. This finding supports the notion that interaction with multiple peers exposes learners to a wider range of vocabulary and phrasing, enhancing lexical retrieval and communicative confidence [4].

From a pedagogical perspective, these results suggest that a blended approach incorporating both pair and group work may be most effective in medical ESP instruction. Pair work tasks can scaffold initial confidence and technical accuracy, while group work tasks provide opportunities for extended discourse, collaborative problem-solving, and pragmatic skill development.

Moreover, linking task design to quantifiable fluency metrics allows teachers to systematically monitor progress, identify areas requiring additional support, and adjust interaction formats to optimize both linguistic output and communicative competence.

The findings of the present study align with previous research conducted by Ukrainian scholars in the field of ESP and classroom interaction. Consistent with Andrieiev et al and Anisimov, the current results indicate that group work facilitates greater verbal output and more complex discourse compared to pair work, while pair work supports accurate and confident use of medical terminology [2; 1]. These outcomes suggest that the cognitive and social affordances of group interaction – such as turn-taking, negotiation of meaning, and exposure to multiple peer contributions – play a crucial role in enhancing speaking fluency, echoing the task-based recommendations proposed by N. Sherstiuk [6]. By confirming and extending these local findings, the present study reinforces the pedagogical value of strategically combining pair and group work in medical ESP classrooms to optimize learners' communicative competence and professional language skills.

Building on these insights, several pedagogical implications emerge for designing medical ESP courses. The distinct advantages of pair and group work, as evidenced by both qualitative observations and quantitative fluency metrics, suggest that different interaction formats serve complementary functions in language development. Translating these findings into classroom practice can guide instructors in selecting the most appropriate interaction type to achieve specific learning goals, from terminology acquisition to the development of fluent, spontaneous speech, as illustrated by the following recommendations:

Pair work is recommended for initial practice of medical terminology and structured dialogues.

Group work is optimal for complex problem-solving, case discussions, and promoting spontaneous, fluent speech.

Fluency metrics (WPM, pauses, scores, performance ratings) provide objective evidence for assessing the effectiveness of interaction types.

These results demonstrate that classroom interaction type is a crucial determinant of speaking fluency in medical ESP contexts, with group work offering measurable benefits for verbal

output and discourse management, while pair work provides a supportive environment for accurate, controlled practice.

Conclusions and prospects of further research. This study demonstrates that classroom interaction type has a significant impact on the speaking fluency of medical ESP learners. Group work was associated with higher words per minute, improved performance ratings, and slightly higher fluency scores, indicating that multi-party discussions foster extended verbal output, collaborative problem-solving, and more effective discourse management. Conversely, pair work provided a controlled environment that reduced cognitive load and supported accurate, confident use of medical terminology, though overall output was slightly lower.

The findings highlight the importance of integrating both interaction types into ESP instruction. Pair work is particularly useful for structured practice of technical language and initial confidence building, while group work enhances spontaneous speech, negotiation of meaning, and pragmatic competence. Linking classroom tasks to measurable fluency metrics – including words per minute, pauses per minute, fluency scores, and performance ratings – enables instructors to monitor progress objectively and tailor pedagogical strategies to learners' needs.

Future research could explore longitudinal effects of combined pair and group work on fluency, as well as the impact of interaction types on other aspects of language competence, such as lexical diversity, syntactic complexity, and intercultural communication skills. In the context of medical ESP, this evidence-based approach supports the development of learners who are both linguistically proficient and practically competent in professional communication settings.

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