

# PARAPHRASING CHALLENGES AND STRATEGIES AMONG NON-NATIVE ENGLISH STUDENTS IN ESP CONTEXT

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**Abstract**—Paraphrasing is a fundamental skill in academic writing, yet it presents notable challenges for non-native English speakers (NNS), particularly within English for Specific Purposes (ESP) contexts, where it remains underexplored. This study investigates the paraphrasing difficulties and strategies of 25 undergraduate NNS students enrolled in ESP course. Data were collected through the analysis of written paraphrasing tasks and stimulated recall interviews, following a five-week guided paraphrasing intervention. Findings highlight that the primary obstacles were understanding technical content and specialized vocabulary, largely due to limited prior exposure and insufficient language proficiency. Students predominantly relied on surface-level strategies such as synonym replacement and sentence restructuring. Despite these challenges, participants expressed positive attitudes toward guided instruction, emphasizing the value of teacher support throughout the writing process. The study recommends that effective paraphrasing instruction in ESP settings should integrate explicit teaching with sustained practice. These insights offer practical implications for ESP pedagogy and future research.

**Keywords**— Academic Writing, English for Specific Purposes (ESP), Language proficiency, Paraphrasing Challenges, Pedagogical support

## I. INTRODUCTION

Paraphrasing is a fundamental academic skill that enables students to engage critically with source materials while maintaining academic integrity. Despite its importance, many NNS students—particularly those in specialized fields—struggle to paraphrase effectively due to linguistic, cognitive, and disciplinary challenges. In ESP contexts, such as medical education, these difficulties are compounded by the complexity of technical texts and limited exposure to academic writing conventions.

While previous research has explored paraphrasing from students' perspectives, few studies have examined their actual writing performance, especially in ESP settings [1]. This study addresses this gap by investigating the challenges faced by undergraduate medical students in Saudi Arabia when paraphrasing. It analyzes both students' perceptions and their written paraphrasing performance in tasks completed after receiving explicit instruction in paraphrasing strategies, adapted from Yahia and Egbert [2]. The findings aim to inform more effective academic writing instruction for ESP students in medical education.

## II. LITERATURE REVIEW

### A. Paraphrasing Strategies and Instruction for NNS Students

Paraphrasing is a key academic skill, yet NNS students often struggle to apply it effectively, especially in ESP contexts. Research identifies several paraphrasing strategies—semantic (e.g., synonym substitution), syntactic (e.g., voice shifts), grammatical (e.g., word class changes), and contextual reformulation [3, 4]. However, NNS students tend to rely on surface-level techniques, such as synonym replacement and word-order modification, which frequently result in meaning distortion [5, 6].

Studies show that students often paraphrase at the sentence level and lack awareness of deeper conceptual strategies [1]. Factors such as limited exposure to academic writing, unfamiliarity with disciplinary content, and lack of instructional support contribute to these challenges [7, 8].

Effective paraphrasing interventions include explicit instruction, scaffolded practice, and feedback [2]. Additionally, data-driven approaches—such as the use of corpora, which are large collections of authentic texts—can significantly enhance learners' lexical choices and structural awareness [9]. Despite the availability of paraphrasing tools like QuillBot and ChatGPT, overreliance on them may hinder independent writing skills [10, 11]. Peer collaboration and guided practice remain essential for developing strategic competence [2].

This study builds on existing research by examining both the paraphrasing strategies and the written performance of Saudi undergraduate medical students following targeted instruction. It aims to identify effective approaches for improving paraphrasing in ESP academic writing.

#### B. Paraphrasing Challenges Among NNS Students

NNS students face a range of linguistic, cognitive, and behavioural challenges when paraphrasing academic texts [4, 5, 12]. Linguistically, difficulties include limited vocabulary, grammatical control, and the ability to select appropriate synonyms and restructure sentences effectively [2, 13]. Many students rely on word-level substitutions while retaining the original sentence structures, resulting in superficial paraphrasing and potential distortion of meaning [14, 15].

Cognitively, paraphrasing demands strong reading comprehension and inferential thinking. Students must identify key ideas and rephrase them accurately, yet poor comprehension often leads to patchwriting—copying with minimal changes—which compromises academic integrity [16, 17]. While patchwriting may serve as a developmental strategy in early stages of language learning, it should not be accepted as a final academic product [18, 19].

Behavioral factors such as time pressure, fear of plagiarism, and overreliance on paraphrasing tools (e.g., QuillBot, ChatGPT) further complicate the process. These tools may offer lexical alternatives but often produce inaccurate or awkward output without guided instruction [10, 11]. Low motivation and limited feedback also contribute to ineffective paraphrasing practices [12].

In English for Specific Academic Purposes (ESAP), particularly in medical fields, paraphrasing poses distinct challenges compared to general English for Academic Purposes (EAP). Unlike general academic writing, medical texts are densely packed with technical information and rigid terminology, leaving little room for lexical variation [9, 20]. Moreover, medical students often prioritize mastering subject content over developing academic writing skills, and writing support in English as a Medium of Instruction (EMI) settings is often limited [21]. These factors underscore the need for targeted instruction and structured practice tailored to the specific demands of ESP learners.

#### C. Research Gaps and Rationale

Despite growing interest in paraphrasing instruction, few studies have explored how medical students develop paraphrasing skills through guided practice. Most research focuses on general EFL contexts, with limited attention to students' own perceptions and written performance in ESP settings [3, 4]. To address this gap, the present study investigates the strategies and challenges faced by Saudi undergraduate medical students after receiving explicit paraphrasing instruction. It aims to inform more responsive pedagogical practices in medical English writing.

##### 1) Research Questions:

RQ1: What strategies do undergraduate medical students employ when paraphrasing?

RQ2: What challenges do they face in academic writing tasks requiring paraphrasing?

RQ3: What influencing factors could explain paraphrasing challenges?

### III.METHODOLOGY

#### A. Participants and Context

Twenty-five female first-year medical students (L1 Arabic, L2 English) from a Saudi university participated in this study. All were enrolled in a preparatory ESP medical English course taught in an EMI context. Based on the Oxford Online Placement Test, students were placed at the B1 level (CEFR). Their ages ranged from 17 to 20 ( $M = 18.69$ ), with English learning beginning at a mean age of 10.5. The course met 16 hours per week and focused on academic and professional communication in medical settings.

#### B. Instructional Framework

The instructional framework for paraphrasing followed [22] three-stage model: understanding, production, and evaluation. The first stage was implemented directly, whereas the production and evaluation stages were adapted to align with the paraphrasing strategies presented in the students' textbook, *English for Medicine in Higher Education Studies* [23] (see Appendix A). It was contextualized for ESP within the medical domain. The Instruction emphasized three core techniques: semantic, syntactic, and structural paraphrasing. These were reinforced through guided practice and formative feedback across a structured seven-week course. Week 5 introduced the paraphrasing foundational concepts. Weeks 6 and 7 focused on semantic and syntactic strategies. Week 8 emphasized genre awareness and peer review. Weeks 9 and 10 provided integrated practice and individual feedback. The sequence concluded in Week 11 with a timed paraphrasing exam to assess students' proficiency (see Table 1).

**Table 1: Paraphrasing Instructional framework and task description.**

W	Focus Area	Task Description	Instructional Support
W 5	Introduction to Paraphrasing	Identify and highlight key ideas in short medical texts; differentiate quoting, summarizing, and paraphrasing.	Teacher-led workshops, examples of effective paraphrasing

W6	Semantic Paraphrasing Strategies	Practice paraphrasing by applying the three semantic strategies: using synonyms, using antonyms, and using word transformations, using medical glossaries.	Vocabulary lists, thesaurus training, and paraphrasing in groups
W 7	Syntactic Paraphrasing Strategies	Rewrite sentences using the three syntactic strategies (e.g., active/passive voice, replacing the subject and sentence rewording).	Grammar revisions, sentence transformation drills, and paraphrasing in groups
W 8	Genre Awareness – Technical Vocabulary	Analyze model texts to identify genre-specific features and paraphrase accordingly.	Instructor feedback, peer review sessions, and paraphrasing in pairs
W 9	Integrated Practice & Teacher Feedback	Complete a full paragraph paraphrasing with peer review and teacher feedback in class.	Instructor feedback, peer review sessions, and paraphrasing in pairs
W 10	Mock Writing Test	Complete a full paragraph paraphrasing with peer review and teacher feedback in class.	Individual paragraph paraphrasing, instructor feedback
W 11	Final Writing Exam	Complete a full paragraph paraphrasing of about 100 words in 30 minutes.	—

### C.Data Collection and Analysis

Two data sources were used: final exam writing samples and stimulated recall interviews.

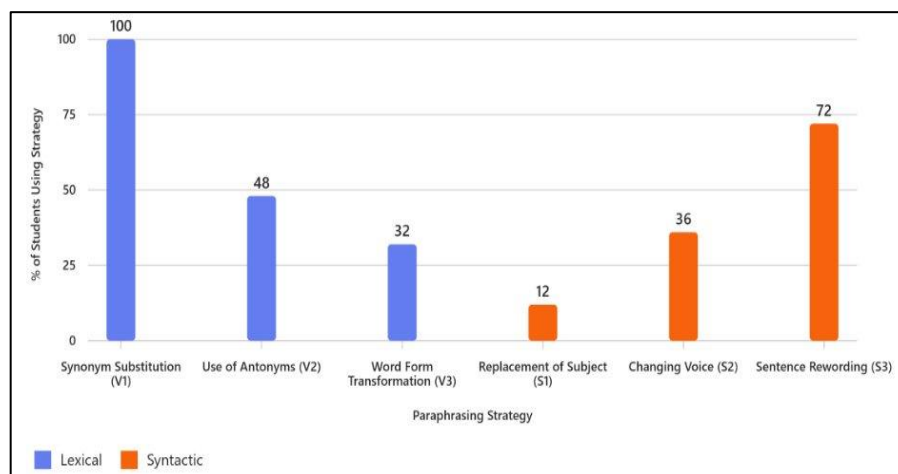
2) Writing Samples: In Week 11, students completed a 30-minute electronic exam, paraphrasing a 100-word textbook passage. The responses were analyzed based on the application of six paraphrasing strategies identified in the textbook, which included both syntactic and semantic types (see Appendix A). Each instance of strategy use was coded and quantified. A second rater independently coded 30% of the samples, with interrater agreement reaching 100% after reconciliation.

3) Stimulated Recall Interviews: Seven students participated in 40-minute stimulated recall interviews within three days of the exam (see Appendix B). During the interviews, they used their own exam responses to reflect on their paraphrasing decisions and the challenges they encountered. Transcripts were thematically coded using a hybrid approach—drawing on both literature-informed and emerging themes. A second researcher helped develop the codebook, double-coded selected transcripts, and resolved discrepancies through discussion to ensure coding consistency.

## IV.FINDINGS AND DISCUSSION

### A. Paraphrasing strategies employed by NNS medical Students

Analysis of students' paraphrasing strategies in final exam writing revealed a strong preference for synonym substitution, employed by 100% of students, with usage ranging from 2 to 14 instances. This suggests that it is the most accessible strategy and heavily emphasized in ESP instruction as it allows students to demonstrate



understanding of medical vocabulary without altering sentence structure and reducing the risk of misinterpretation.

Figure 1: Percentages of paraphrasing strategies applied by NNS in the ESP context

The second most common strategy was sentence rewording, used by 72% of students, due to its manageable syntactic demands. It enables variation while maintaining meaning, which is crucial in medical contexts where precision is essential. In contrast, strategies such as antonym use (48%), voice change (36%), and word form transformation (32%) were less frequently applied and associated with lower performance, indicating partial mastery. The least used strategy was subject replacement, adopted by only 12% of students, possibly reflecting limited exposure to deeper syntactic reformulations.

In terms of strategy range, only 12% of students used five instructed strategies, while 32% used two, and 8% used just one, indicating a reliance on a narrow set of paraphrasing techniques—primarily synonym substitution and sentence rewording. These findings suggest that students favor strategies that are both instructionally emphasized and linguistically safer within the constraints of specialized ESP content. More complex strategies, which require deeper syntactic manipulation, were less frequently used, indicating a need for further instructional support to broaden students' paraphrasing repertoire.

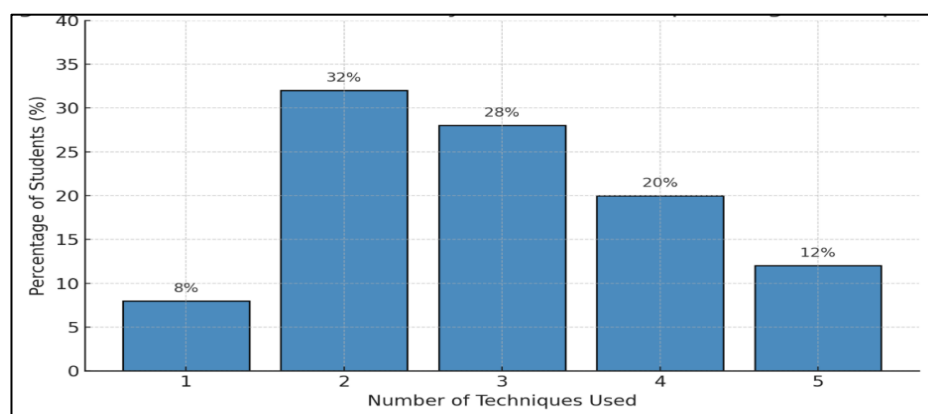


Figure2: Distribution of Students by Number of Paraphrasing Strategies Used

These patterns were further supported by qualitative data from stimulated recall interviews. Most participants reported using synonyms and sentence reordering, describing them as the easiest and safest strategies—especially under exam pressure and with limited grammatical confidence. Students expressed reluctance to engage in more complex paraphrasing transformations due to fear of making grammatical errors, time constraints, and limited prior exposure to advanced syntactic structures. As a result, many tend to break long sentences into shorter ones or minimally alter sentence structure. These behaviors reflect what [24] termed minimal revision or near-copy paraphrasing, which often borders on patchwriting.

Examples from students' writing illustrated varying degrees of success. While some demonstrated adequate comprehension and lexical variation, others engaged in patchwriting, closely mirroring the original text. Although this raises concerns about plagiarism, it may also represent a developmental stage in academic writing, as argued by [12, 19], who emphasized the pedagogical value of patchwriting for novice writers.

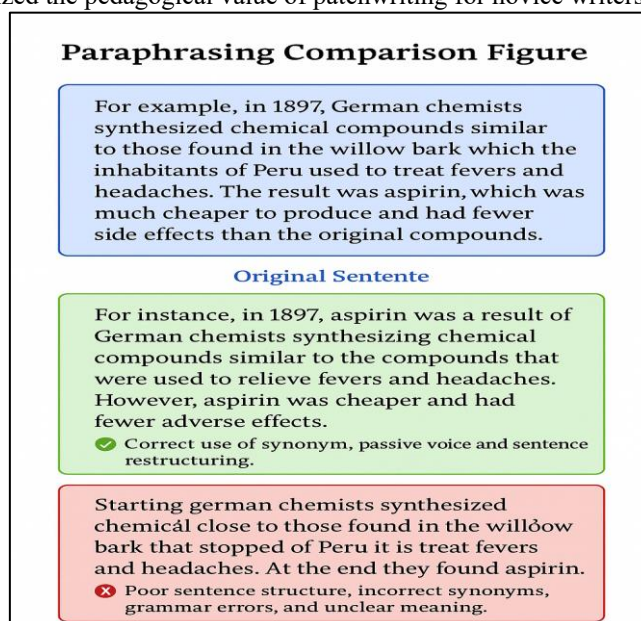


Figure 3: Examples of acceptable and unacceptable paraphrasing

Overall, the integration of quantitative and qualitative data suggests that students are still developing their paraphrasing proficiency. Their reliance on basic strategies reflects both instructional emphasis and a cautious

approach to language use. While patchwriting was prevalent, it may serve as a transitional phase in learning, supporting pedagogical approaches that scaffold deeper syntactic reformulation and grammatical competence.

### **B. Paraphrasing Challenges in the ESP Context**

In response to the second research question, interview data revealed that participants developed a clearer understanding of the difficulties they faced with paraphrasing following instructional sessions and guided practice. Instruction appeared to raise awareness of key challenges, particularly the appropriate selection of synonyms and understanding of medical context—both of which were frequently cited as barriers to effective paraphrasing. Approximately 70% of participants reported that vocabulary selection and grammatical accuracy were their primary challenges. Several students admitted that limited vocabulary hindered their ability to express ideas accurately, leading to difficulty in conveying intended meaning. As Participant 2 stated: “I tend to have ideas, but I can't convey them.” Similarly, Participant 4 noted: “It's harder to convey the same idea using different words because we don't have enough words.”

This aligns with [5], who found that vocabulary limitations are a persistent challenge for EFL learners, especially in academic writing contexts. Examples from student writing further illustrated this issue, such as the incorrect use of “little” instead of “fewer” and “the final” instead of “the result”, indicating lexical confusion and a lack of grammatical precision. These errors reflect what [2] describes as common struggles among NNS in maintaining semantic accuracy during paraphrasing. Students also emphasized the role of language proficiency in achieving successful paraphrasing. Participant 4 highlighted that advanced proficiency enables better synonym selection and sentence restructuring: “When your English level is advanced, you know other synonyms and you know how to form the right structure.”

This supports [24] observation that higher proficiency correlates with more effective use of syntactic transformations and lexical variation. Comparative examples between advanced and lower proficiency students showed clear differences in sentence structure, coherence, and synonym use (Figure 3). Lower proficiency students produced fragmented sentences and misused vocabulary, reinforcing the need for syntactic awareness and grammatical competence in paraphrasing.

Another major challenge identified was the complexity of medical vocabulary. Half of the participants (50%) expressed confusion about which terms were considered technical and whether they should be paraphrased. While most avoided altering terms like aspirin or penicillin, others attempted substitutions, such as headache pain in the head, reflecting uncertainty about medical terminology. Participant 7 emphasized that understanding medical terms is not just a language issue but one of conceptual accuracy: “We must ensure that we know the meaning of the medical terminologies to avoid changing the meaning.” This aligns with findings in [25], which argue that limited content knowledge increases the risk of misrepresentation in paraphrasing, and with [26], which describes disciplinary writing as cognitively demanding and epistemologically complex.

Moreover, paraphrasing in medical contexts emerged as a high-stakes task, requiring not only linguistic skills but also disciplinary knowledge. Students' awareness of the semantic precision required in medical writing reflects the lexical constraints of the genre. As [5] noted, even advanced students may struggle with genre-specific conventions and terminology.

### **C. Influencing Factors in Paraphrasing Practices**

Three main factors influence students' paraphrasing practices: lack of prior training and instruction, overdependence on AI tools, and fear of committing plagiarism. Interview data revealed that most participants had minimal or no structured training in paraphrasing during their previous medical courses. Several students reported that paraphrasing was introduced informally, without explicit modeling or guided practice. As Participant 2 noted: “It wasn't really proper training just some instructions from our teachers.” This lack of foundational instruction contributed to student anxiety, inefficiency, and reliance on surface-level strategies, such as synonym substitution and basic grammatical changes. These findings support [2], who emphasized the importance of explicit instruction to improve paraphrasing skills and academic integrity.

Moreover, many participants admitted to relying heavily on AI-based paraphrasing tools (e.g., ChatGPT, QuillBot) to complete previous research assignments. While these tools offered immediate assistance, students still found the process challenging. Participant 3 shared: “We use a lot of AI websites because it was very hard.” This behavior reflects findings in [11], who reported that students often turn to digital tools due to a lack of confidence and training, but may still struggle with lexical accuracy and semantic precision. While AI tools can support paraphrasing, [10] cautions that they may produce near-copy outputs or incorrect substitutions, requiring critical review and refinement by the user.

Another significant behavioral factor was the fear of committing plagiarism, reported by 90% of participants. Students frequently expressed uncertainty about whether their paraphrasing was sufficiently distinct from the source. This uncertainty prompted the adoption of several coping strategies. A commonly employed method involved rewriting content based on personal comprehension of the material. Additionally, many students relied on individual judgment to evaluate the originality of their work. To supplement these efforts, some participants made use of digital tools designed to detect textual similarity. Furthermore, students often sought guidance from teachers or subject-matter experts to clarify acceptable paraphrasing practices. Lastly, several students turned to AI-based assistance as a means of rephrasing content and minimizing the risk of unintentional plagiarism. Participant 2 explained: “If I see it's really similar, then okay, I will change it. I've tried to use plagiarism apps, but they didn't really work for me.”



These findings align with [5], who identified plagiarism anxiety as a major barrier to effective paraphrasing among EFL learners. Moreover, formative feedback and revision opportunities have been shown to reduce anxiety and foster academic integrity [7], [27]. Students also emphasized the value of feedback loops, such as having a first draft reviewed before final submission. This process was seen as essential for building confidence and improving paraphrasing quality.

## V. CONCLUSION AND RECOMMENDATIONS

These findings underscore the importance of integrating language instruction with disciplinary literacy—particularly in fields such as medicine, where effective paraphrasing demands both linguistic precision and conceptual understanding. Students' paraphrasing practices were shaped by a complex interplay of factors, including limited prior training, reliance on digital tools, and affective concerns such as the fear of committing plagiarism. Although AI tools offered accessible support, they were insufficient substitutes for foundational skills such as comprehension, critical thinking, and genre awareness.

Moreover, many students tended to rely on surface-level strategies, largely due to inadequate vocabulary, grammatical uncertainty, and a lack of clarity regarding disciplinary conventions. These challenges were further compounded by the lack of guided instruction and formative feedback earlier in their academic journey. To address these issues, ESP curricula must adopt instructional approaches that scaffold vocabulary development, promote syntactic flexibility, and build genre awareness.

Incorporating paraphrasing instruction into broader writing development—through guided practice, timely feedback, and the responsible use of digital tools—can foster deeper learning, boost student confidence, and reinforce academic integrity. These findings call for a more integrated, skills-based approach to ESP curriculum design, one that aligns language instruction with the cognitive and communicative demands of specific disciplines. highlighted strategies

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## APPENDICES

Appendix A: The Six Paraphrasing Strategies Presented in Students' Textbook.

Appendix B: Stimulated recall interview Questions.

Interview Questions – Paraphrasing Challenges Among Medical Students

### 1. Academic Background and Writing Context

-Can you describe the types of writing assignments you usually complete in your medical studies (e.g., case reports, research papers, essays)?

-How often are you required to paraphrase content in these assignments?

-Have you received formal training in academic writing or paraphrasing as part of your medical education?

### 2. Understanding and Perception of Paraphrasing

-In your own words, what does paraphrasing mean in the context of medical writing?

-Why do you think paraphrasing is important for medical students, especially in clinical or scientific communication?

-How do you distinguish between acceptable paraphrasing and plagiarism?

### 3. Process and Strategies

-Can you walk me through how you typically approach paraphrasing a passage from a medical textbook or research article?

-What strategies or tools do you use to help you paraphrase (e.g., rewriting, summarizing, online tools)?

-Do you find it easier or more difficult to paraphrase technical medical content compared to general academic material? Why?

### 4. Challenges and Difficulties

-What specific difficulties do you face when paraphrasing medical or scientific texts?

-Do you find it challenging to retain the accuracy of medical terminology while changing the sentence structure?

-Have you ever been unsure whether your paraphrasing was too close to the original? How did you address that concern?

-Have you ever received feedback indicating your paraphrasing was problematic (e.g., too similar, unclear)? If so, what did you learn from it?

### 5. Language and Skill Factors

-Do you feel your English language skills affect your ability to paraphrase accurately and clearly?

-How does the complexity of medical vocabulary and concepts impact your paraphrasing efforts?

-Do you feel more confident paraphrasing content from your own field (medicine) or from other disciplines?

### 6. Support and Instruction

-What kind of instruction or resources related to paraphrasing have been most helpful to you?

-Do you think paraphrasing should be more formally taught or emphasized in medical education? Why or why not?