

**NATIVE AND NON-NATIVE WRITERS' USE OF FIRST-
PERSON PRONOUNS IN DIFFERENT SECTIONS OF
BIOLOGY RESEARCH ARTICLES IN ENGLISH**

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ABSTRACT: *The use of first-person pronouns in academic writing has become an important topic in discourse analysis and English for Academic Purposes research. Traditionally, scientific writing was expected to be objective and impersonal; however, recent studies demonstrate that personal pronouns are frequently used in research articles to establish authorial identity, present arguments, and interact with readers. This study investigates the use of first-person pronouns in biology research articles written by native English-speaking (NES) and non-native English-speaking (NNES) authors. The aim of the research is to examine how writers employ first-person pronouns across different sections of research articles and how these linguistic choices reflect authorial stance, disciplinary identity, and interaction with the academic community.*

The study adopts a qualitative comparative approach based on discourse analysis. Different sections of biology research articles, including introduction, methodology, results, and discussion, were examined in order to identify the

frequency and discourse functions of first-person pronouns such as I, we, us, and our. The analysis also considers second-person and third-person pronouns where relevant to rhetorical organization and interactional meaning.

ANNOTATION: This article investigates the use of first-person pronouns in biology research articles written by native and non-native English-speaking authors. The study analyzes the frequency, distribution, and discourse functions of pronouns across different sections of research articles. The findings indicate that first-person plural pronouns are commonly used to establish authorial identity, guide readers, and express academic stance. The study also reveals differences between native and non-native writers in their use of personal pronouns and rhetorical strategies.

Key Words: First-person pronouns, academic writing, biology research articles, native English speakers, non-native English speakers, authorial stance, discourse analysis, personal pronouns, scientific communication, academic discourse.

Annotatsiya: Ushbu maqolada ingliz tilida yozilgan biologiya ilmiy maqolalarida ona tilida so‘zlashuvchi va ingliz tilini ikkinchi til sifatida qo‘llovchi mualliflarning birinchi shaxs olmoshlaridan foydalanishi o‘rganiladi. Tadqiqotda olmoshlarning chastotasi, maqola bo‘limlari bo‘yicha taqsimlanishi va diskursiv vazifalari tahlil qilinadi. Natijalar birinchi shaxs ko‘plik olmoshlari muallif pozitsiyasini ifodalash, o‘quvchini yo‘naltirish va akademik stance yaratishda muhim rol o‘ynashini ko‘rsatadi. Shuningdek, maqolada native va non-native mualliflar o‘rtasidagi farqlar ham aniqlanadi.

Kalit so‘zlar: Birinchi shaxs olmoshlari, akademik yozuv, biologiya ilmiy maqolalari, native English speakers, non-native English speakers, authorial stance, diskurs tahlili, shaxs olmoshlari, ilmiy kommunikatsiya, akademik diskurs.

Аннотация: В данной статье исследуется использование местоимений первого лица в научных статьях по биологии, написанных

носителями английского языка и авторами, для которых английский является иностранным языком. Анализируются частотность, распределение и дискурсивные функции местоимений в различных разделах научных статей. Результаты показывают, что местоимения первого лица множественного числа активно используются для выражения авторской позиции, организации текста и взаимодействия с читателем. Исследование также выявляет различия между носителями и неносителями английского языка в использовании личных местоимений и риторических стратегий.

Ключевые слова: *Местоимения первого лица, академическое письмо, научные статьи по биологии, носители английского языка, неносители английского языка, авторская позиция, дискурс-анализ, личные местоимения, научная коммуникация, академический дискурс.*

INTRODUCTION

The increasing internationalization of higher education and scientific research has significantly expanded the role of English¹ as the dominant language of academic communication. As a result, many non-native English-speaking researchers are required to publish their work in English-language journals in order to participate in global academic discourse. This growing demand for English for Academic Purposes (EAP) has encouraged researchers to investigate the linguistic and rhetorical characteristics of academic writing.

One important aspect of academic discourse concerns the use of personal pronouns, particularly first-person pronouns. Traditionally, scientific writing was often described as objective, impersonal, and detached from the writer. Researchers were expected to avoid explicit self-reference and focus entirely

1. ¹ Hyland, K. (1994). "Hedging in Academic Writing and EAP Textbooks." *English for Specific Purposes*, 13(3), 239–256.

on facts and experimental results. However, contemporary studies in discourse analysis and academic writing have shown that academic texts are not completely impersonal. Instead, writers frequently use personal pronouns to establish credibility, guide readers, organize arguments, and express authorial stance.

Previous research demonstrates that first-person pronouns function as important rhetorical resources in academic discourse. Hyland (1994) argues that academic writing depends not only on propositional content but also on interactional elements that allow writers to communicate attitudes, authority, and involvement. Through the use of pronouns such as *we*, *us*, and *our*, researchers construct an authorial identity and position themselves within disciplinary communities.

The use of first-person pronouns may vary according to discipline, genre, and cultural background. In scientific disciplines such as biology, writers often balance the need for objectivity with the need to claim responsibility for research findings and contributions. Consequently, pronouns become important tools for negotiating authority and politeness within academic communities.

Comparative studies between native English-speaking (NES) and non-native English-speaking (NNES) writers suggest that differences exist in pronoun usage and authorial visibility. Native writers often employ pronouns strategically and flexibly, while non-native writers may underuse or misuse them due to limited awareness of disciplinary conventions or concerns about academic formality.

Despite increasing research in this area, relatively few studies have focused specifically on biology research articles and the distribution of first-person pronouns across different sections of research papers. Since article sections such as introduction, methods, results, and discussion serve different rhetorical purposes, pronoun usage may vary significantly within the same text.

Therefore, this study aims to examine the use of first-person pronouns in biology research articles written by native and non-native English-speaking authors. The research seeks to answer the following questions:

1. How frequently are first-person pronouns used in biology research articles?
2. How does pronoun use vary across different article sections?
3. What discourse functions do first-person pronouns perform?
4. What differences exist between native and non-native English-speaking writers in their use of pronouns?

The study contributes to discourse analysis, corpus-based academic writing research, and English for Academic Purposes pedagogy.

METHOD

This study adopts a qualitative comparative research design based on discourse analysis and corpus-based examination of biology research articles. The purpose of the study is to investigate how native English-speaking and non-native English-speaking writers use first-person pronouns in different sections of academic articles.

The corpus consisted of selected biology research articles published in international scientific journals. The articles were divided into two categories:

1. Articles written by native English-speaking authors
2. Articles written by non-native English-speaking authors

Different sections of the articles, including introduction, methodology, results, and discussion, were analyzed separately in order to identify patterns of pronoun use.

The study focused primarily on first-person pronouns, including:

- Singular forms: *I, me, my*
- Plural forms: *we, us, our*

In addition, second-person and third-person pronouns were occasionally examined when relevant to discourse organization and interactional meaning.

The analysis investigated:

1. Frequency of pronoun occurrence
2. Distribution across article sections
3. Semantic reference of pronouns
4. Discourse and rhetorical functions
5. Differences between native and non-native writers

The rhetorical functions examined included:

- Presenting research goals
- Explaining methodology
- Guiding readers through the text
- Claiming contribution or originality
- Expressing interpretation and evaluation
- Creating solidarity with readers

The study also considered the relationship between pronoun use and academic politeness strategies, authorial visibility, and disciplinary conventions.

Through qualitative interpretation, the research explored how personal pronouns contribute to interactional meaning and construction of academic identity in biology research writing.

RESULTS

The findings² reveal significant differences in the frequency and functions of personal pronouns within biology research articles.

First-person plural pronouns, particularly *we*, *us*, and *our*, occurred far more frequently than other personal pronouns across all analyzed articles. These pronouns appeared in both native and non-native writing, although native writers demonstrated more varied and strategic usage.

2. ² Hyland, K., & Milton, J. (1997). "Qualification and Certainty in L1 and L2 Students' Writing." *Journal of Second Language Writing*, 6(2), 183–205.

In strong contrast, the first-person singular pronoun *I* and its related forms appeared very rarely in the corpus. This suggests that biology research writing continues to value collective scientific identity and disciplinary objectivity rather than individual authorial presence.

The analysis also showed that pronoun usage differed according to article section.

Methodology Section

The methodology section contained a high frequency of first-person plural pronouns, especially when describing experimental procedures and research actions. Pronouns were often combined with active verbs:

- “We collected samples...”
- “We analyzed the data...”
- “We conducted experiments...”

This usage emphasized authorial responsibility for research procedures.

Results Section

In results sections, pronouns occurred less frequently because the focus shifted toward presentation of data and findings. Writers often preferred impersonal structures and passive constructions to maintain objectivity.

Discussion Section

The discussion section showed increased use of pronouns again, particularly when interpreting findings and presenting conclusions. Writers used pronouns to express interpretation, evaluation, and contribution to the field.

The study also identified differences between native and non-native writers. Native English-speaking authors tended to use pronouns strategically to guide readers and establish authority, whereas non-native writers sometimes avoided self-reference or used pronouns inconsistently.

Overall, first-person plural pronouns were found to function as important rhetorical devices for constructing academic identity and interaction with readers.

ANALYSIS

The analysis demonstrates that personal pronouns perform important communicative and rhetorical functions in biology research articles.

One significant observation is that first-person plural pronouns allow writers to balance authority and modesty. By using *we* instead of *I*, authors present research as a collaborative scientific activity rather than an individual achievement. This aligns with disciplinary expectations of objectivity and collective knowledge production.

Another important finding concerns authorial visibility. Although scientific writing has traditionally emphasized impersonality, the frequent occurrence of *we* and *our* demonstrates that modern academic discourse increasingly accepts visible authorial presence.

The analysis also reveals that pronouns contribute to reader engagement. Expressions such as “we can observe” or “our findings suggest” guide readers through arguments and create interaction between writer and audience.

Differences between native and non-native writers suggest that pronoun usage is influenced by linguistic competence and awareness of disciplinary conventions. Native writers generally used pronouns more naturally and strategically, while non-native writers sometimes showed underuse due to concerns about excessive subjectivity or overuse caused by unfamiliarity with academic style.

The study further confirms Hyland’s argument that academic writing is interactional rather than purely informational. Pronouns function not only as grammatical elements but also as rhetorical resources for constructing credibility, stance, and disciplinary membership.

DISCUSSION

The findings of this study support previous research emphasizing the importance of personal pronouns in academic discourse.

The frequent use of first-person plural pronouns demonstrates that biology research articles are not entirely impersonal. Instead, writers actively position themselves within their texts and negotiate relationships with readers and disciplinary communities.

The dominance of plural pronouns over singular pronouns reflects scientific conventions valuing collaboration, objectivity, and shared knowledge production. Even single-authored articles often employ *we* as a conventional academic strategy.

The comparison between native and non-native writers also highlights the challenges faced by NNES researchers in English-medium academic publishing. Non-native writers must not only master scientific content but also understand subtle rhetorical conventions and interactional features of academic discourse.

From a pedagogical perspective, the findings suggest that academic writing instruction should include explicit discussion of authorial stance and pronoun use. Students often receive conflicting advice regarding self-reference in academic writing, which may lead to uncertainty and inconsistent usage.

Teachers should therefore help learners understand when and how personal pronouns can be used appropriately in research writing. Awareness of disciplinary norms and rhetorical functions can improve students' confidence and effectiveness in academic communication.

The study also demonstrates the value of discourse analysis for understanding scientific communication. Pronouns are not merely grammatical choices but important indicators of identity, authority, and interaction within academic communities.

CONCLUSION

This study investigated the use of first-person pronouns in biology research articles written by native and non-native English-speaking authors.

The findings reveal that first-person plural pronouns are widely used across different sections of biology research articles, while first-person singular pronouns occur rarely. Pronoun use varies according to rhetorical purpose and article section, with higher frequency in introductions, methods, and discussions.

The study also demonstrates that personal pronouns serve important rhetorical and interactional functions, including expressing authorial stance, guiding readers, claiming contribution, and constructing academic identity.

Differences between native and non-native writers suggest that pronoun usage is closely connected to disciplinary awareness and linguistic competence. Native writers generally employ pronouns more strategically, whereas non-native writers may experience difficulties related to underuse, overuse, or inconsistency.

Overall, the research confirms that academic writing is not completely impersonal but involves active interaction between writers, readers, and disciplinary communities. Understanding the rhetorical functions of personal pronouns can help students and researchers develop more effective academic writing skills.

Future research may expand the corpus, investigate additional scientific disciplines, and explore cross-cultural differences in authorial stance and self-reference practices.

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