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ПУНКТУАЦИЯ В АКАДЕМИЧЕСКОМ ПИСЬМЕ НЕАНГЛОЯЗЫЧНЫХ АВТОРОВ

Аннотация: научные тексты, написанные носителями английского языка, часто характеризуются различными языковыми, стилистическими и риторическими погрешностями. Пунктуация является одним из основных типов ошибок в таких текстах, однако этому аспекту грамматики уделяется недостаточно внимания в обучении академическому письму и исследованиях в этой области. Цель данной статьи – показать, что целенаправленное обучение академическому письму, построенное на межкультурном подходе, существенно улучшает навыки использования пунктуации у русскоязычных начинающих исследователей, а процесс развития этих умений можно выстраивать в зависимости от сложности пунктуационных задач. Эти задачи делятся на «простые», «средней сложности» и «сложные» по таким критериям, как: частота употребления в академическом тексте, сложность ассоциируемой английской грамматики и соотнесение с русской грамматикой. Для тестирования студентов были выбраны пять задач: две из категории «простых» и три из категории «средней сложности». Протестированные аспиранты составили две группы: те, кто не проходил курс обучения академическому письму (группа 1), и те, кто прошел данный курс (группа 2). Студенты из группы 2 продемонстрировали значительно более высокие результаты по всему тесту и по каждой пунктуационной задаче. Кроме того, в этой группе наблюдалась корреляция между количеством корректных ответов и сложностью задач. Результаты исследования указывают на то, что целенаправленное обучение академическому письму для международной публикации должно включать изучение и практическую отработку наиболее актуальных для академического письма пунктуационных задач независимо от того, являются ли они простыми и очевидными или сложными и неоднозначными.

Ключевые слова: академическое письмо, пунктуация, неанглоязычный автор, аспирант, носитель английского языка.

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PUNCTUATION IN ACADEMIC WRITING OF NON-ANGLOPHONE AUTHORS

Abstract: academic writing of non-native English speakers often features various linguistic, stylistic, and rhetoric inaccuracies. Punctuation is among the most dominant types of inaccuracy; however, it has received insufficient interest in academic writing research and instruction. The purpose of this paper is to demonstrate that targeted academic writing instruction based on a cross-cultural approach can considerably improve punctuation skills of Russian novice researchers, and this improvement can be controlled with regard to the complexity of punctuation issues. These issues were classified into «easy», «moderate», and «complicated» categories according to their frequency in academic texts, complexity of the associated English grammar, and correlation with the Russian grammar. To test students' skills in English punctuation, we chose five issues: two from the «easy» category and three from the «moderate» category. Two groups of students were tested: those who did not have an academic writing course (Group 1) and those who completed the course (Group 2). The results demonstrated that Group 2 performed significantly better than Group 1 in both the overall test results and the results for each punctuation issue. In addition, in Group 2, there was a correlation between students' correct answers and the complexity of issues. The findings suggest that the most essential punctuation issues, whether easy and explicit or complicated and uncertain, should be elaborated and practiced in goal-oriented academic writing instruction.

Keywords: academic writing, punctuation, non-Anglophone author, postgraduate student, non-native English speakers.

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Introduction

According to Kirkman, «punctuation marks are integral parts of the signalling system we call writing»¹. Demonstrating the significance of proper punctuation, the author admits that sometimes he had to re-read the extracts in scientific and technical texts, which does not characterize these texts as a good writing practice. Today, when the amount of information is growing exponentially, the writing style of academic texts should be easy to follow and understand unambiguously from the first reading. This fact is critical for researchers who aim to reach their audiences worldwide and pave the way for their studies to the disciplinary community [1].

However, non-Anglophone researchers often encounter difficulties in complying with international academic writing traditions [2–8]. Although punctuation is not a central difficulty and is generally seen as a tool for effective writing [9], it still indi-

¹ Kirkman J. *Punctuation Matters. Advice on Punctuation for Scientific and Technical Writing* (4th ed.). Routledge, 2006. P. 5.

cates overall language literacy [10] and is directly related to text comprehension [11], and thus the reader's decision to read the text or not, as well as to trust the writer's argumentation or not. Therefore, novice academic writers, especially non-Anglophone ones, among other matters that are essential for academic texts, should know the punctuation norms and traditions of English-mediated academic interaction to effectively communicate their ideas to the international academic community.

Comma is one of the most challenging punctuation marks because it creates multiple difficulties for non-Anglophone authors [12–14]. These difficulties can be caused by its very sophisticated usage and the fact that many of its use cases in English differ from those in students' native languages. In this paper, we focused on five use cases in which Russian engineering student writers tend to make mistakes in comma usage in their academic texts. These cases are closely related to the punctuation rules in the Russian language and may result in misuse, overuse, or no use of the comma. «Misuse» means that another mark should be used instead of the comma; «overuse» means that the comma should not be used but it is there; and «no use» means that the comma should be used but it is not there.

The research questions (RQs) were:

RQ1: How can English punctuation use cases be classified with reference to the challenges typically faced by Russian university students in their academic writing?

RQ2: Can Russian postgraduate students empirically acquire punctuation norms to apply them properly in their academic writing?

RQ3: How well can the skills of using punctuation marks be developed during the academic writing course that focuses on cross-cultural differences?

The first RQ, in fact, is intended to classify not only punctuation marks but also some typographical means. These aspects are crucial in organizing academic texts correctly in terms of grammar and explicitly in terms of graphic design. For non-Anglophone writers, punctuation-graphical means may produce additional challenges because they often differ in students' native languages (L1) and English as a target language (L2). Therefore, similar to other L2 issues, these means should be acquired in the process of learning various aspects and applications of L2, i. e. they should be learnt and practiced from the easiest to the most complicated, with periodic revision and improvement of skills in more sophisticated contexts.

By *empirical acquisition* in the second RQ, we mean non-targeted acquisition of punctuation norms by postgraduate students from their previous experience. This experience may include learning English at high school and university, reading (and probably writing) papers in English, and other activities associated with English-mediated scientific interaction. We assume that all respondents of this study have learnt English at school and university, and this background will allow them to demonstrate basic punctuation skills. Additionally, the study suggests that students' experience in reading (and writing) academic texts in English may have developed their skills for recognizing basic punctuation norms in such texts, particularly those norms that are explicitly different from the Russian language and are thus easy to notice. These assumptions allow making positive predictions about the number of correct answers in the test. However, since most Russian engineering students have in-

sufficient English language proficiency [3], which may hinder their ability to notice differences, the results may be less optimistic.

The third RQ is intended to identify the extent to which targeted academic writing instruction can improve students' punctuation skills. We predict that the results will be highly positive because each selected case requires only one correct punctuation mark, and this mark is clearly different from the one used in the Russian language. In addition, these cases are frequent in academic texts and were regularly focused on in the academic writing course, which should have established definite patterns in dealing with these punctuation issues.

Background

Academic Writing Issues

Academic writing of non-Anglophone authors has multiple distinctive features that distinguish it from academic writing of native speakers or those who are actively engaged in international publications. The differences were found in many aspects. For example, differences at the discourse, sentence, and word levels were found between science abstracts written by Japanese, American, and British scholars [7] and between biomedical abstracts written by Korean and American scientists [4]. Multiple genre differences were found between academic writing styles of Arabic and English linguistics and education researchers [2; 5]. The authors of these and other studies agree that such differences may discourage positive reviews from high-rank journals.

Russian writers also possess some peculiarities in their research papers (RPs) written in English. For example, their writing style is often found to be wordy, obscure, and ambiguous; with excessive nominalization, complicated syntax, and lexical units that are not typical of international disciplinary discourses [3; 6; 8]. Paper titles in academic texts written by Russian scientists are longer and «heavier» than those in the texts written by their Anglophone colleagues [15].

Many researchers have claimed that the central reason for such peculiarities is authors' L1 interference, which is often caused by a lack of overall L2 proficiency [3; 6; 12; 16]. Another negative contributor is the scholarly writing traditions of authors' home countries which they introduce in texts written for international publication. According to Korotkina [6], these traditions are the main «tyrannosaur» that Russian scientists should fight in their endeavors to comply with international academic writing traditions.

Punctuation Issues

Unlike rhetoric issues, punctuation in academic prose have excited limited interest in cross-cultural research. This lack of attention possibly results from the minute impact of punctuation errors on text comprehension. Nevertheless, some scholars consider inaccuracy in punctuation to be an issue of general writing inaccuracy and a lack of systematized practice [9; 12], or a low level of general text understanding [13]. Moreover, punctuation errors were proven to be the most dominant type of errors in non-native student writing [17] and are also often considered to be caused by L1 interference [10; 12; 16]. Along with other mechanics inaccuracies, punctuation errors may eventually result in a negative impression of the author [13] and may be

the reason for the manuscript to be returned for additional revision by a qualified native speaker.

As Wallwork writes, «punctuation must help the reader understand the relationships between the various parts of the sentence»¹. As such, punctuation in English grammar typically refers to specific punctuation marks, such as commas, semicolons, periods, etc., associated with well-established rules of their usage. However, with respect to academic texts, they are often discussed together with typographical symbols (e. g., an ampersand, a bullet point, a pound symbol), font variations (e. g., italic type, bold type, capitalization), and text positioning (e. g., indentions, vertical spaces) [10, 18, 19]. For example, Kirkman² includes bold and italic type styles in *Punctuation Matters*. Wallwork³ discusses some uses of capitalization along with punctuation in *English for Writing Research Papers*. In *Writing the Research Paper*, McCarthy and Ahmed⁴ encourage readers to be mindful of headers, i. e., to use the right fonts, types, cases, indents, spaces, and positioning. This combined significance of multiple punctuation-graphical means can be attributed to the fact that they are all used to efficiently achieve the communicative goals of academic texts.

Punctuation skills can be discussed as a two-dimensional competence that «bridges the worlds of grammar and meaning», as conceptualized by Hirvela et al. [16, p. 13]. First, this competence reflects the level of language proficiency, which suggests that overall language literacy is directly linked to the student's performance in punctuation among other skills [9; 10]. Punctuation proficiency is typically based on an awareness of the underlying punctuation principles and an ability to follow them using the norms of the language. For example, these principles differ in Russian and English languages, as summarized by Yevtushenko [20]. In Russian, the main punctuation principle is based on the priority of syntax and has a regulatory character; it normally *prescribes* using specific means with specific syntactic structures. In English, it is based on the priority of comprehension and mainly has an advisory character; it *recommends* using specific means to achieve specific communicative goals. In addition, proper punctuation demonstrates the author's awareness of genre and scientific register norms because there are some peculiarities in using punctuation in academic writing (for example, Oxford comma), which are not characteristic of the general English language.

Second, this competence is related to the communicative skills of authors. This indicates that they can manipulate various punctuation-graphical means to construct the text and build arguments so that readers effectively and unambiguously comprehend the meaning and the author's communicative intentions [12; 14]. Furthermore, these skills allow the author to facilitate text readability, for example, by visually helping the reader make pauses where necessary (e. g., by using commas or semicolons) and creating a word image (e. g., by using capitalization).

¹ Wallwork A. *English for Writing Research Papers*. Springer, 2016. P. 107.

² Kirkman J. *Op. cit.*

³ Wallwork A. *Op. cit.*

⁴ McCarthy P., Ahmed K. *Writing the Research Paper. Multicultural Perspectives for Writing in English as a Second Language*. Bloomsbury Publishing, 2021. 224 p.

However, there are multiple punctuation issues in academic writing in the English language that can be challenging for non-Anglophone authors. For a Russian proofreader, these challenges in English texts written by Russian authors can be clearly seen as caused by Russian language interference. Conclusions about L1 interference were also made by researchers from other countries [10; 12; 16], who very often related it to a lack of corresponding English language knowledge. Specifically, when writers do not know what to say or write in L2 (and where to find the appropriate answer), they choose a strategy of employing knowledge from their L1 [21]. To avoid this interference, Ali et al. [12] suggested that instruction should include (1) teaching punctuation marks; (2) checking them in students' writing; and (3) providing error-corrective feedback. Vlasko et al. [14] listed the most challenging English punctuation use cases and proposed various tasks that can improve students' skills. According to Ivanova et al. [13], most Russian students have difficulties with colons, semicolons, commas, dashes, hyphens, and brackets. The researchers proposed teaching and practicing punctuation in academic writing using Information and Communication Technologies (ICTs), and their results demonstrated that the number of punctuation errors was considerably reduced after a digitally supported course.

In this study, we focused only on comma use and limited ourselves to five cases where its use could be challenging. These cases can represent various degrees of complexity for non-native writers and frequently appear in engineering research papers. As such, they were included in the academic writing course based on the cross-cultural approach. To develop teaching materials for the course, we made the most of the experience and research of international and Russian academic writing instructors (e. g., J. Flowerdew, K. Hyland, D. Walker, I. B. Korotkina, O. L. Dobrynina), various textbooks and guides on academic writing¹, research in intercultural and contrastive rhetoric [2; 5; 7; 22; 23], and our own analyses of scientific-technical discourse. The course discussed numerous aspects of academic writing by examining contrasting linguistic and rhetorical norms, including punctuation, in the Russian and English languages. With respect to punctuation, the most important and problematic use cases were learnt and practiced as a class, and specific cases were handled individually while considering the context.

Methods

Punctuation Classification

In our classification, we used the term «punctuation use cases» for the cases that grammatically require specific punctuation marks. For example, «simple series» requires commas (and Oxford comma); «complex series» requires commas and semicolons. To classify use cases in which punctuation marks are used in the English language, we analyzed information from multiple sources: websites designed for academic writers (e. g., *APA Style, Punctuation Marks* (University of Bristol), *Punctuation* (Purdue University, Northern Illinois University), *A Quick Guide to Punctuation* (University of Lynchburg)), academic writing guides (e. g., by H. Glasman-Deal,

¹ Glasman-Deal H. *Science Research Writing: For Non-native Speakers of English*. London: Imperial College Press, 2010. 272 p.; Hamp-Lyons L., Heasley B. *Study Writing. A course in Writing Skills for Academic Purposes* (8th ed.). Cambridge University Press, 2010. 213 p.; McCarthy P., Ahmed K. Op. cit.; Wallwork A. Op. cit.

L. Hamp-Lyons and B. Heasley, J. Kirkman, P. McCarthy and K. Ahmed, and A. Wallwork), EFL course books issued by prominent publishers from the UK and the USA (e. g., Oxford University Press, Cambridge University Press, Macmillan Publishers), and research by scholars from various countries [10; 13; 14; 20]. We also relied on our own teaching and proofreading experience at Tomsk State University of Control Systems and Radioelectronics (TUSUR), Tomsk, Russia.

Our classifications (easy, moderate, and complicated) considered the most important factors that make punctuation use cases challenging for Russian novice academic authors. These factors include the following: occurrence frequency for a use case in academic texts, complexity of grammar associated with the punctuation mark, and correlation with the Russian language. To test punctuation skills of Russian engineering students, we used five use cases from the «easy» and «moderate» categories.

Test Questions

The test included five sentences representing typical punctuation challenges for novice Russian researchers (table 1)

Table 1

Information about test sentences

Sentences	Group	Cross-cultural differences	Type of error
S1: An anti-drone system operates in three parts: detection, localization <u>n</u> , and decision making.	Easy	EL: Oxford comma RL: no comma	no use
S2: Today, displays with a thickness of <u>0,2</u> mm are mass-produced.	Easy	EL: point RL: comma	misuse
S3: For industrial communication <u>n</u> , some other durable substrates are also reported in the literature, such as Arlon, but at lower frequency bands.	Moderate	EL: comma RL: no comma	no use
S4: The results confirm <u>m</u> , that a frequency bandwidth of over 100 MHz of the current sensor can be achieved.	Moderate	EL: no comma RL: comma	overuse
S5: The output of an ensemble is a weighted average of the outputs of each network [10, 17, 21] <u>l</u> , the resulting network often outperforms the constituent networks.	Moderate	EL: semicolon RL: comma	misuse

Note. EL – English language; RL – Russian language.

These challenges include the following use cases:

1. Simple series (S1): the use of an Oxford comma (no comma before «and» in series in Russian). This case refers to the «easy» category because this comma fre-

quently appears in academic texts and is easy to recognise empirically and implement properly.

2. Numerals (S2): the use of a point in decimals or fractions (a comma in Russian). This case also refers to the «easy» category because these numbers are frequently used in scientific-technical texts, and this grammar is part of a high school programme.

3. Introductory elements (S3): the use of a comma after an introductory phrase that appears before the subject (no comma in Russian). This case refers to the «moderate» category because it involves basic syntax; in Russian, the use of commas depends on where such phrases appear in sentences. In English texts, a reading pause can encourage writers to use a comma.

4. Complex sentences (S4): no use of a comma before «that»-clause (in Russian, a comma is always used to separate relative clauses). This case refers to the «moderate» category because it also involves basic syntax knowledge; however, «no comma before “that”» pattern can be easily recognised while reading English texts.

5. Compound sentences (S5): the use of a semicolon between independent parts of a compound sentence (in Russian, a comma is typically used). This case also refers to the «moderate» category as it requires basic linguistic knowledge and/or extensive reading practice. Note that if a student proposed separating the parts and making two independent sentences, we counted this suggestion as an adequate correction.

We intentionally did not choose cases that involve punctuating long complex and compound sentences, as described by Yevtushenko [20]. They were not included because they require deep linguistic skills in both languages and considerable previous L2 academic reading and writing experience, which is not characteristic of most Russian engineering students. Furthermore, the cases that we chose can provide enough information to make preliminary conclusions about students' performance.

Test Groups and Procedure

The groups consisted of first-year postgraduate students who clearly had experience in studying English language (at high school and university) and who may have also had experience reading and writing academic texts in English at university. All students were full-time postgraduate students of various engineering majors at TUSUR, Tomsk, Russia. They had 68 academic hours of EFL in the spring term, 2024. Thirty-four of these hours were dedicated to academic writing, which was not a compulsory course. The students who chose the course attended the classes delivered by academic writing instructors; those who did not choose the course attended traditional EFL classes with their group lecturers.

To answer the second and third RQs, we conducted two test sessions. In the first class of the EFL course, we tested 40 students to answer RQ2 (all postgraduate students; Group 1). In the last class of the academic writing course, we tested 33 students to answer RQ3 (only students who completed the course; Group 2). Both test sessions lasted 20 minutes, and the students were required to write their answers in printed versions. They had to decide whether the underlined commas were used correctly in the sentences. If they thought they were, they chose «yes»; if they thought they were not, they should have proposed their variants. We only counted the answers that had appropriate proposals (adequate corrections); if the answer just said «no», it

was not counted. To facilitate this task, we provided Russian interpretations of the sentences.

Because the composition of respondents slightly differed between the two test sessions, we assumed that they were independent groups. Consequently, we used a nonparametric Mann–Whitney U test in *SPSS Statistics 16.0* for Windows to compare the results; the difference was considered significant at $p < .05$.

Academic Writing Course

The course lasted 34 academic hours. The two main components of the course were as follows: (1) general aspects of the scientific register and academic discourse (e. g., universal features of the scientific register and scientific-technical discourse, syntax in the two languages, cohesion and explicitness of scientific texts, paragraphing, and ICTs for academic writers); and (2) an IMRaD paper (various sections of the paper, their structure, grammar, and rhetoric). All tasks in the course were based on the material of engineering research papers in the fields that are relevant for educational programs of TUSUR. The course was based on a cross-cultural approach and involved elaborating on numerous issues that differ in academic communication styles in the two languages. The course also included several writing assignments followed by peer review and instructor feedback. Because the use cases covered in the test frequently appear in academic texts, they were regularly emphasized in feedback.

Results

Classification of Punctuation Use Cases

We classified the use cases for English language (EL) punctuation marks (and some typographical means) into three categories: easy, moderate, and complicated (table 2). The cases were analyzed in terms of the frequency of their use in academic texts, complexity of the associated English grammar (according to the levels of the Common European Framework of Reference for Languages (CEFR)), and correlation with the Russian language (RL) grammar.

We did not aim to cover all punctuation use cases. Instead, we wanted to demonstrate the principle of their classification to support our choice of use cases for this study. We also wanted to present the theory that we applied to address punctuation issues in the academic writing course for postgraduate engineering students. In brief, punctuation use cases from the «easy» category were revised and practiced by doing one or two tasks, while cases from the «moderate» category were considered in detail and practiced by performing multiple exercises. The use cases from the «complicated» category were not discussed intentionally; however, if there were questions about such cases in mentor texts, we explained them in simple words. Thus, the classification table contains only several examples in each category.

Table 2

Classification of EL punctuation use cases

	Easy	Moderate	Complicated
Frequency	Cases that can appear extensively in all academic texts	Cases that appear in academic texts relatively often	Cases that typically appear in papers written by native speakers
Grammar complexity	Cases associated with A2 CEFR level	Cases associated with B1 and B2 CEFR levels	Cases associated with C1 and C2 CEFR levels
Correlation with RL	Cases that are similar to and/or explicitly different from RL	Cases that differ from RL and require basic knowledge of EL and RL syntax and grammar	Cases that differ from RL and require deep knowledge of EL and RL syntax and grammar
Examples of use cases	Series, numerals, discourse markers, capitalizations, short compound and complex sentences	Quoting, listing, introductory elements, clarification, abbreviations, hyphenated words, appositives, long compound and complex sentences	Very long sentences with complicated embedded structures, complex constructions with non-finite verbs

Test Results

Overall, the mean values demonstrated that the difference between the groups was significant (Group 1: 1.75; Group 2: 3.73; $p < .001$). The results of each test question are summarized in Table 3, presented as mean values, the percentage of respondents who gave correct answers, the differences in percentages, and the differences in p -values. Correct answers were calculated for either «yes» answers (Sentences 1 and 3) or «adequate corrections» (Sentences 2, 4, and 5).

Table 3

The results for each test question

Sentences	Group 1			Group 2			Diff. in %	Diff. in <i>p</i> -value
	Mean	Yes (%)	Ad. Corr. (%)	Mean	Yes (%)	Ad. Corr. (%)		
S1	.30	30		.91	90.9		60.9	< .001
S2	.40		40	.94		93.9	53.9	< .001
S3	.50	50		.76	75.8		25.8	.025
S4	.38		37.5	.67		66.7	29.2	.014
S5	.18		17.5	.45		45.5	28	.010

The results demonstrate that students in Group 2 gave significantly more correct answers than students in Group 1. This difference is clearly seen in *p*-values for each sentence. The percentages for individual sentences show that in Group 1, most students gave correct answers to Sentence 3 (an introductory phrase before the subject). Note that the difference in percentage for this sentence between the groups was the smallest, indicating that this use case was the hardest to remember and apply. In contrast, the easiest use case to remember and apply was the Oxford comma, which is seen in the highest percentage difference. In Group 2, students gave the most correct answers to Sentence 2 (a point in decimals), which also indicates that this use case was very easy for them to remember and apply.

Discussion

General Conclusions

The results for Group 1 demonstrate that without targeted academic writing instruction, only 17,5–50 % of students could distinguish between the correct uses of commas in English sentences and their incorrect uses. The highest result for Sentence 3 (50 %) may stem from an obvious reading pause that separates logical groups of words and the students' intention to ease reading comprehension. The same might have been the reason for the lowest result for Sentence 5, in which the respondents had to separate two logical groups (compound sentences) and also chose a comma. Erroneous use of a comma to separate two independent clauses is called «comma splice» and, as the results demonstrate, it is common for novice Russian authors. The relatively high percentage of correct answers for Sentence 2 (40 %) can be attributed to the fact that the difference in punctuation marks in decimals in the two languages refers to the basic knowledge that is typically taught and practiced since high school. Thus, we conclude that many students still remember this rule and can apply it in their writing. Finally, the fact that about one third of respondents who decided to put a comma in Sentence 1 and not to put it before «that»-clause in Sentence 4 may only be explained by their expertise in the English language and/or reading experience. Therefore, with respect to punctuation issues covered in this study, we suggest that a maximum of 50 % of Russian postgraduate students may acquire punctuation rules empirically, i. e., only using their previous experience. Moreover, the distribution of

correct answers in this group does not correlate with the complexity of use cases, which means that, in general, empirical acquisition of punctuation norms is likely to be unsystematic and unregulated.

The results for Group 2 clearly demonstrate that targeted academic writing instruction based on the cross-cultural approach allowed students to develop punctuation skills. The use cases from the «easy» group (S1 and S2) demonstrated the highest results, indicating that most Russian students (more than 90 %) acquired «easy» punctuation norms. However, «moderate» use cases, which require basic linguistic knowledge, might have been more difficult. Although significantly more students chose not to use a comma with a «that»-clause (S4), this explicit pattern (no comma before «that») could not remain firmly in the memory of more than 35 % of students. The same is true for introductory phrases before the subject (S3), although the percentage of correct answers here is higher than that for S4. The lowest result for Sentence 5 may indicate a very deeply ingrained habit of using commas between independent clauses in the Russian language; however, its result is still considerably higher than that in Group 1. In general, we can observe that there is a correlation between students» correct answers and the complexity of punctuation issues, which is evident in the degree of acquisition of the norms expressed by differences in percentages and *p*-values. The results for the «easy» use cases were 53,9 and 60,9 % ($p < .001$), while for the «moderate» ones, they ranged from 25,8 % to 29,2 % ($p < .05$).

Pedagogical Implications

The results may have several clear pedagogical implications. First, we cannot expect that most Russian postgraduate engineering students will remember all the English language grammar rules that they previously learnt. This can be attributed to a low-level EFL instruction in high school and/or university and/or a lack of students» effort. This deficiency could further have been interfered with two- and three-year breaks between undergraduate and graduate programs, as well as between graduate and postgraduate programs. This implies that even basic and easy-to-recognize punctuation norms should be revised and learnt in an academic writing course.

Second, it is highly unlikely that most engineering students can learn punctuation rules, especially complicated ones, when reading English research papers. They predominantly read disciplinary texts for information, and very few focus on text mechanics. Therefore, punctuation rules must be elaborated as thoroughly and rigorously as other genre and register aspects of academic writing. Moreover, all these issues must be introduced and practiced using the cross-cultural approach, focusing on differences in communication styles between the two languages and employing students» L1 to explain the differences. To demonstrate the differences in real examples, instructors should utilize various types of writing: papers written by international researchers, EL papers written by Russian scholars, EL manuscripts written by Russian students, and RL papers. The course should certainly involve active writing practice so that students could apply the acquired knowledge in their own texts.

Third, many punctuation issues are closely related to sentence syntax. Therefore, this grammar should also be elaborated in the course to improve the skills in identifying sentence elements that require specific punctuation marks. For Russian postgrad-

uate students, the most critical is grammar associated with the «moderate» category of punctuation use cases; however, some attention should also be paid to revising «easy» ones. If the students are sophisticated EL academic writers, they can also acquire punctuation issues from the «complicated» category, thus making their writing more similar to native EL writing.

Fourth, the development of pre- and post-editing skills should actively be practiced in academic writing courses [24]. Pre-editing should be discussed and practiced in combination with acquiring the skills of building utterances according to the EL word order, and it should concurrently include the norms of punctuating these sentences. Post-editing should be employed every time students use machine translation of sentences or paragraphs. Checking texts for punctuation should be included and practiced throughout the course. To make this process more intense and varied, peer review of all assignments should be employed, with the most sensitive issues, including punctuation, being specified as focus points. In addition, students should learn to use various online resources, for example, *Trinka*, *QuillBot*, *Language Tool*, and *Grammarly*; this skill can help them in their further research writing.

To sum up, although punctuation is not the most critical part of grammar in research papers, it still indicates how assiduous a researcher is in presenting his/her findings to the disciplinary community. This researcher's effort demonstrates respect for the community, which is crucial in the process of joining this community and becoming a trusted and cited scientist. Therefore, all linguistic and non-linguistic issues relevant to research papers addressed to the disciplinary community should be part of the academic writing course.

Limitations

The main limitation of this study was the number of sentences in the test. We included only five, but more examples could have provided a broader selection of data for the analysis and more conclusive results. However, we were limited in time and had to allocate only 15–20 minutes for testing. In addition, these tests were aimed at revealing major trends in students' punctuation performance, which they successfully accomplished.

Another limitation is that the sentences offered in the tests were chosen by test developers. Instead, the paragraphs produced by the students could have demonstrated their real punctuation skills and challenges. However, we might then have lacked sufficient data on specific use cases that we wanted to test in this study. Additionally, writing a paragraph might have taken a longer time, which was not possible in the given situation.

Conclusion

In this paper, we have emphasized the significance of proper punctuation in scientific texts written by non-Anglophone authors for international publication. We demonstrated that punctuation issues can present various levels of difficulty for non-native writers and classified them as easy, moderate, and complicated. On the example of five use cases (two from the «easy» category and three from the «moderate» one), we showed that a maximum of 50 % of postgraduate students can learn to use proper marks empirically, i. e., without having a dedicated academic writing course. By contrast, after such a course, the highest outcome was 93.9 %, indicating that by

rigorously elaborating on various issues in academic writing, considerably more students can solve punctuation problems.

This study could be extended to supplement it with students' perceptions of L1 and L2 punctuation issues or their performance of «complicated» cases. The study can also be developed toward designing new methods and methodologies that can facilitate the improvement of punctuation skills, for example, by using information technology and artificial intelligence. These are directions for future studies in academic writing theory and instruction.

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References

1. Hyland K., Salager-Meyer F. Scientific writing. *Cronin, Blaise, (ed.) Annual Review of Information Science and Technology*. 2009. P. 297–338. DOI: 10.1002/aris.2008.1440420114
2. Alharbi L., Swales J. Arabic and English abstracts in bilingual science journals: Same or different? *Languages in Contrast*. 2011. Vol. 11. No. 1. P. 70–86. DOI: 10.1075/lic.11.1.06alh
3. Dobrynina O. L. Academic writing for publication purposes: The infelicities of style. *Vysshee obrazovanie v Rossii [Higher Education in Russia]*. 2019. Vol. 28. No. 10. P. 38–49. DOI: 10.31992/0869-3617-2019-28-10-38-49 (In Russ.)
4. Duncan B., Hall C. A Coh-Metrix analysis of variation among Biomedical abstracts. *Proceedings of the 22nd International FLAIRS Conference*. 2009. P. 237–242.
5. El-Dakhs D. Are Arabic and English research article abstracts different? Rhetorical structure and interaction in focus. *The Asian ESP Journal*. 2020. No. 16 (5.1). P. 6–32.
6. Korotkina, I. B. Russian scholarly publications in Anglophone academic discourse: The clash of tyrannosaurs. *Integratsiya obrazovaniya [Integration of Education]*. 2018. No. 22 (2). P. 311–323. DOI: 10.15507/1991-9468.091.022.201802.311-323 (In Russ.)
7. McCarthy P., Lehenbauer B., Hall Ch., Duran N., Fujiwara Y., McNamara D. A Coh-Metrix analysis of discourse variation in the texts of Japanese, American, and British scientists. *Foreign Languages for Specific Purposes*. 2007. Vol. 6. P. 46–77.
8. Shpit E. I., McCarthy P. M. Addressing discourse differences in the writing of Russian engineering students and international researchers. *Language Teaching Research*. 2022. Advance online publication. DOI: 10.1177/13621688221109809
9. McNaught K., Shaw G. C. Preparing undergraduate students to be successful writers: Exploring the spelling, grammar and punctuation skills of students identified as potentially «at risk». *Journal of Academic Language and Learning*. 2016. Vol. 10. No. 2. A11–A19.
10. Ninčević S., Zanchi Ž. The Importance of Correct Punctuation and Capitalisation. *Transactions on Maritime Science*. 2012. Vol. 01. No. 01. P. 47–57. DOI: 10.7225/toms.v01.n01.006
11. Truss L. *Eats, Shoots, and Leaves: The Zero Tolerance Approach to Punctuation*. London: Profile Books. 2005. 245 p.
12. Ali S. S., Amin T., Ishtiaq M. Punctuation errors in writing: A comparative study of students' performance from different Pakistani universities. *Sir Syed Journal of Education & Social Research – SJESR*. 2020. Vol. 3. P. 165–177. DOI: 10.36902/sjesr-vol3-iss1-2020
13. Ivanova M., Arupova N., Mekeko N. Digital support for teaching punctuation in academic writing in English. *Journal of Language and Education*. 2022. Vol. 8. No. 3. P. 81–96. DOI: org/10.17323/jle.2022.13608

14. Vlasko N. K., Vilkovala P. V., Kirichko N. V. Teaching punctuation in the English-language scientific and technical text to master's degree students. *Filologicheskie nauki. Voprosy teorii i praktiki. Pedagogicheskie nauki [Philology. Theory & Practice]*. 2020. Vol. 13. No. 2. P. 276–280. (In Russ.) DOI: 10.30853/filnauki.2020.2.55 (In Russ.)
15. Riabtseva N. K. Academic paper titles: A Russian-English perspective. *Nauchnyi dialog*. 2018. No. 6. P. 32–42. DOI: 10.24224/2227-1295-2018-6-32-42 (In Russ.)
16. Hirvela A., Nussbaum A., Pierson H. ESL students» attitudes toward punctuation. *System*. 2012. Vol. 40. No. 1. P. 11–23. DOI: 10.1016/j.system.2012.01.006
17. Sajid M. Diction and expression in error analysis can enhance academic writing of L2 university students. *Advances in Language and Literary Studies*. 2016. Vol. 7. No. 3. P. 71–79.
18. Adaeva O. M. English punctuation marks in the texts belonging to different functional styles [Electronic resource]. *Samarskij nauchnyj vestnik [Samara Journal of Science]*. 2015. No. 1 (10). P. 13–16. Electron. dan. URL: <https://cyberleninka.ru/article/n/funktsionalno-stilisticheskaya-obuslovlennost-angliyskoy-punktuatsii> (date of access 03.09.2024) (In Russ.)
19. Yevtushenko T. G., Gordeeva O. I. Punctuation and supragraphemics in pre-printed Russian scientific texts [Electronic resource]. *Vestnik Tomskogo gosudarstvennogo universiteta [Tomsk State University Journal]*. 2012. No. 359. P. 18–21. Electron. dan. URL: <https://cyberleninka.ru/article/n/funktsionirovanie-punktuatsionno-graficheskikh-sredstv-v-sovremennyh-russkikh-nauchnyh-tekstah-s-pozitsii-nositeley-russkogo-yazyka-na> (date of access 03.09.2024) (In Russ.)
20. Yevtushenko T. G. Similarity and differences in separating uses of the comma in Russian and English scientific papers [Electronic resource]. *Vestnik Tomskogo gosudarstvennogo universiteta [Tomsk State University Journal]*. 2010. No. 336. P. 11–14. Electron. dan. URL: <https://cyberleninka.ru/article/n/obschie-i-spetsificheskie-cherty-funktsionirovaniya-punktuatsii-v-russkom-i-angliyskom-nauchnom-stile> (date of access 03.09.2024) (In Russ.)
21. Jarvis S., Pavlenko A. *Crosslinguistic Influence in Language and Cognition*. New York and London: Routledge, 2008. 287 p.
22. Connor U. Intercultural rhetoric research: Beyond texts. *Journal of English for Academic Purposes*. 2004. Vol. 3. P. 291–304. DOI: 10.1016/j.jeap.2004.07.003
23. Walker D. How to Teach Contrastive (Intercultural) Rhetoric: Some Ideas for Pedagogical Application. *New Horizons in Education*. 2011. Vol. 59. No. 3. P. 71–81.
24. Dobrynina O. L. Academic writing: proofreading teaching at the final step of a foreign text writing. *Nepreryvnoe obrazovanie: XXI vek [Lifelong education: the XXI century]*. 2021. No. 2 (34). DOI: 10.15393/j5.art.2021.6930 (In Russ.)