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**DIFFICULTIES IN TEACHING AND LEARNING SCIENTIFIC
GENRES**

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Abstract

During the last two centuries, a genre has been a research subject of linguistics and methodology. A genre is not a purely specific scientific category; it is a social category as well. The article reveals, describes and analyzes the difficulties that teachers and non-anglophone students can encounter dealing with scientific genres in the Russian and English languages. Despite the availability of a large volume of published studies providing classifications of scientific texts, describing the peculiarities of teaching and learning scientific genres and demonstrating guidelines for writers about how to create scientific texts of different genres in Russian and English, some obstacles to effective use of genres remain. Based on the analysis of the existing literature devoted to genre studies, guidelines how to write in scientific genres and in accordance with requirements of journals and conferences to manuscripts, some difficulties have been identified. The solution to such difficulties as the irregularity and polysemy of scientific genres terminology and divergence in interpretation of the compositional structure of the most relevant scientific genres have been proposed.

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1. Introduction

A genre exists in all types of human communication (Bakhtin, 2000), “it becomes a condition for the verbal interaction of people, a generator of mental activity” (Zhilyakov, 2015, p. 82).

Genres are studied in scientific literature on the basis of a cognitive approach. Searching for its origin, western researchers refer to the works by Bakhtin. The cognitive approach to a genre is based on two main statements: a) a genre is a form of mental representation; b) genre classes are not formations with clear boundaries, they are like fluids and are built on the principle of “family resemblance”. It means that the belonging of an individual piece of work to a particular genre is determined by its similarity to the best genre representative, so called ‘genre prototype’ (Tarasova, 2018). So, this kind of ambiguousness of a genre can cause irregularity in genre terminology, that in turn, can lead to some difficulties encountered by those who pursue mastering genres, namely, scientific genres.

Genre competence is one of the ‘status symbols’ of a personality, an indicator of the ability to communicate in standard situations, a substantial component of the communicative competence (Sotova, 2017). Genre competence in scientific communication sphere is defined as “a scope of knowledge about stylistic features of a scientific text and a variety of genre models, as well as skills and abilities of modelling scientific texts of different genres according to communicative task of intercultural scientific communication using appropriate language and stylistic repertoires” (Kolesnikova & Ridnaya, 2019, p. 387) and is considered to be one of the main abilities and skills of a future specialist and researcher.

Therefore, foreign and national methodologists and educators pay much attention to the methodology of teaching academic genres. The genre approach in teaching ESL academic and business writing seems to be of high importance (Fedorova et al., 2020). Moreover, the priority of skills in making literature review and writing research articles was defined by Isupova (2020) through the survey among students of a non-linguistic institute. However, some obstacles to effective genre-building remain.

2. Problem Statement

According to the current Federal State Educational Standards of Higher Education of the Russian Federation, a graduate of a master program in machine-building “must be able to prepare scientific-engineering reports, reviews, publications on obtained findings in the field of machine-building” (Fgosvo, 2020). A graduate of a master program in sociology is supposed “to be able to conduct fundamental and applied sociological research and present its findings” (Fgosvo, 2018). Hence, considering English is the language of international scientific communication, it may be concluded that mastering scientific genres in both languages, Russian and English, is one of the most important professional competences (Fedorova et al., 2020). However, non-anglophone students can encounter some difficulties in writing in academic genres, e.g. ones caused by differences between the national and international rhetorical and publishing traditions (Korotkina, 2018; Zashikhina, 2020). Our study is aimed to describe the difficulties that learners and teachers can encounter dealing with English and Russian scientific genres.

3. Research Questions

There are several questions to be considered within our study. The first question is “What kind of difficulties may arise in the process of teaching and learning academic genres in Russian and English?” The second question is “Is there a unified intergenre model of scientific texts to help teach and learn academic genres effectively?”. The third question is “How to deal with the difficulties?”

4. Purpose of the Study

The purpose of the study is to reveal, describe and analyze the difficulties in teaching and learning scientific genres in Russian and English and propose the solutions to eliminate the difficulties.

5. Research Methods

The methods employed in the study include the analysis of the existing literature devoted to genre studies, guidelines for author about how to write in various scientific genres and in accordance with requirements of journals and conferences to manuscripts.

6. Findings

As a result of the study there have been distinguished the following difficulties accompanied by their solutions:

6.1. Irregularity and polysemy of scientific genres terminology

One of the serious problems of teaching scientific genres lies in irregularity and polysemy of terms and the lack of generally accepted definitions of such scientific genres as abstract and summary within the genre and intra-genre system of the scientific functional style. Despite the standards nominalizing the requirements to an informative abstract and an indicative abstract, the questions how to teach summarizing and abstracting and how to learn scientific-informative substyle deserve much attention. The irregularity of the terms is described in detail in the work by Matulevich (2008).

Even writing this article we experienced some difficulty in formulating the term: ‘scientific’ or ‘academic’ genres? The former was chosen and the latter was ignored because in accordance with the Russian rhetorical and publishing traditions the term ‘academic’ is used for academic student activity or academic sphere of communication and in our study, we are pursuing the difference between scientific and academic activities and spheres of communication.

When teaching Russian as a Foreign Language, the problem of distinguishing between an abstract and a summary is solved, in particular, with the help of the questions: the abstract answers the question “What is the text about?”, a summary, in its turn, answers the question: “What is said in the text?” In foreign literature, there is no clear difference between an abstract and a summary. In textbooks of American publishers, the terms summary and abstract are used interchangeably that is demonstrated in the citation: “... summaries (abstracts) at the beginning of journal articles...” (Johnson,

1998, p. 183). One more example is the description of a physical structure of a scientific article made by Lindsay (2020) who uses the word “summary” for a part at the beginning of an article.

As a result, the Russian-speaking and English-speaking academic communities face the problem of using the terms ‘summary’ and ‘abstract’ when interchangeably writing an abstract to an article. Publishing houses or organizing committees of conferences imposing the requirement for an author: “to write an abstract to an article” confuse the functions of an abstract and a summary. On the one hand, this part of the article must help define the general content and the relevance of the article, and help decide if it is worth reading the original text. On the other hand, the organizers want authors to write about the goal and objectives of the study, methods, novelty and results in this secondary genre. Sometimes, an opposite situation may be observed: a small secondary text to an article entitled as “summary” just enumerates the main issues considered in the article. An example is the ‘summary’ to the article by Kegeyan (2019).

The solution is to follow the requirements of publishing houses and conference organizers, paying much attention to the description of the content of the abstract (summary).

6.2. Divergence in interpreting genre composition

Unfortunately, sometimes, teachers and learners dealing with the structure of this or that academic genre may encounter a difficulty in understanding what they have to write about in their text. Considering a genre of a scientific article, Day and Gastel (2017) underline the usefulness of the IMRAD (Introduction, Methods, Results, and Discussions) organization of scientific papers for authors that has helped them to organize their manuscripts within about the past century.

Nowadays, writers face a great deal of guidelines about how to write a scientific article and its components. As for the subgenre of Introduction, CARS (Creating a Research Space) model, proposed by Swales (2008) may be a useful tool for authors. Being developed on the study of articles across a range of disciplines, the CARS model includes the following 3 moves (steps): 1) Establishing a territory; 2) Establishing a niche; 3) Occupying the niche. Another view on Introduction is proposed in Video Tutorial “Writing your article for journal Publication” provided by IEEE Author Center (2020). According to their guidelines, Introduction should include: 1) Novelty: Literature review; a) Goal: what question you are trying to answer; 3) Motivation: why you are asking the question. So, we can see a variety of wording and subheadings in the description of one and the same subgenre which may confuse a writer.

Thus, we propose the solution to the problem described above. It is a unified inter-genre model of a scientific text that reflects communicative and cognitive stages in the activity of a researcher and helps a reader gain a complete understanding of the text. The correlation of the model with a number of scientific genres is demonstrated in our work (Kolesnikova & Ridnaya, 2016). The relevance of the model has been proved again as a result of the analysis of the existing guidelines on academic writing.

7. Conclusion

As a result of the conducted study, the literature devoted to genre studies, guidelines and textbooks teaching writing different scientific genres were reviewed. The main difficulties in teaching and learning scientific genres which are caused by differences between the national and international rhetorical and

publishing traditions have been revealed. Despite irregularity and polysemy of terminology, the difficulties in writing Russian and English scientific genres can be overcome through thorough analysis and meeting the requirements to manuscripts proposed by publishing houses and conference organizers. Another problem concerned with divergence in interpreting and understanding compositional structure of scientific genres can be solved by the use of a unified inter-genre model of a scientific text.

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