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Tetiana Kravchenko

Doctor of Philosophy,

Senior Lecturer of the English language,

Literature with Teaching Methods Department,

Mukachevo State University

Mukachevo, Ukraine

ORCID: 0000-0002-4963-4667

e-mail: *tatyanak1815@gmail.com*

EFFECTIVE STRATEGIES FOR IMPROVING SCIENTIFIC COMMUNICATION IN ENGLISH

Abstract. The article discusses the main strategies for improving scientific communication in English. It has been determined that the process of obtaining a university education includes educational and research components. The educational component includes the formation of English-language academic competence, the research component requires mastery of a scientific style of speech, since the essence of scientific communication in English is the exchange of information between a group of people united by common ideas and interests. In addition, it has been determined that effective formation of scientific communication in English for students is possible if a systematic approach to learning a foreign language is implemented.

Formal (scientific publications and dissertation defenses) and informal communication in a virtual environment (conversations of scientists, speeches at conferences, electronic correspondence, other forms of computer communication) have been considered.

Various aspects of scientific communication have been analyzed. It has been found that effective scientific communication requires an understanding of the audience (interacting with different groups, such as scientists, students, the public, politicians and financial partners, requires adapting the communication approach to their unique interests, technical level and perception of information), creating active interaction (creating forums for discussion where scientists and the audience can exchange ideas, questions and answers), using simple and understandable speech (avoiding complex terms and technical vocabulary, using analogies, definitions), using visual aids (interactive presentations, videos, graphics), use of modern technologies (social networks Twitter, Facebook and LinkedIn, websites and multimedia tools).

Based on the analysis, the conclusions have been drawn that effective scientific communication is possible if the right strategies and tools are used. We see the study

of scientific communication as a component of scientific and pedagogical activity as a perspective for further exploration.

Keywords: scientific communication, effective strategies, information and communication technologies, innovative methods.

Problem statement. Scientific communication is an important element in the successful development of science and contributes to the understanding and acceptance of discoveries and research by a large audience. Effective scientific communication opens opportunities for collaboration, engages the public and financial partners, and influences the development of society as a whole. English, as one of the most common languages, is determined by the high level of development of culture, science and technology in the countries that speak it. Its wide use in science allows scientists to present research results to the general public and exchange knowledge with colleagues from other countries. In particular, writing scientific papers and carrying out professional communication in English is becoming an important component for specialists in various fields. Recently, attention in Ukraine and abroad has been focused on the problem of teaching English, taking into account the needs of future specialists, which emphasizes the need for professional training of students for effective English communication in their chosen field of activity, in particular in scientific activity [1; 3]. Various strategies aimed at enhancing the effectiveness of scientific communication in English need to be explored. The focus must be placed on identifying key approaches that can significantly improve the clarity and impact of scientific discourse. By delving into these strategies, students will gain valuable insights into refining their communication skills, ultimately contributing to a more comprehensive and accessible dissemination of scientific knowledge in the English language.

Analysis of recent research and publications. In national linguistics, various aspects of scientific communication are considered in the works of H.S. Bathyina, V.Zh. Kelle, D. Heimz, M.G. Lazar, I.A. Maisel, Yu.Z. Myrskyi, E.M. Myrskyi.

Despite the fact that a significant number of scientists focus their attention on the topic of scientific communication, it is relevant, in our opinion, to study effective strategies for improving scientific communication.

The research aim is to determine effective strategies of scientific communication.

Presentation of the basic material. The process of obtaining a university education includes both educational and research components. The educational component is the formation of English-speaking academic competence for masters, postgraduates and scientists. It includes awareness of the intercultural nature of scientific communication, adaptation to globalization and internationalization trends of university education. This also includes the improvement of language competence, covering the lexical and grammatical features of the English-language scientific style [1].

The research component necessitates a profound command of a scientific style of speech, which serves as a distinct and specialized form of communicative expression. Within the realm of scientific discourse, various types of texts emerge, resulting in a diverse array of genres that cater to different modes of scholarly communication. Among the primary genres encapsulated within the scientific style are the monograph, a comprehensive and in-depth exploration of a specific topic; the scientific article, a concise presentation of research findings; the abstract, a succinct summary of a study's key points; theses formulated for the delivery of a report at a scientific conference, providing a structured overview of research; a review, offering critical analysis and evaluation of existing literature; a dissertation, representing a comprehensive and original contribution to a field of study; a term paper, a focused exploration of a particular subject within the scientific domain; a diploma/master's thesis, an advanced research project undertaken at the culmination of a degree program; a textbook, designed to impart knowledge and understanding to students; a guide, serving as a manual for navigating specific scientific processes or methodologies; a lecture, an oral presentation conveying complex concepts to an audience; and an oral presentation, a spoken delivery of research findings or insights. The rich tapestry of genres within the scientific style provides researchers with versatile means to convey their knowledge and contribute to the ongoing discourse within their respective fields. [7,8].

Communication with colleagues and collaborators requires a high level of English proficiency. Students' education should be focused on the study of key genres of English-language scientific writing. In addition, oral presentation training is required for speaking at international conferences, seminars and participating in round table meetings. Special attention should be paid to the development of communicative verbal and non-verbal tactics for preparing and conducting presentations [2].

The essence of scientific communication in English is the exchange of information between a group of people united by common ideas and interests. Communication relations in this context are considered as information relations. Effective formation of scientific communication in English for students is possible if a systematic approach to learning a foreign language is implemented [2].

Linguistic and communicative competence of students will allow them to actively participate in international scientific events, contributing to the expansion of international contacts. Linguistics distinguishes such forms of scientific communication as formal and informal, oral and written, as well as various types of correspondence and face-to-face exchange of information [5].

Formal communication of scientists is carried out mainly in writing through scientific publications and dissertation defenses. Informal communication includes scholarly conversations, conference presentations, and electronic correspondence. It is an important element where free exchange of information takes place, strengthening interpersonal ties. E-mail, blogs, and other forms of computer-based communication

are seen as informal modes of communication that occur in a virtual environment and may be less structured and more open to informal information sharing[3].

Therefore, in order to achieve effective scientific communication, it is important to consider several key aspects. *First*, it is necessary to deeply understand the audience, since this is a defining stage in the transmission of information and its perception by the recipient. Preparing to interact with different groups, such as fellow scientists, students, the public, politicians and financial partners, requires adapting the communication approach to their unique interests, technical level and perception of information [7].

The *second* important aspect is to create active interaction and discussion. Scientific communication is not limited to the simple transfer of information; it includes the creation of discussion forums where scholars and audiences can exchange ideas, questions and answers. This contributes to the active involvement of the audience and the development of the scientific community.

Equally important is interaction and feedback within the scientific community, which creates a favorable environment for the exchange of ideas and knowledge. Scientists must actively interact, taking into account the diversity of the audience and creating conditions for the development of ideas and the exchange of research results.

As part of the *third* aspect of effective scientific communication, one should turn to the use of simple and understandable speech. Effective scientific communication is determined by the scientist's ability to adapt one's style and language to the audience, avoid using unnecessary terms, and ensure clarity and accessibility of information. It is important to consider the different level of technical understanding in different groups, for example, when interacting with fellow scientists and the public.

Avoiding complex terms and technical vocabulary is key, as these elements can make it difficult for the audience to understand the information. It is important to consider that using simple and accessible language helps to improve the understanding of your ideas among different groups, especially among those who may be less familiar with the topic [7].

Enhancing ease of speech involves several strategies. First, the use of terms and abstractions should be avoided, replacing them with simpler and more understandable expressions. Definitions serve as a means of explaining specialized terms to facilitate their understanding. The use of concrete examples and visual elements such as diagrams and illustrations help define and clarify complex ideas. Using analogies that are understandable to the audience helps to put ideas into a common context. In addition, checking the understanding of the audience through questions and answers promotes active interaction and adaptation of communication on the fly. Ultimately, simplifying sentence structure and avoiding complex constructions makes reading and listening easier. Communication tools that focus on the practical application of research emphasize its relevance to the real world, which can generate more interest in the audience.

Therefore, the use of simple and understandable language, together with the use of specific examples and illustrations, contributes to effective scientific communication, making ideas more accessible to different groups of recipients.

The fourth aspect of scientific communication that requires attention is the use of visual aids. Along with this, science communication requires scientists to use a variety of communication formats, such as visualizations, interactive presentations, and videos, to facilitate understanding of complex concepts. Pictures, graphs, charts, and other visual elements play a key role in explaining complex scientific concepts. They not only facilitate the perception of information, but also contribute to its memorability. It is important to note that visual elements should be properly adapted to the audience and avoid exaggerated complexity. The use of visual aids such as pictures, graphs and charts in scientific communication has enormous potential to facilitate the perception and memorability of information. This aspect can be considered from several perspectives. Visual aids make abstract concepts concrete, helping people more easily understand complex relationships and structures. Images and graphics make information more concrete and accessible. Illustrations and graphics made a huge contribution to the memorability of information. People perceive and remember visual elements more effectively compared to textual information. Specialized audiences may require the use of technically oriented graphics, while simple illustrations should be chosen for the general public. It is important to consider the level of technical understanding of audience members. Images should serve as a communication tool, not a source of misunderstanding. It is important to avoid excessive detail and complexity, which may look impressive but are not always conducive to understanding. Depending on the topic and audience, it is recommended to consider a variety of visualization formats, such as graphs, tables, charts, and diagrams. The use of different formats allows to effectively transfer information. Images should be concise and clear. Reducing the number of details to the necessary minimum helps to avoid overloading with information. In a virtual environment, interactive elements can be used effectively, allowing the audience to manipulate and explore the data on their own. Regular feedback on visual elements allows adapting them according to the needs of the audience. In general, the use of visual aids is necessary not only for visibility, but also for making scientific information more accessible and interesting for different audiences.

The fifth aspect, the use of new technologies. Modern technologies, such as social networks, websites, and multimedia tools, offer ample opportunities for expanding audiences and improving scholarly communication. It is important to use these tools to disseminate scientific knowledge and engage the public. Modern technologies open limitless opportunities for scientific communication, providing greater accessibility, efficiency and interactivity. The use of social networks, websites and multimedia tools is becoming a key element in interacting with different audiences and disseminating scientific knowledge. Social networks such as Twitter, Facebook,

and LinkedIn allow academics to interact with a diverse audience, bringing not only professionals, but also students and members of the public into the discussion. Websites and social media provide an opportunity for scientists to interact with the public directly, helping to explain important scientific questions and highlight their own research. The use of multimedia such as video, audio and graphics facilitates the understanding of complex concepts by allowing the transition from theory to concrete examples. Communities on social networks can become an active place for discussing scientific topics, and engaging the audience in virtual discussions allowing to create a sense of community. Websites and blogs allow scientists to keep their audience updated about their research, new discoveries, and scientific developments, which helps to keep the audience interested. Engaging with the public through technology can open new opportunities for collaboration and exchange of ideas with individuals with different perspectives and experiences. The use of virtual formats for conferences and webinars expands the accessibility of events and provides the opportunity for audience participation from different parts of the world. The use of these technological tools contributes not only to effective scientific communication, but also to the growth of public interest in science. It is important to learn and use these tools to make scientific knowledge accessible and understandable to a wider audience.

Conclusions and prospects for further investigations. Effective scientific communication is an important element in the development of modern science. Investing time and effort in improving communication methods can lead to greater understanding and support for research. With the right strategies and tools, scientists can make their work accessible and understandable to a wider audience. We see the study of scientific communication as a component of scientific and pedagogical activity as a perspective for further exploration.

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ЕФЕКТИВНІ СТРАТЕГІЇ ДЛЯ ПОКРАЩЕННЯ НАУКОВОЇ КОМУНІКАЦІЇ АНГЛІЙСЬКОЮ МОВОЮ

Тетяна Кравченко

доктор філософії,

старший викладач англійської мови,

літератури з методикою викладання

Мукачівського державного університету,

м. Мукачево, Україна

ORCID: 0000-0002-4963-4667

e-mail: tatyanak1815@gmail.com

Анотація. У статті розглянуто основні стратегії для покращення наукової комунікації англійською мовою. Визначено, що процес здобуття університетської освіти включає навчальну і науково-дослідну складові. До навчальної складової відноситься формування англomовної академічної компетенції, науково-дослідна складова вимагає володіння науковим стилем мовлення, оскільки сутність наукової комунікації англійською мовою полягає в обміні інформацією між групою людей, об'єднаних спільними ідеями та інтересами. Крім того, було визначено, що ефективне формування наукової комунікації в англійській мові для студентів можливе за умови впровадження системного підходу до вивчення іноземної мови.

Розглянуто формальну (наукові публікації та захисти дисертацій) та неформальну комунікацію у віртуальному середовищі (бесіди вчених, виступи на конференціях, електронне листування, інші форми комп'ютерного спілкування).

Проаналізовано різні аспекти наукової комунікації. З'ясовано, що для ефективної наукової комунікації необхідним є розуміння аудиторії, створення активної взаємодії, використання різноманітних форматів комунікації, уникання складних термінів, застосування аналогій, використання візуальних засобів, використання сучасних технологій.

На основі проведеного аналізу, сформовано висновки, що ефективна наукова комунікація можлива за умови використання правильних стратегій і інструментів.

Ключові слова: наукова комунікація, ефективні стратегії, інформаційно-комунікативні технології, інноваційні методи.

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