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ACADEMIC AND SCIENTIFIC COMMUNICATION IN THE CONTEXT OF DOCTOR OF PHILOSOPHY TRAINING

The article deals with the research of specific features of academic and scientific communication in the context of developing competences of postgraduate students. An analysis of the research publications on preparing PhD students for academic communication, the content and specifics of academic writing, academic writing in cultural and linguistic discourse etc. is done. The following theoretical research methods have been used during the research: analysis and synthesis for analyzing research publications, systematization, and generalization for developing the main points and conclusions of the research conducted, and prognostic analysis for outlining the prospects for further research.

There is highlighted the essence of such concepts as a language (as a system of sound and graphic signs), speech (as a process of expressing the thought using language means, i.e., a system of sound and graphic signs), communication (as a process of information exchange involving two or more people, who use verbal (vocabulary) and nonverbal (body language, gestures, eye contact etc.) means, there existing oral, written, and visual communication). The functions of communication in the academic environment, aimed at the transfer of knowledge from one person to another, which involves its processing and presentation in a format that a post-graduate student can perceive, understand, transform into their knowledge system for further use, the structure of academic writing as a component of the educational and scientific program of training doctors of philosophy (mastering the basics of academic writing; abstracting; publication of scientific papers in peer-reviewed journals; presentation of written work) are presented. The analysis of the principles of academic and scientific communication (clear formulation of the purpose of scientific work, audience involvement, clarity of the author's position, focus on the subject, logical structure, provability, clarity and completeness of explanation, effective use of research, use and design of source base, writing style) is done.

Keywords: *academic communication; postgraduate; Doctor of Philosophy; scientific communication; educational and scientific program; principles.*

Fig. 1. Ref. 10.

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АКАДЕМІЧНА ТА НАУКОВА КОМУНІКАЦІЯ У КОНТЕКСТІ ПІДГОТОВКИ ДОКТОРІВ ФІЛОСОФІЇ

Стаття присвячена висвітленню результатів дослідження особливостей академічної та наукової комунікації у контексті формування компетентностей post-graduate students. Виконано аналіз науково-педагогічної літератури з проблеми дослідження. Висвітлено зміст понять мова, "мовлення", "комунікація". Представлено функції комунікації в академічному середовищі, структуру академічного письма як компонента освітньо-наукової програми підготовки докторів філософії. Проаналізовано принципи академічної та наукової комунікації. Презентовано висновки до виконаного дослідження та перспективи подальших наукових студій.

Ключові слова: *академічна комунікація; аспірант; доктор філософії; наукова комунікація; освітньо-наукова програма; принципи.*

Introduction. According to "OECD Future of Education and Skills 2030: OECD Learning Compass 2030", among the basic skills of specialists in the 21st century there are three groups: "cognitive and meta-cognitive skills, which include

critical thinking, creative thinking, learning-to-learn and self-regulation; social and emotional skills, which include empathy, self-efficacy, responsibility and collaboration; practical and physical skills, which include using new information and communication

technology devices” [10, 83]. These skills are essential for professionals in any field as they are indispensable for living and working in a society of knowledge. Cognitive skills allow you to use information expressed in a digital, graphic, and verbal format, which is crucial for an individual operation both as a citizen and as a professional. Metacognitive skills are necessary for lifelong learning realization. In this context, we emphasize the necessity to possess the ability to express our ideas and views in writing.

Today, educational and scientific programs for training Doctor of Philosophy are increasingly diversified due to introducing such disciplines as “Academic Writing”, “Methodology of preparation of scientific publications”. Such disciplines are aimed at developing the competencies based on scientific professional knowledge and skills in the field of academic writing, in particular, those which are necessary for finding information sources, processing and critical comprehension of the obtained information, its use and presentation, producing own academic and research papers, establishing effective communication with other participants of the academic, scientific, and professional environment. We agree with the opinion of O. Semenog that “successful formation of competencies of doctors of philosophy (PhD students) largely depends on the educational policy of universities, whose mission is education, research and innovation and it should be aimed at ensuring the competitiveness of graduates in Ukrainian, European and international education space, deepening international activities, developing individuals as citizens not only of the country but also of the world with a high level of academic culture and academic integrity” [5, 321].

Analysis of recent research and publications. The specifics of teaching academic writing has been the subject of research for both domestic and foreign scholars. Thus, the research has been done on the following: peculiarities of preparing students for academic communication (M. Kozolup [1]), the content and specific character of academic writing (N. Maloshonok [2], S. Revutska [3], B. Green, K. Beavis [9]), academic writing in cultural and linguistic discourse (O. Selivanova [4], O. Semenog [6], L. Shulinova [7], T. Yakhontova [8]) etc.

The purpose of the article is to present the results of the research into the specific features of academic and scientific communication in the context of training Doctor of Philosophy, as well as the principles underlying them.

Research methods. The following theoretical methods have been used during the research: analysis and synthesis for processing scientific and pedagogical literature on the research problem, systematization

and generalization for formulating the main provisions and conclusions to the research; prognostic analysis for outlining the prospects for further research.

Presentation of the main material. Academic writing is rooted in metalinguistic skills, i.e., the ability to critically read and understand the written text and analyse it, formulate the author’s position, and so on. Academic writing deals with theories and causes that govern processes and practices of everyday life and explores alternative explanations for these events.

Language is a system of sound and graphic signs. Speech is the process of expressing thoughts using language means, i.e., a system of sound and graphic signs. Throughout life, a person learns to understand and use different languages, and these are not only foreign languages. We mean both letters and numbers, chemical and physical, mathematical, and medical signs, financial symbols etc., which form a system of signs, i.e., the language of a particular field of scientific knowledge or profession.

In society, we always meet and use different types of language, which is inherent in a particular social environment and is called a sociolect (social dialect), jargon or slang. Thus, members of a certain professional community (doctors, financiers, computer scientists) can use vocabulary that is completely or partially incomprehensible to a person working, for instance, in the field of agriculture or cultural studies. Prison or street slang is not entirely clear to many people. The dialect used by the population in the Zakarpattia region differs significantly from the dialect of the neighbouring Ivano-Frankivsk region and is sometimes completely incomprehensible to the residents of Cherkasy, Kharkiv or Sumy regions. However, if a doctor lives in the Zakarpattia region and works in a rehabilitation centre for drug addicts, it is only natural that he understands and uses not only his professional language and jargon of medicine but also the dialect of his community and the street slang. So, one person, being in different environments, adapts to them and uses appropriate vocabulary to establish communication with their representatives: the scientific and professional community, family, government officials, service, and trade workers etc.

Communication is the subject of research for specialists in various fields of scientific knowledge – philosophy, cultural studies, linguistics, psychology, pedagogy, sociology, media studies and more. Communication is considered as a “purposeful process of information exchange between two or more subjects” [4, 552], where the subjects can be not only people but also automated systems, artificial intelligence systems etc. Still, when people are the subjects of communication, we can define

communication as a process of information exchange involving two or more people who use verbal (vocabulary) and nonverbal (body language) means, and its varieties are oral, written, and visual communication.

In the academic environment, communication is aimed at ensuring the effectiveness of the educational process and involves the transfer of knowledge from teachers to students (in our context we mean post-graduate students) or assistance in self-acquisition of knowledge with the teacher support. Here we are talking about a transfer of knowledge from one person to another, which involves its processing and presentation in a format that post-graduate students will be able to perceive, understand, and transform into their system of knowledge for further use. And here it is crucial that the teacher and the post-graduate student “speak the same language”. This task is not easy, as it requires from the teacher the skills and abilities to organize the text with the optimal amount of special vocabulary and terminology, which is logically and reasonably used and disclosed in the text. “Academic communication occurs in the relevant educational, general scientific, sectoral and professional oral and written genres and is implemented in various forms of academic discourse. The proper mastery of academic communication strategies is the key to the quality acquisition of professional knowledge and skills by students, their future effective social interaction with members of relevant scientific and academic communities and success in achieving professional goals” [1, 5]. In other words, the implementation of academic communication requires the presence of such components as “subjects (members of the academic community), objects (goals, motives, and intentions of communicators) and means of communication (academic genres as units of discourse)” [1, 34].

Since the education process involves interaction between the teacher and post-graduate students, it is essential to establish the communication that will foster the solution of the main learning tasks and achievement of the major goal, which is to obtain the outlined learning outcomes for post-graduate students. It is important to form the following competencies of future Doctor of Philosophy: the ability to work with a reference base in the scientific field of knowledge or professional field, ability to critically comprehend and analyse the information obtained, ability to develop original ideas and present them in the form of text documents, ability to establish, organize and implement written communication.

There are different views on the structure of academic writing. Thus, N. Maloshonok considers that academic writing should be structured according

to the principle “from simple to complex”, which is predetermined by the specific nature of mastering academic writing, which moves from simple elements (lexical and grammatical constructions) to complex elements (research papers and methods of their presentation) [2].

The author distinguishes the following levels:

1) mastering the basics of academic writing: features of structural elements of a paragraph, a thesis; formulation of arguments; paragraph design; competent text formatting;

2) abstracting: involves preparing short written works; mastering the strategy of the scientific project development; getting acquainted with short written non-research works, short written research works, abstract writing and compiling lists of keywords, writing essays, literature references, reports, book reviews; formatting a scientific text, working on style, adhering to the requirements on formatting;

3) publishing in reviewed journals, which provides acquainting with the database of journals in the field of scientific knowledge; policy and rules of cooperation with journals; writing a scientific article, its formatting, editing in response to the received reviews; communicating with reviewers; getting acquainted with the criteria for evaluating materials etc.;

4) presenting a written work: structuring the presentation; logical links and transitions between the structural components of the presentation; slide designing rules; ways of communicating with the audience, rhetoric techniques; interaction with the audience; answering questions (see Figure 1) [2].

Written academic communication is based on several principles. First, it is the principle of clear formulation of the purpose of a research paper, it being to answer the question posed by the author in its title. The task is formulated following the purpose set, it may be to analyse or synthesize information, to persuade, to inform the audience and so on. Thus, the purpose of a scientific work may be:

- to persuade, i.e., to use a research paper to make readers accept the author’s answer to the question. Persuasion involves choosing one answer to a question, arguing the position expressed by providing evidence and logical inferences, trying to persuade the audience to change their point of view. To do this, you need to strengthen your position by referring to relevant documents or sources;

- to analyse, i.e., to explain and evaluate possible answers to the question, choosing the best one relying on selected criteria. Analytical research papers are aimed at studying the causes and consequences, evaluating the effectiveness and the ways of solving the problem, finding the connection between different ideas, analysing arguments of other scientists. The

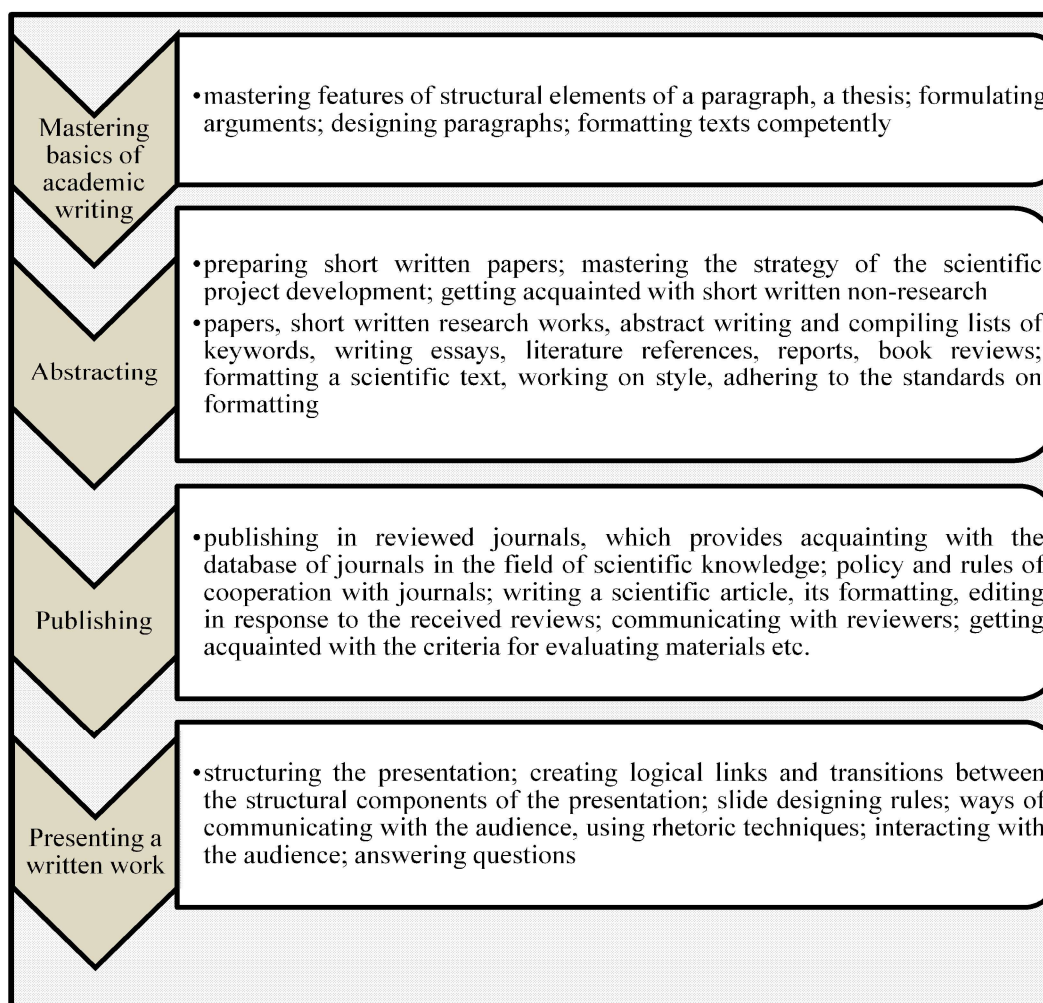


Fig. 1. The structure of academic writing [2]

purpose of the synthesis involves the integration of all parts of the problem and producing your answer to the question. Such scientific papers include an analytical report and critical analysis;

- to inform, i.e., to explain the possible answers to questions thus contributing to the expansion of the audience's knowledge about the subject of research.

In any case, the purpose of the research should be stated clearly and understandably, and a research paper will be successful if the purpose is achieved.

The principle of audience involvement is important for written academic communication. Any research paper is aimed at a particular audience, i.e., the scientists working in the same field of scientific knowledge as the author. So, it is necessary for the authors to be interested in and get acquainted with scientific publications dealing with the topic of their research, as well as to express their views in a way that attracts the interest of readers in their ideas.

The research papers in which the authors express their points of view clearly and unambiguously have

the advantage in the academic, scientific, and professional environment. A research paper is not just a simple list of facts or summaries of processed scientific sources. The audience is interested in the author's opinion about the subject of research, the author's ideas, and reasoning.

The principle of focusing on the research subject implies the need to write the text in which every paragraph and every sentence supports a clear author's position. Research papers should not contain any excessive, irrelevant, unimportant, or contradictory information.

According to the principle of logical structure, a research paper should have a clear standard structure: introduction, main part, and conclusions. In research papers, the text should be presented logically, divided into paragraphs, between which there should be a logical transition:

- introduction attracts the audience's attention, presents background information, justifies the rationale and feasibility of the study;

- every paragraph of the main part presents one main point to support the author's statement declared in the title of the research paper, which is accompanied by logical reasoning and evidence. All sentences should be logically connected so that the reader easily understands the ideas presented;

- conclusions summarize the author's position and the main points of the work, specify the contribution of the research done into the field of science; identify the prospects for further research.

An important principle of a research paper is provability. Thus, every part of the research paper should contain sufficient relevant evidence to support the author's statement. Such support is provided due to drawing on facts, examples, descriptions, personal experience, expert opinions, quotes.

Regarding the principle of clarity and completeness of explanation, it is important to present to the audience the idea, logic, and organization of the research, as well as the author's reasoning and thought processes, which need to be clearly and fully explained.

The principle of effective use of research implies that the research paper should contain references to modern and quality scientific or professional sources. Since a research paper is to present the author's ideas, they should be confirmed by the results of the research performed. Therefore, the research and its results should be integrated into the text of the research paper, not presented separately. This means that it is necessary to provide the initial data, analyse them, present their substantiation and citations.

In any research paper, importance is given to the principle of use and format of the reference base. The reference base is formatted following a determined style, considering the rules of referring to the sources used in the text, formatting and compiling the list of references used.

The last principle underlying a research paper is the principle of writing style. Since this is the author's work, the authors are supposed to express the opinion in their own words, per the scientific style.

A research paper should be distinguished by clarity, conciseness, and ease of reading. Proofreading aimed at eliminating grammar, punctuation, and lexical errors is obligatory.

Conclusions and prospects for further research. The analysis of scientific sources shows that the exchange of scientific information, ideas, and knowledge produced by scientists, researchers, and developers in various fields of scientific knowledge is of crucial importance for the development of modern society. Scientific communication in the field of modern science is a multispectral phenomenon performing search and information, social,

organizational, and promotional functions. According to our own teaching experience with post-graduate students, skills of academic writing are among the crucial skills that a post-graduate student is supposed to acquire in the scopes of the educational component of the Doctor of Philosophy education and scientific program. These skills are sure to enable constructive communication in the professional and scientific sphere.

Prospects for further research include the research into developing the academic literacy of post-graduate students.

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