

**FOREIGN LANGUAGE ACADEMIC SOCIALIZATION
AS AN ASPECT OF SCIENCE MAJORS PROFESSIONAL TRAINING
AT UKRAINIAN UNIVERSITIES**

The paper focuses on the issue of language socialization into the global academic discourse community as a necessary component of professional preparation to be offered to science majors at Ukrainian higher educational establishments. The results of the survey held among junior and senior undergraduate students of sciences at two universities of L'viv with the purpose to assess their academic communicative competence are analyzed. The importance of teaching academic communication in a foreign language to students majoring in sciences in order to prepare them for functioning in the global academic and scientific environment is discussed.

Key words: academic communication, discourse community, language socialization, science majors professional training.

Introduction. At the age of globalization and increasing mobility in education and professions the primary goal of college education has changed. The focus has shifted from developing in-depth disciplinary-specific skills and expert knowledge in future specialists to preparing them for the possibility of multiple careers by equipping them with essential skills of adapting to constantly changing social and professional environments. Present time college and university students must recognize the importance of life-long learning for their future career success. In this context the purpose of college education is to provide students with the necessary prerequisites for their further independent professional development. According to the "Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning" the following combination of knowledge, skills and attitudes has been defined as "necessary for personal fulfilment, active citizenship, social cohesion and employability in a knowledge society" of today: "1) communication in the mother tongue; 2) communication in foreign languages; 3) mathematical competence and basic competences in science and technology; 4) digital competence; 5) learning to learn; 6) social and civic competences; 7) sense of initiative and entrepreneurship; 8) cultural awareness and expression" [8].

Similarly, the question of what fundamental intellectual capabilities college graduates should exhibit has received considerable attention in the USA, both inside and outside the academy. Thus, National Education Goals developed in 1990 by President Bush and a group of governors to improve the nation's education system emphasise the paramount importance of such skills as critical thinking, effective communication and ability to solve problems for college graduates [7, 4]. Development of a whole personality as the ultimate social value is the primary goal of education in Ukraine. Higher education in its turn is directed at the provision of fundamental scientific, cultural and practical preparation of specialists who will occupy a firm position at the cutting edge of scientific, technological and social progress and form the nation's intellectual elite [1, 87]. Language and communication competence is the key to achieving such goals.

In modern global educational, scientific and professional environments communication is a life skill that pervades all other dimensions of human development. It is foundational to all other academic, professional and social experiences. Communication competence is central to a student's academic success. Through mastering basic communicative skills students engage in critical thinking and information and media literacy. They learn to construct messages as well as articulate and defend their ideas while at the same time critically evaluating the arguments of others. Thus they develop the ability to question information, examine new evidence, categorize and organize ideas, and create linkages between concepts and their own life experiences [9]. Besides, good communication skills enhance students' future career prospects. Today's employers desire employees who have the broad general skills as well as some experience applying those skills in real-world settings. This means that those pursuing professional fields must develop broad general knowledge and advanced analytic and communication skills [6, 6]. Finally, communication skills are foundational to student social experiences.

The first step to developing professional communicative competence in future specialists is the acquisition of academic communication (AC) skills by university students. The central questions to the discussion around the formation of academic discursive competence are “How do newcomers to an academic culture learn how to participate appropriately in the oral and written discourse and related practices associated with that discourse community? How are they explicitly or implicitly inducted or socialised into these local discursive practices?” [3, 1.1]. Over a few recent decades there has been much research done on AC in linguistics, applied linguistics and education. Many works have been dedicated to discourse and genre analysis (P. Brett, J. Swales, T. Yakhontova). Such studies would approach the matter by examining text and move structures in academic writing, comparing journal article abstracts, introductions, discussion sections, or conclusions (among other components) within or across the sciences and the social sciences etc. Important research has been conducted on aspects of academic discourse such as the cognitive and rhetorical processes of composing and assessing writing; textual borrowing, citation, and plagiarism; metadiscourse etc. [2, 170]. In most cases, though, the focus of attention has primarily been on written discourse, such as textbooks, writing assignments, and professional journals, within their respective discourse communities [3, 1.2]. Sociocultural approaches to academic discourse socialization view learning as developing the capability to participate in new discourse communities as a result of social interaction and cognitive experience [4, 427; 5, 189]. The process also involves developing one’s voice, identity, and agency in a new language/culture. Learning scientific discourse, in its turn, involves learning to think, act, speak and write like a scientist in a scientific community of practice (or a simulation of one) [3, 1.4]. In Ukrainian pedagogy and education studies the issue of academic discourse socialization of university students has not been developed yet. There are works dedicated to the development of professional communicative competence in students of different fields both in native (I. Mischuk) and foreign (N. Mykytenko, N. Sura, Y. Nikolayenko) languages. However, no comprehensive study of university students’ preparation for communication within the academic community of their specialization has been undertaken yet.

This **paper aims** at attracting attention to the issue of students’ involvement into academic discourse community (academic discourse socialization) as the basis for further development of professional communicative skills in science majors. For this purpose a survey targeted at identifying students’ needs and problem areas in their AC competence has been held in two Ukrainian universities: Ivan Franko National University of L’viv (LIFNU) and L’viv State University of Life Safety (LSULS). The task of the study has been to prove/ disprove the hypothesis that the courses offered to students in their general education program do not provide the basis for the formation of effective AC skills in the native and/ or a foreign language. If this is proved to be the case, the necessity to introduce a special academic communication course should be declared.

Methods. The total of 120 undergraduate students (3rd and 4th year of study) majoring in biology (50, LIFNU), geology (30, LIFNU) and ecology (40, LSULS) were involved in the survey that comprised two parts: a test of English academic communication competence and a questionnaire. The test included three types of questions: 1) multiple choice questions on AC genres, their distinguishing features, as well as the process of text and speech production in the academic setting; 2) questions testing students’ knowledge of academic vocabulary; and 3) open-ended questions in which students were asked to produce a short text in the academic style or give extended descriptions of certain academic discourse phenomena.

The questioning concerned students’ attitudes about the importance of AC in both native and foreign language for their academic progress and future professional careers. Students were also asked to self-evaluate their knowledge and skills in the native and foreign language professional communication as well as various AC skills such as writing, citation, making presentations, participating in group discussion, etc.

Results. The data obtained from the test of English AC competence has been split according to the three types of questions described above. Figures 1-3 respectively present the respondents’ answers.

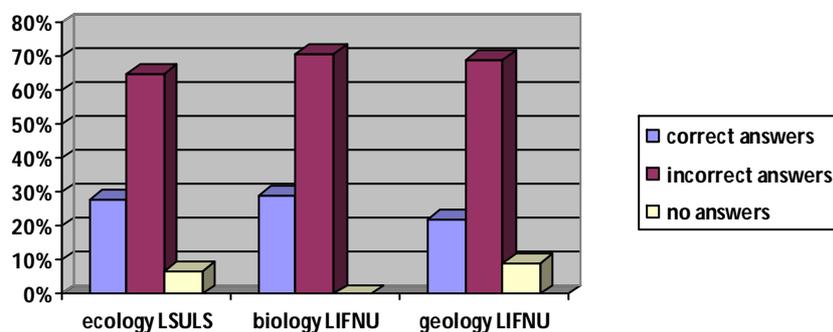


Figure 1. Respondents' answers to multiple-choice questions

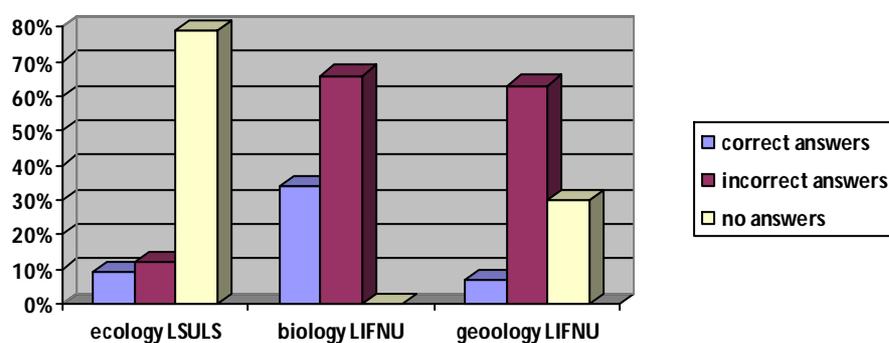


Figure 2. Respondents' answers to questions on academic vocabulary

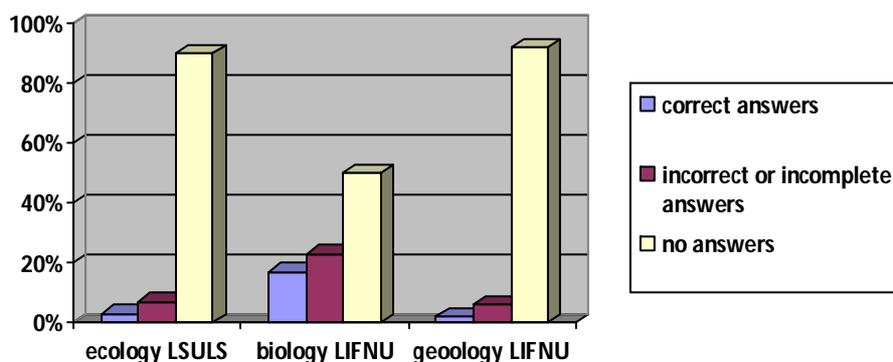


Figure 3. Respondents' answers to open-ended questions

Questioning of the students revealed that they are aware of the importance of communicative skills for their future professional success. For example, the respondents were asked to select five competencies which they consider to be vital for a scientist. The table below shows the students' priorities:

Table 1

Respondents' choice of the most important competencies for a scientist

1	skills in using technologies	60%
2	foreign and native language skills	58%
3	ability to adapt to new situations	57%
4	research skills	55%
5	in-depth specialist knowledge	53%

93% of the total number of the respondents admit that foreign language skills are indispensable for a professional in the field of sciences. 68% of the students reported that they would like to attend a foreign language AC course.

The self-evaluation part of the questionnaire revealed the following:

- The respondents find their ability to communicate in the professional scientific environment in their native language to be much better than that in a foreign language. Figures 4 and 5 illustrate how the students evaluate their level of readiness for professional communication in their native and foreign languages respectively.

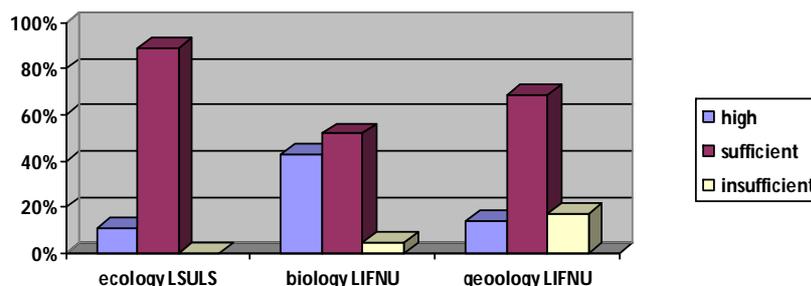


Figure 4. Respondents' self-assessment of readiness for professional communication in their native language

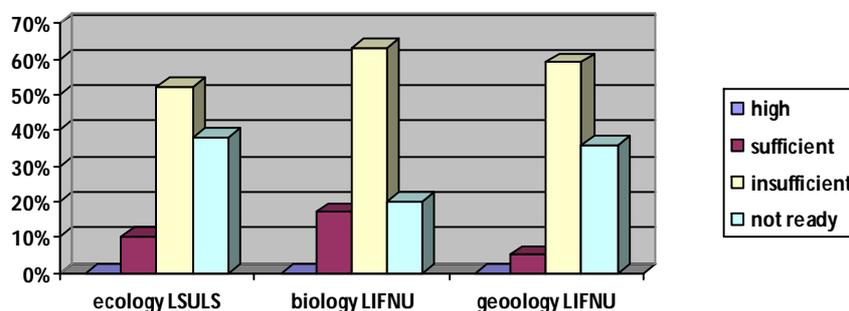


Figure 5. Respondents' self-assessment of readiness for professional communication in a foreign language

- The respondents assess their foreign language AC skills in the following way:

Table 2

Respondents' self-assessment of their foreign language AC skills

<i>AC skills</i>	<i>good</i>	<i>sufficient</i>	<i>insufficient</i>
academic reading skills	6%	50%	44%
summarising skills	0%	28%	72%
knowledge about academic genres	3%	21%	76%
academic essay writing skills	0%	19%	81%
conference abstract writing skills	3%	40%	57%
research paper writing skills	0%	29%	71%
knowledge about citation styles	3%	19%	78%
oral presentation skills	7%	43%	50%

Discussion. The results of the survey conducted in different universities correlate substantially which signifies that the situation observed is not unique to any particular higher educational establishment but, on the contrary, is characteristic of Ukrainian higher education. There is also a clear correspondence between the results of the test and students' self-assessment which proves the validity of the survey and helps to identify the problem areas in communicative instruction provided by current undergraduate programs in sciences.

As it can be seen from the results, language courses that are included in the general education core for science majors in Ukrainian universities do not satisfy students' academic communication needs, particularly those concerning the knowledge about academic genres, communication processes and strategies. Students also need instruction on documentation styles and ways of avoiding plagiarism. Respondents in the survey admitted the lack of the abovementioned knowledge and academic skills and expressed their interest in attending an AC course in a foreign language. On the other hand, the data obtained about AC instruction in the students' native language is not sufficient for making conclusions as no testing of respondents' native language AC competence was conducted.

Conclusion. The present study has proved the hypothesis about an ineffective foreign language academic communication instruction provided for undergraduate science majors at Ukrainian universities. As a solution to the existing problem an elective course of AC in a foreign language might be offered during the junior or senior year of study for those who strive for further developing of their professional careers in the international scientific community. The next stage of our work will consist in initiation of an elective course "Introduction to Academic Communication" as a pilot project for junior and senior science majors and subsequent analysis of the experimental groups' academic achievements in order to assess viability of the project.

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ІНШОМОВНА АКАДЕМІЧНА СОЦІАЛІЗАЦІЯ ЯК АСПЕКТ ПІДГОТОВКИ МАЙБУТНІХ ФАХІВЦІВ ПРИРОДНИЧОГО НАПРЯМУ В УНІВЕРСИТЕТАХ УКРАЇНИ

Стаття присвячена проблемі мовної соціалізації студентів у глобальну академічну дискурсну спільноту як важливому компоненту підготовки майбутніх фахівців природничого напрямку в українських ВНЗ. Здійснено аналіз результатів дослідження, проведеного серед студентів третього та четвертого курсів, які здобувають природничі спеціальності у двох університетах м. Львова. Зазначено необхідність підготовки студентів природничого напрямку до академічної комунікації іноземною мовою.

Ключові слова: академічна комунікація, дискурсна спільнота, мовна соціалізація, підготовка студентів природничого напрямку.

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ИНОЯЗЫЧНАЯ АКАДЕМИЧЕСКАЯ СОЦИАЛИЗАЦИЯ КАК АСПЕКТ ПОДГОТОВКИ БУДУЩИХ СПЕЦИАЛИСТОВ ЕСТЕСТВЕННОГО НАПРАВЛЕНИЯ

Статья посвящена проблеме языковой социализации студентов в глобальное дискурсное сообщество как важному компоненту подготовки будущих специалистов естественного направления в ВУЗах Украины. Проведен анализ результатов исследования, имевшего место среди студентов третьего и четвертого курсов, овладевающих специальностями естественного направления в двух университетах г. Львова. Указана необходимость подготовки студентов естественной сферы к академической коммуникации на иностранном языке.

Ключевые слова: академическая коммуникация, языковая социализация, дискурсное сообщество, подготовка будущих специалистов естественного направления.

