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**Vital Issues in Life Sciences Implications: Socio-Economic,
Legal, Environmental and Cultural Trends**

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Collaborative learning in academic English classroom: Preparation of PhD candidates

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Academic English acquisition for PhD candidates is one of the main goals of higher education modernization in Ukraine. Preparation of PhD candidates in postgraduate studies is carried out through educational-scientific program and curriculum, and approved by an academic council for each specialty. Academic English Program, designed by the Department of Linguodidactics and Foreign Languages, Volodymyr Vynnychenko Central Ukrainian State Pedagogical University, includes a course “Academic English”, the purpose of which is to create necessary communicative ability for a scientist in oral and written forms within the subject area of the individual research. To reach the purpose of the course a collaborative learning Academic English class was created. The goals and processes of collaborative activities in already designed small groups (3+4+4) were structured as such: tightly structured tasks and creation of a clearly delineated product. The study incorporated both group goals and individual accountability. Each member of the group received individual task to contribute into the fulfilment of the group task. From this research study, it can be concluded that collaborative learning fosters the development of critical thinking through discussion, clarification of ideas, and evaluation of others’ ideas. The changing role of an instructor as a facilitator involves creating and managing meaningful learning experiences and stimulating PhD candidates’ thinking through real problems of their scientific research.

Keywords: academic language; collaborative learning, critical thinking, group goal, individual accountability

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INTRODUCTION

English is now recognised as a basic life skill for the 21st century and is very essential to the field of education. Internationalization of higher education stimulates the development of intercultural competence and competences in professional situations within an international environment (Juknytė-Petreikienė and Žydžiūnaitė 2017). In the Foreword to “The internationalisation of Ukrainian universities: the English language dimension” Director Ukraine British Council Simon Williams pointed out that English Language provides people with the ability to explore and navigate wider ranges of information and viewpoints than if they just have their home languages (Bolitho and West 2017). Higher education reform (Higher Education Act) increased demand for English language competence as academics need enhanced proficiency to access academic literature and to conduct and publish their research.

According to requirements (On Approval of the Procedure for Preparing Graduates... 2016), preparation for postgraduate studies in Ukraine involves performing of educational-scientific program of a higher educational institution in certain specialty and conducting individual scientific research. Preparation of PhD candidates in postgraduate studies is carried out through educational-scientific program and curriculum, and approved by an academic council for each specialty. Educational and scientific program of postgraduate studies includes four components which comprise acquisition by a PhD candidate certain competencies in accordance with the National Qualifications Framework, and obliges:

- 1) to gain profound knowledge in specialty of research;
- 2) to master general scientific (philosophical) competencies;
- 3) to acquire researcher’s universal skills, in particular oral and written presentation of the results of scientific research in Ukrainian language;
- 4) to acquire a language competence sufficient for presentation and discussion of scientific results in a foreign language in oral and written forms, as well as for full understanding of foreign scientific texts in corresponding specialty.

This paper aims at examining the question of Academic English acquisition for PhD candidates as one of the main goals of higher education modernisation in Ukraine. There are certain tasks that are to be solved: to determine the main methodological approaches of Academic English acquisition for PhD candidates (competence approach, collaborative learning, critical thinking), and to analyse the experience of PhD candidates’ preparation at Volodymyr Vynnychenko Central Ukrainian State Pedagogical University. The research methods include analysis and generalisation, the systemic approach that are most appropriate for answering the questions relating preparation of a PhD candidate proficient in academic English and the method of instruction variable with two categories: individual learning and collaborative learning.

DIFFERENT DEFINITIONS OF THE TERM "ACADEMIC LANGUAGE"

First of all, it should be noted that the concept "academic language" is interpreted by us as the language that is used by teachers and students for the purpose of acquiring new knowledge and skills. Academic language refers to the oral, written, auditory, and visual language proficiency required to learn effectively in schools and academic programs (The Glossary of Education Reform) Academic language is used in classroom lessons, books, tests, and assignments, and it’s the language that PhD candidates are expected to learn and achieve fluency in. Frequently contrasted with "conversational" or "social" language, academic language includes a variety of formal-language skills (vocabulary, grammar, punctuation, syntax, discipline-specific terminology, or rhetorical conventions) that allow PhD candidates to acquire knowledge and academic skills while also successfully navigating higher educational establishment policies, assignments, expectations, and cultural norms (Shandruk 2017).

Although definitions in the research literature differ somewhat, there is general agreement that academic language is both general- and content-specific. That is, many academic words are used across all content areas (such as demonstrate, conflict, analyze, element, category), whereas others pertain to specific subject areas (photosynthesis, mitosis, density, hypothesize, and inertia for

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science; angle, ratio, dispersion, and calculate for math). It is important to remember that academic language is more than specific content vocabulary words related to particular topics. Rather, academic language represents the entire range of language used in academic settings (The Academic Language of Science).

Academic language is "the language that is used by teachers and students for the purpose of acquiring new knowledge and skills imparting new information, describing abstract ideas, and developing students' conceptual understandings" (Chamot and O'Malley 1994). Academic language refers to "word knowledge that makes it possible for students to engage with, produce, and talk about texts that are valued in school" (Flynt and Brozo 2008). "Academic English is the language of the classroom, of academic disciplines (science, history, literary analysis) of texts and literature, and of extended, reasoned discourse. It is more abstract and decontextualized than conversational English" (Gersten et al. 2007). Academic English "refers to more abstract, complex, and challenging language that will eventually permit you to participate successfully in mainstream classroom instruction. Academic English involves such things as relating an event or a series of events to someone who was not present, being able to make comparisons between alternatives and justify a choice, knowing different forms, and inflections of words and their appropriate use, and possessing and using content-specific vocabulary and modes of expression in different academic disciplines such as mathematics and social studies" (Goldenberg 2008). "Academic language is the set of words, grammar, and organizational strategies used to describe complex ideas, higher-order thinking processes, and abstract concepts" (Zwiers 2008).

Some educators suggest that the distinction between conversational and academic language is somewhat arbitrary and that it is the *situation*, *community*, or *context* that is either predominantly social or academic (Aukerman 2007, Bailey 2007). Although knowing conversational language assists PhD candidates in learning academic language, we must explicitly teach English learners the "vocabulary, more complex sentence structures, and rhetorical forms not typically encountered in nonacademic settings" (Goldenberg 2008). Analyses of language used in assessments by Bailey, Butler and Sato (Bailey et al. 2007) found two types of academic language: content specific language and general academic language. Similarly, there are general academic tasks that PhD candidates to know how to do in order to be academically proficient (e.g., create an outline, take notes) and more specific tasks (e.g., write a report on the topic of research).

THE MAIN PRINCIPLES OF INDIVIDUAL STUDY ON THE COURSE "ACADEMIC ENGLISH"

Over the last several decades the perceived norms of writing in English for Academic Purposes and English for Specific Purposes have been affected by the dominance of that language across an array of fields and settings (McIntosh et al. 2017). Scientists have to write and speak about science to both professional and lay audiences very often. Those who are non-native English speakers have to learn both the subject knowledge as well as the scientific language to communicate within and outside the science community (Wong 2015). Academic English Program, designed by the Department of Linguodidactics and Foreign Languages, Volodymyr Vynnychenko Central Ukrainian State Pedagogical University, is compiled according to educational-professional program of preparation of the Doctor of Philosophy. The subject of the study of the course "Academic English" is written and oral academic English. The purpose of the course is to create necessary communicative ability for a scientist in oral and written forms within the subject area of the individual research, namely:

– Academic Speaking (presentations or reports on topics related to the topic of research; present a layout of the statement and logically structure the ideas; comment on the tables, graphs and diagrams; use adequate strategies during discussions, seminars and consultations; to orientate the audience regarding general construction of the speech; adhere to the topic of the speech; to emphasize the main idea, to expand and develop it; to start a discussion, to sum up, to preside during the discussion, etc.);

– Academic Writing (generalize, rephrase and synthesize ideas from different types of texts (articles, research projects, etc.); fix and write out the results of the research; write reports (for example, in accordance with the project); briefly summarize the contents of the text, logically structure the ideas; write an introduction / conclusions; write annotations to scientific articles and to the theses, etc.).

To suite the purpose of the course language skills need to be developed in every Academic English lesson. Volodymyr Vynnychenko Central Ukrainian State Pedagogical University Postgraduate Training Program (2016) for applicants of Educational and Scientific Degree of Doctor of Philosophy was designed for such branches of knowledge as 01 Education (specialties: 011 Educational Sciences; 014 Secondary Education (Physics)), 03 Humanitarian Sciences (specialties: 032 History and Archaeology; 035 Philology), 08 Law (specialty: 081 Law), 11 Mathematics and statistics (specialty: 113 Applied Mathematics). After admission one group of 11 PhD candidates was created. Qualitative composition of the Academic English class was the following: 3 PhD candidates (011 Educational Sciences), 2 PhD candidates (113 Applied Mathematics), 2 PhD candidates (014 Secondary Education (Physics)), 2 PhD candidates (081 Law), 1 PhD. candidate (032 History and Archaeology), 1 PhD candidate (035 Philology). So we faced the problem how to teach academic English effectively in terms of speaking and writing to diverse PhD candidates. To learn new information, ideas or skills, PhD candidates have to work actively in purposeful ways. They need to integrate new material with what they already know or use it to reorganize what they already knew. In collaborative learning situations, PhD candidates are not simply master new information or ideas. They are creating a new research with the information and ideas. The role of supervisors is the following: they should encourage their students to participate in a wide range of academic activities as much as possible (Sarikaya et al. 2017).

THE SYSTEM OF JOINT EDUCATION AS A GUARANTEE OF AN EFFECTIVE LEARNING PROCESS

As Jeff Golub points out, “Collaborative learning has as its main feature a structure that allows for student talk: students are supposed to talk with each other....and it is in this talking that much of the learning occurs.” (Golub 1988). Collaborative learning produces intellectual synergy of many minds coming to bear on a problem, and the social stimulation of mutual engagement in a common endeavour. This mutual exploration, meaning-making, and feedback often leads to better understanding on the part of students, and to the creation of new understandings for all of us (Smith and MacGregor 1992). Recent research suggests learning is fundamentally influenced by the context and activity in which it is embedded (Brown et al. 1989). Collaborative learning activities immerse students in challenging tasks or questions. Rather than beginning with facts and ideas and then moving to applications, collaborative learning activities frequently begin with problems, for which students must marshal pertinent facts and ideas. Instead of being distant observers of questions and answers, or problems and solutions, students become immediate practitioners. Rich contexts challenge students to practice and develop higher order reasoning and problem solving skills (Smith and MacGregor 1992). Calls to involve students more actively in their learning are coming from virtually every quarter of higher education (Astin 1985).

Proponents of collaborative learning claim that the active exchange of ideas within small groups not only increases interest among the participants but also promotes critical thinking. According to Johnson and Johnson (1986), there is persuasive evidence that cooperative teams achieve at higher levels of thought and retain information longer than students who work quietly as individuals. The shared learning gives students an opportunity to engage in discussion, take responsibility for their own learning, and thus become critical thinkers (Totten et al. 1991). Critical thinking is an evaluative thinking which can sense the gap between facts and what should be (*das sein and das sollen*), inferring to what is ideal; capable of analysing and evaluating and able to find out problem-solving strategies (Chairunnisa 2016).

Involvement in learning, involvement with other students, and involvement with faculty are factors that make an overwhelming difference in student retention and success in college. By its

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very nature, collaborative learning is both socially and intellectually involving. It invites students to build closer connections to other students, their faculty, their courses and their learning. Collaborative learning covers a broad territory of approaches with wide variability in the amount of in-class or out-of-class time built around group work. Collaborative activities can range from classroom discussions interspersed with short lectures, through entire class periods, to study on research teams. The goals and processes of collaborative activities also vary widely. Some faculty members design small group work around specific sequential steps, or tightly structured tasks.

Others prefer a more spontaneous agenda developing out of student interests or questions. In some collaborative learning settings, the students' task is to create a clearly delineated product; in others, the task is not to produce a product, but rather to participate in a process, an exercise of responding to each other's work or engaging in analysis and meaning-making (Smith and MacGregor 1992). In our case we decided to create a collaborative learning Academic English class built around group work. According to Rau and Heyl (1990), smaller groups (of three) contain less diversity; and may lack divergent thinking styles and varied expertise that help to animate collective decision making. Taking into account diversity of our PhD candidates in specialties we divided the class into three groups according to branches of knowledge and related specialties:

Group 1 – 01 Education (3 PhD candidates (011 Educational Sciences));

Group 2 – 08 Law + 03 Humanitarian Sciences (2 PhD candidates (081 Law), 1 PhD candidate (032 History and Archaeology), and 1 PhD candidate (035 Philology))

Group 3 – 11 Mathematics and statistics + 01 Education (2 PhD candidates (113 Applied Mathematics) and 2 PhD candidates (014 Secondary Education (Physics))).

The goals and processes of collaborative activities in already designed small groups (3+4+4) were structured as such: tightly structured tasks and creation of a clearly delineated product. According to Slavin (1989), for effective collaborative learning, there must be group goals and individual accountability. When the group's task is to ensure that every group member has learned something, it is in the interest of every group member to spend time explaining concepts to group mates. Research has consistently found that students who gain most from cooperative work are those who give and receive elaborated explanations (Webb 1985). Therefore, this study incorporated both group goals and individual accountability. Each member of the group received individual task to contribute into the fulfilment of the group task.

The overarching goal of individual task is to promote Academic English language competency for educational and professional purposes. Every PhD candidate reads a scientific article on the topic of his research, works on the vocabulary and terminology, creates glossary, and collects all necessary data and ideas for his individual research. PhD candidate writes his own annotation and summary to the article on the topic of his research. At the end a PhD candidate prepares a poster presentation, works out its structure and vocabulary. The overarching goal of group task is to prepare PowerPoint presentation to develop candidates' abilities to think, organize and express their ideas clearly and effectively both orally and in writing. All PhD candidates make their poster presentations in the group.

All members discuss the achieved results of every individual task. Then the group works on the theme, goal, and process of their PowerPoint presentation based on individual task results. Quintessence of the group work is speaking report based on PowerPoint presentation. All three groups make their presentation; discuss outcomes and negative and positive moments of collaborative learning. According to Vygotsky (1978) students are capable of performing at higher intellectual levels when asked to work in collaborative situations than when asked to work individually. Group diversity in terms of knowledge and experience contributes positively to the learning process. Bruner (1985) contends that collaborative learning method improves problem-solving strategies because the students are confronted with different interpretations of the given situation. The peer support system makes it possible for the learner to internalize both external knowledge and critical thinking skills and to convert them into tools for intellectual functioning.

CONCLUSIONS

In the present study, the collaborative learning medium provided PhD candidates with opportunities to analyze, synthesize, and evaluate ideas cooperatively. The informal setting facilitated discussion and interaction. The group interaction helped PhD candidates to learn from each other's scholarly knowledge, skills, and experiences. The PhD candidates had to go beyond mere statements of opinion by giving reasons for their judgments and reflecting upon the criteria employed in making these judgments. At the end of the course, PhD candidates learned grammatical structures and English syntax rules that are necessary for understanding and producing a wide range of texts in academic and professional fields; linguistic forms typical of official and spoken language; academic and professional speaking; a wide range of vocabulary resources (including terminology) necessary in academic and professional spheres.

From this research study, it can be concluded that collaborative learning fosters the development of critical thinking through discussion, clarification of ideas, and evaluation of others' ideas. For collaborative learning to be effective, the instructor must view teaching as a process of developing and enhancing ability to learn. The instructor's role is not to transmit information, but to serve as a facilitator for learning. This involves creating and managing meaningful learning experiences and stimulating PhD candidates' thinking through real problems of their scientific research. Future research studies need to investigate the challenges of teaching academic writing as a dominant form of presentation ideas in the frame of Academic English course.

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