Pedagogical Factors of English Language Professional Training of Future Doctors

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ABSTRACT

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The process of modernization of the higher educational system in Ukraine poses certain requirements to the foreign language (L2) training of future medical specialists at university level. In order to be able to function effectively and efficiently on the job market not only on national, but also on international level, medical students need to possess transversal competences, digital and entrepreneurial skills, as well as mastery in at least one foreign language.

With regard to this, the aim of the current article is to present the pedagogical factors and conditions at the heart of interdisciplinary L2 training of the future medical specialists in Ukraine. It provides a theoretical analysis of these two issues and outlines their key role in the L2 teaching and learning process at tertiary level. The article also highlights the main interdisciplinary principles underlying the foreign language preparation of future doctors in the Odessa National Medical University.

The shared insights could serve as a trigger to the updating of all foreign language training programmes of English for specific purposes implemented on a national level in Ukrainian higher education institutions.

Key words: English for Future Doctors, Medical English, English Teaching

1. INTRODUCTION

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The integration of educational process of Ukraine into international space presents demands on both students and teachers, since it is aimed at training specialists of a new generation capable of active professional life. This is in line with the “Skills Agenda for Europe” proposed in 2016 by the European Commission as a way to facilitate the process of better matching of the skills of graduates to the needs of the labour market. The basic assumption underlying the smooth transition from higher education to the world of work is that university students have to possess not only transversal competences, but also digital and entrepreneurial competences, job-specific skills, as well as skills to sustain personal and professional development and well-being. Along with this, a recent study undertaken by the European Commission on the link between foreign language proficiency and employability (2015) convincingly proves that the knowledge and ability to communicate fluently in at least one foreign language gives a strong competitive advantage to higher education graduates seeking a job in the 28 EU Member States.

Although Ukraine is not part of the European Union, its drive to keep up with the developments in the higher education area on the Old Continent and pave the way for continuing reform which puts forward the idea of multilingualism and which promotes the value of foreign language study in higher education programmes, requires a clear view on the needs of the economy (incl. on the level of foreign language skills of university students) and on the compatibility of current foreign language (L2) programmes and courses to those needs. It has to be noted that despite the considerable number of theoretical and practical research works related to the study of different aspects of L2 training of higher education students in Ukraine, there is still lack of sufficient research findings regarding the professional L2 training of higher education graduates. The purpose of the article, therefore, is to make an analysis of the current trends of formation the competitiveness of medical specialists in the process of foreign language training at university level in Ukraine and to substantiate the growth of necessity of a foreign language preparedness of the future doctors.

2. LITERATURE REVIEW

The concept of foreign language training of university graduates in Ukraine is continuously gaining a prominent position in the current educational reforms on a national level. Despite, its importance and the achievements of the
national linguistic and didactic theory, the level and quality of English language training of future medical specialists has not been well elaborated in Ukraine yet (Krysak 2016). There is a growing need to reconsider the orientation of L2 training from a teacher-centred to a learner-centred paradigm which puts the students at the heart of the teaching and learning process and which complies with their professional interests as future doctors. Furthermore, it is also necessary to update not only the L2 teaching and learning methodologies, but also the principles for content selection of the teaching materials, the ways in which classes are organised and the overarching principles of organisation of existing L2 programmes for English for specific purposes.

Before considering the pedagogical principles in relation to the focus of the current article it is necessary to identify the factors that influence the increase of efficiency of L2 training.

First of all, the essence of the phenomenon “factor” has to be considered. In pedagogical science, there is no single interpretation of this term. Among the many definitions available in research literature, we would start with that offered in Russian and Ukrainian works. One of the possible definitions of the term in focus is suggested by Sergej Ivanovcih Ozhegov (2001) who considers the factor as a moment, as the essential circumstances in any process, a phenomenon. The definition given in the Dictionary of the Ukrainian Language (2002) of the same term says that a “factor is the condition, the driving force of any process, the phenomenon” (Dictionary of the Ukrainian Language 2002: 97, own translation). Similarly, this term is defined in the Psychological Dictionary edited by Brodovskaya, Grushevij and Patrik (2007) as "a condition, a driving force, the cause of a certain phenomenon or process” (Brodovskaya, Grushevij and Patrik 2007: 68, own translation). This definition is used as the basis for the description of other concepts, processes, phenomena and, therefore, for its understanding in pedagogy it is expedient to use existing general scientific interpretations, adapting them to pedagogical processes and phenomenon. A different viewpoint of the discussed term is offered by Oleksandra Dubaseniuk (2011). She claims that the factor is a point determining the nature and composition of the object of studies, as well as the main reason for possible causes of differences in the levels of the object. An identical explanation is given by Natalyia Panchuk (2013) who defines the factor as the main internal and external cause which predetermines a certain phenomenon.

If we turn to the discussion of the specifics of the term “factor” and pre-established ideas related to it in the works of Western researchers, we could
trace the interplay of internal and external factors and the relations of the key players in the educational process. Jose Vicente Abad and Liliana Maria Maturana (2010), for example, state that pedagogical factors are “the conditioning forces that regulate the relations among the constituent elements of the teaching and learning process, i.e. teachers, students, methodology, and subject matter” (Abad and Maturana, 2010 in Abad, 2013). They claim that the internal factors are related to the personality and individual characteristics of the teachers and students which have an effect on their roles in the L2 classroom, while the external factors are those elements of the teaching and learning process which neither the teacher, nor the students, can control – time, space, educational policies, L2 programmes and curricula, the socio-cultural context.

According to Judith Molka-Danielsen, Mats Deutschmann (2009) pedagogical factors are connected to the subject matter of the course, while Puri (2012) suggests that they refer to the learning styles of students, their study habits, the teaching and learning methods used in the classroom, the pedagogical support provided by the teacher and the multimedia tools. These two definitions are not covering the rich spectrum of aspects that researchers acclaim to the notion of pedagogical factors – goals, expectations, learning outcomes (Fresen, 2007), the diversity of assessment (Chen and Yao 2016), presence, reflection and self-directed learning (Cole 2000) among others.

Despite the variety of classifications and approaches to the definition of the term “pedagogical factors” given above, the common “thread” in all of them is that “pedagogical factors” are the main internal and external causes that trigger an increase the quality of the teaching and learning process and that raise the level of learner preparation in the specific subject matter.

We need to state that pedagogical factors are just one element of the multitude of factors that have an essential role in the educational process. This can be illustrated by the classifications offered by Alla Bohush (2017) and Alexandra Popova (2017) which contain the following groups of factors:

- **external** and **internal factors** – the external factors are influences from the outside, while the internal are the instructions, needs, interests of a student;
- **objective** and **subjective factors** – the first depend on the will of specific students and the subjective are generated by the will and the initiative of certain students;
• **purposeful** and **spontaneous factors** – the purposeful put an influence on the student taking into account the real level of his/her development, while the spontaneous cannot be programmed as they do not "fit" into the pedagogically appropriate logic of action because they change the direction of self-development of the individual.

Furthermore, Nataliya Galskova and Nadezhda Hez (2006) share a set of factors that have a direct link to the process of L2 training:

- **socio-economic and political factors** – the social needs in foreign language as a means of communication, the possibility of real use of language, traditions in studying and choice of language;
- **social pedagogical factors** – these include the national language teaching and learning policy and the place of language in the educational system, the availability of qualified pedagogical staff, along with the teaching resources and technical equipment available;
- **socio-cultural factors** – based on the differences or similarities between the L2 learners own culture and the target culture;
- **methodological factors** – the level of development of methodological science and related sciences, the goals, content and principles of learning underlying the L2 programmes on national level;
- **individual factors** – the individual and social characteristics of the students and the teacher, their roles in the educational process, social and cultural orientation, level of general development, motivation in learning / teaching of language.

The internal factors in the classification of Bohush (2019) and Popova (2017) correspond to an extent to the individual factors in the classification of Galskova and Hez (2006) as they refer to the personality, interests and motivation of learners, on the one hand, and to the individual traits, instruction style and commitment of the teacher. The set of factors – socio-economic and political, social pedagogical and socio-cultural can be linked to the external factors in the first classification as these are “elements” of the environment and the education context which the teacher and the L2 learners have little control on. The same applies to the methodological factors, which although focused on the prevailing theoretical framework at the heart of the L2 teaching and learning
paradigm, are also an element that does not depend on the will and choice of the main participants in the educational process.

In addition to these ways of grouping factors, we can present the one designed by Ivan Pavlovich Podlasyj (2013), which highlights the importance of the teaching materials and the learning to learn skills of L2 learners. According to him, the quality of the teaching material affects considerably the way of teaching and learning the foreign language. He goes further to state that it has to be regarded in terms of its two complex components – presence of objective information and didactic processing of the new teaching material. Still, it is relevant to claim that the quality of the teaching material also depends on the principles underlying the selection of content, its overall organisation and form and the method of teaching used in the L2 classroom.

Students’ ability to learn (or the so called *learning to learn skills*) are defined by I. P. Podlasyj as the overall ability to learn and the ability to reach the expected results. This factor includes the level of general training of students, the ability to master the educational material, their general ability to educational and cognitive activity, the general characteristics of attention, the peculiarities of thinking when studying a particular subject, the psychological guidance on the conscious and solid learning material, students’ motivation for learning, etc.

Despite the fact that Podlasyj differentiates and distinguishes these two factors as separate units within the classification offered by him (which includes two more elements – *time* and *organizational and pedagogical influence*), we think that they are closely interrelated. With regard to this we claim that the link between these two factors has to be clearly pinpointed and explained since the ability to learn is primarily a personal ability, but it is also strongly dependent on the quality of the teaching material and the teaching style of the course tutor.

A serious disadvantage of Podlasyj’s classification is the absence of a factor such as the *interaction between the teacher and students*, which, in our opinion, has significant impact on the success of the training. This factor has to be included in the classification as the psychological atmosphere in the L2 classroom is an important issue in the teaching process. Our proposal is motivated by the numerous data from research which prove the link between anxiety and performance in the L2 classroom (Gardner and MacIntyre 1993; Park and Lee 2006; Piniel and Csizér 2014 among others).

Another group of researchers Podchalimova, Ilyina and Shamova (2004) believe that factors can be grouped differently – e.g. social and pedagogical,
scientific and theoretical, personal and professional. In their opinion, the group of social pedagogical factors unites radical transformations in the leading spheres of life, the strategy of modernizing the Ukrainian higher education system. The group of scientific and theoretical factors comprises of the modern achievements of science of education, the latest data on the structure of the educational process in higher education, the results of scientific research in the professional activity of a medical specialist. The last group – the group of professional competency factors is represented by a professional culture of the medical specialist, his/her professional objectives, the content and structure of his/her professional activity, the professional requirements for the personality of the doctor, requirements for forms, methods and means of professional activity, and their results. Thus, we can conclude that the group of personal factors combines medical students’ awareness of the need for personal development, professional self-development and motivation for professional and educational activities of the future medical specialist.

All the factors discussed above have a significant role in the L2 training of future doctors which allows them to get acquainted with the specific terminology used in their future job.

According to the classification of Ekaterina Efremova (2009) the factors influencing the process of L2 training of students in a medical university are as follows:

- **modern scientific achievements** – these place an emphasis on the innovative aspects in the field of English language teaching (as L2) to future doctors;
- **the content and structure of the professional activity of the future specialist** – the careful selection of L2 content and the topics of L2 teaching and learning materials, as well as their link to the specifics of the medical profession, is a guarantee for the successful implementation of the gained L2 knowledge and skills in the professional practice of the future doctors;
- **students’ age, educational and cognitive abilities** – these should be taken into account when planning the overall organisation, content, goals and learning outcomes of the L2 programme and courses use at tertiary level in medical universities as they are directly linked to the expected results from the L2 training.
One of the issues that should be taken into account when planning the L2 curriculum and course content used in the foreign language classroom of medical universities is the condition of English language professional training. The notion "condition" used here can be interpreted as the effectiveness of English language training, on the one hand, and on the other hand – as the context in which something takes place.

We need to state that these two interpretations of the term “condition” differ from the ones used in philosophy where a condition is the relation of the subject (i.e. an individual) to the phenomena surrounding him/her without which he/she cannot exist. The object itself acts as something predetermined and the condition is external in relation to the subject and the diversity of the objective world (Audi 1995).

The second issue that has to be considered when planning the structure and content of a L2 curriculum suitable for the training of future doctors is the notion of pedagogical principles. In psychology, a pedagogical principle is interpreted as "a certain circumstance or environment that influences (accelerates or inhibits) the formation and development of pedagogical phenomena, processes, systems, and personality traits" (Dubasenyuk and Voznyuk 2011: 97, own translation). We share the opinion of Pavel Ivanovich Pidkasistyj (2018) who considers that pedagogical principles are as factors affecting the process of achieving the goal. He divides them into:

a) **external pedagogical principles** – such as: positive relationship between the teacher and students; the objectivity of the assessment of the educational process; place of study, premises, climate, etc.;

b) **internal (individual) pedagogical principles** – among which: individual features of students (e.g. health condition, features of character, experience, skills, motivation, etc.).

Based on this we can say that pedagogical principles can be viewed as the result of purposeful choice and application of elements of content, methods (techniques), as well as organizational forms of learning to achieve specific educational goals. In our article we will accept and use the definition of the term given by Pidkasistyj (2018) – “the external circumstances that significantly influence the course of the pedagogical process to such an extent so that they are deliberately constructed by the teacher in order to naturally foresee, but not to guarantee a certain result (Pidkasistyj 2018: 144, own translation).
A different way of interpreting the discussed term is proposed by Olga Bratanich (2001). She defines them as a set of objective possibilities, content, forms, methods and circumstances aimed at solving the problems. Oleksij Nazola (2005) interprets this notion as "a set of objective and subjective factors that positively influence the efficiency and effectiveness of the educational process" (Nazola 2005: 12, own translation). The definitions given by the two researchers complement each other but reflect different viewpoints.

Summing up the views of the researchers, we come to the conclusion that the pedagogical principles are a set of purposefully created measures implemented in the teaching and learning processes which provide a solution to a particular pedagogical task and contribute to the improvement of the efficiency of the pedagogical process.

The English language professional training of future doctors is defined as a purposefully organized educational process which includes the mastering of future physicians by a set of language and speech competences, their creative development in practical work with patients, interaction with colleagues and/or foreign partners, involvement in presentations and discussions during participation in scientific conferences, forums etc. At the same time, the specificity of contemporary L2 teaching in a medical university is that a specialist should speak the foreign language as a means of professional and interpersonal communication.

Thus, the pedagogical principles of the English for Specific Purposes (e.g. Medical English) can be considered as a complex of circumstances in which future doctors are trained, certain content is implemented and a set of measures, which promote the efficiency of the educational process of medical students, is carried out.

3. ELABORATION OF PEDAGOGICAL PRINCIPLES OF THE FUTURE DOCTORS’ ENGLISH LANGUAGE TRAINING

The logic of the article defines the pedagogical principles for the effective implementation of the Medical English Training of future doctors such as:

1) integration of professional and linguistic (foreign language) disciplines in the educational process of future medical specialists;

2) motivational awareness of the necessity for future doctors to learn a foreign language for further professional activity;
3) creation of the English for special purposes improved educational programmes for Ukrainian high medical schools, which were implemented in the educational process of the Odessa National Medical University;

4) immersion of future doctors into the active process of vocational foreign language activities.

The outlined pedagogical principles are to be realized together. However, a certain pedagogical condition stands out at each separate stage of the L2 teaching and learning process. These pedagogical conditions are interrelated to the chosen interdisciplinary approach which stands at the heart of the organization of the L2 training of future doctors at the Odessa National Medical University (as part of the processes of modernizing the current system of L2 teaching and learning in the respective higher education institution). In the absence of coordinated educational programmes, interdisciplinary connections are implemented during practical training in different ways: through the integration of linguistic and vocational disciplines which is done in accordance with the requirements of the existing L2 programmes and in the extra-curricular work of students.

The interdisciplinary approach implemented in the L2 classrooms relies on the connectedness and cooperation of different departments and disciplines. A clear principle of continuity in the training of medical students can be traced in the Departments of medical and biological profile, as well as in the Department of Foreign Languages of the Odessa National Medical University. The steps followed in the implementation of the interdisciplinary approach included:

- coordination of the programme of gradual formation of knowledge in the system of education;
- identification of the main structural elements of the content sections and the topics to be mastered by the L2 learners;
- activation of previously acquired basic concepts and methods of action to the formation of a positive attitude to L2 learning and active participation in the educational process on behalf of the students;
- designation of the prospect of deploying the learning process as a step in the L2 (English language) preparation of future doctors.
4. INTERDISCIPLINARY APPROACH OF LEARNING

The successful implementation and effective and efficient use of the interdisciplinary approach in the L2 teaching and learning process of medical specialists at tertiary level requires solid theoretical preparation of the L2 lecturer in a variety of medical fields among which: Human Anatomy, Histology, Pharmacology. The university L2 teacher needs this specialized knowledge in order to be able to select and/or design supplementary materials for his/her language classes and for the individual tasks of L2 students.

Despite this initial prerequisite, the implementation of the interdisciplinary approach in the L2 (English language) training of future doctors requires additional steps. One of these additional steps taken by the Odessa National Medical University L2 teachers involves the setting of clear teaching goals – the goals are formulated on the basis of the selected methodology and comply with the goals of the other specific medical disciplines in the programmes and the English language training programme.

The main requirements for setting up of interdisciplinary educational goals in the English language training of future doctors can be as follows:

1) The teaching material of interdisciplinary L2 programmes should equally meet the objectives of mastering the foreign language and the specialty;

2) The foreign language in interdisciplinary educational programs should not serve the purpose of training, but the means of organizing the training of professional activities and achievement of its results;

3) The professional knowledge associated with the discipline studied should be structured into a logical sequence that will allow students to organize productive interaction in the group to solve current tasks in the learning process and provide this interaction by means of the foreign language;

4) The linguistic material should be presented in the classroom as exercises focused on the development of logical and didactic thinking, which will let students analyze the grammatical structure of the language, as well as simulate the analogy of linguistic phenomena being studied;

5) The content of the L2 interdisciplinary programmes should allow for the development of the L2 speaking skills of students on professional topics that are in line with students linguistic needs and level of special medical knowledge.
5. CONTEMPORARY FOREIGN LANGUAGE REQUIREMENTS OF THE HIGHER MEDICAL SCHOOLS

The need to expand and improve the English language training in the system of higher medical education in Ukraine was dictated by the transferring of the higher education system to a new educational paradigm aimed at achieving a certain level of the future doctor preparation and society in general. On the other hand, the general current state of teaching medical and biological sciences in Ukraine requires the use of an integrated approach to the study of complex biological processes occurring in the human body, the mastering of fundamentally new approaches to diagnosis, prevention, treatment, to understanding the nature of man.

The needs of modern medicine triggers the demand to develop new educational courses related to the study of diagnostic methods, correction of pathological principles and treatment of a person taking into account its individual characteristics. In this regard there must be integration of humanities, natural sciences and medical sciences as the foundation of education in the preparation of a future medical specialist. This issue is of importance as it influences future professional activity of the doctors and simplifies the educational process for future doctors. Close cooperation with the medical departments can significantly increase the level of teaching the relevant disciplines and creates the ground for the specific medical profile disciplines.

Thus, the educational activity of a higher medical school in the Ukrainian educational context should be aimed at:

1) providing complex medical training according to the qualification characteristics of the graduate in agreement with improved educational standard of higher medical education in a corresponding medical specialty;

2) offering courses that integrate the humanities, natural sciences and medical sciences which give students a strong medical foundation for their future careers in medicine;

3) implementing the holistic approach as a means of understanding the nature of human diseases;

4) raising the level of education via maximum use of individual training, implementation of an interdisciplinary combination in educational programmes, creating integration courses that will ensure the transferring model of vocational education to a systemic one;
5) developing students' analytical and problem-solving skills, as well as commitment to research activities;

6) pursuing the maximum development of students’ personality, creation of principles for self-realization, disclosure of individual characteristics, creative potential of the future doctor, development of the need for constant self-education.

The given ideas are practically implemented during the educational process of future doctors at the training offered in the Odessa National Medical University.

6. CONCLUSION

The issue of optimizing English language vocational training for future doctors and developing the general foreign language training for future medical specialists is becoming increasingly important in Ukrainian higher medical educational institutions. In the article analysis of contemporary scientific literature devoted to the issue was represented. Moreover, the pedagogical principles of improvement the educational process of English language training of future doctors, which consistent application will contribute to its optimization, was described.

Thus, the provision of reasonable above mentioned pedagogical principles and their future consistent implementation will contribute to optimization the educational process and teaching of future doctors developing their English language professional activities.

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