

Teaching professional disciplines in English – a way to Europeanization of Ukraine higher education

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Abstract. The Ukraine Ministry of Education and Science have set the task of Europeanization of higher education in Ukraine. One of the aspects of solving this problem is to provide the ability of our university graduates to communicate in their speciality in English. The article is devoted to the issue of increasing the efficiency of educational process, studying professional disciplines in English and considers measures to provide an opportunity to achieve this goal. The experience of Ukraine higher education institutions in this field, in particular; organisational work of foreign language departments, general technical and profiling departments are analysed. Taking into account the MES guidelines on a radical change in the attitude to the English language at Ukraine universities, in order to increase the level of HEI graduates professional training to communicate freely in English on professional matters, it is necessary to put on the agenda, among others, the solution of such items as: involving the university teaching staff in the process of education in English by studying professional English and coming back to the practice of examining applicants for the master's degree in professional English at the HEI platform.

1. Introduction

The annual ranking of 100 best universities in the world, published by the British newspaper "Guardian", showed that there is no Ukraine university there [1] Why?

In the commentary to the article L. Grinevych, ex-minister of education and science, notes there are a number of criteria that determine the university's inclusion in such a ranking. One of them is the so-called citation index, i.e. the number of publications by lecturers and scientists in scientific journals.

Our absence in the ranking is explained, among other things, by "widespread ignorance of foreign languages, which prevents Ukrainian scholars from publishing in international sources... For Ukraine to appear finally in such a ranking,... it is necessary to introduce a state program of studying English by our scientists" [ibid], which is confirmed by all subsequent ratings.

This issue becomes especially relevant with Ukraine entering the Bologna system of higher education, which should allow Ukrainian diplomas to be quoted on a par with European ones, and our student could at any time move from the third year of Ukrainian higher education institution (HEI) to the third year of European, for example, British. But the realities are completely different.

A challenge? Yes. But long ago Kozma Prutkov said: "Look at the root." What is the root? And what is the reason? It turns out that the ancients have already given the answer: "Quod ab initio vitiosum est, tractu temporis convalescere non potest" translated as: What is vicious from the beginning cannot be corrected over time.

Some more ancient wisdom postulates: "Ex nihilo - nihil fit" - Nothing happens out of nothing. "Non progredi est regredi" - Not to go forward means to go back. And "Who is not a surplus, is a deficit" - Who does not move forward, lags behind. As for the world experience, it is now the norm for Western European students to know two foreign languages and it's not uncommon to know three. In South Korea, English is studied plus one of Asian languages: Chinese, Japanese, Hindi, Farsi, Arabic or one of European ones: German, French, Spanish, Russian, depending on the region where the graduate plans to work. At the Riga Aviation University students are studying English for 5 years, and from the second semester they start learning a second foreign language.

2. Materials and Methods

2.1. Constituent documents of the Ministry of Education and Science of Ukraine.

As it is stated in the latest Law on Higher Education (Article 48, paragraph 2) "in order to create conditions for international academic mobility, a higher education institution has the right to decide on the teaching of one or more disciplines in English and / or other foreign languages, while ensuring that higher education students know the relevant language in the state language" [2]. Does it mean that it is not obligatory to implement this provision?

But recently a number of documents of the Ministry of Education and Science have been published, trying to solve this problem more decisively, paying special attention to the introduction of the English language into the educational process of Ukrainian universities.

Thus, Ukraine MES developed a concept on improving the level of teaching English at Ukraine universities [3] stating that "the economic development of countries is highly dependent on the knowledge of English by citizens". "The importance of knowledge of English by all specialists is growing". "... of the non-English-speaking European countries, we take the 28th place out of 32, in terms of English language skills". "Together with the British Council and other partners, we have developed recommendations for higher education institutions on teaching English at Ukraine universities and to teach professional subjects in English" [ibid].

Taking into account that, unfortunately, the level of students' knowledge of English does not increase, but decreases during study [4], the Conceptual Bases of the state policy on the English language development especially emphasize the necessity of teaching professional disciplines in English as a part of the Ukrainian-language program – (English as Medium of Instruction for Ukrainians (EMI-U), as well as providing a complete educational program in English for foreign students – (EMI-f), increasing the support of EMI lecturers of HEI, including organization of refresher courses of the English language. Then 75 percent of high school graduates will be able to speak at least two foreign languages, and by 2025, graduates of all education levels will have to speak, at least, B2 level English. The purpose is "to provide professional knowledge of English by teaching professional disciplines in English"[5].

According to official statistics, in 2020 the list of exams and professional tests for admission to the master's program includes the foreign language exam in 22 out of 121 specialties, i.e., only 18% [6]. It turns out that the rest do not need to speak professional English reaching the bachelor's degree, as, for example, in "Aviation and rocket and space technology" specialty. This may lead to the condition when a significant part of our young people won't get a full higher education, given the low level of English proficiency [4]. We consider such a decision absolutely unreasonable and unacceptable, taking no account of the real situation with the English-language in the country today.

How the issue of professional foreign language is solved in some universities of Ukraine?

Here is a fragment of the circular of the Prydniprovskiy State Academy of Civil Engineering and Architecture (PSACA) [7]:

On the way to integration into the European educational space.

Modern educational technologies of the Prydniprovskiy State Academy of Civil Engineering and Architecture.

Prestigious specialty + 2 foreign languages + Personal computer proficiency = Components of the success in life and career.

«Today, it is clear that scientific and technical information can be correctly perceived or, if necessary, translated by specialists in a particular field of science and technology, rather than language specialists». «To understand the nature of a physical, chemical or technical phenomenon, it is necessary to be at least familiar with it. To be able to talk about a specific technical topic in a foreign language, it is not enough to know vocabulary and grammar, you need to be an expert in this field and have communication skills in a foreign language». "Such thinking suggests strengthening the training of engineers specializing in foreign languages in polytechnic HEI of Ukraine» [8].

Accounting and Finance Faculty of Zhytomyr State Technological University (ZhSTU): "The concept followed by the faculty staff: mandatory knowledge of professional foreign languages by the faculty, which allows to increase the level of teaching and train highly qualified specialists, taking into account European and world achievements" [9].

National Aviation University (NAU), Kyiv is practicing professional education in English for more than 20 years today in 22 specialities with more than 300 lecturers participating in it. Amazing!

Kyiv National University of Construction and Architecture (KNUCA), Department of Water Supply and Sewerage. Here for 16 years, the lecturers of the department deliver the "Professional foreign language" course. There are a number of other universities where these issues are solved at an appropriate level. Let's limit ourselves to the given examples. But these are rather exceptions.

The study of foreign languages in higher education comes to translating professionally-oriented texts from a foreign language into the native language. According to Omelyan Vyshnevsky, a professor at Drohobych State Pedagogical University, "translation from a foreign language into a native language is generally aimed at improving knowledge of one's native language, not a foreign language" [10]. In our opinion, it is true.

«Today, as a rule, only one foreign language is studied during the first year (semester), when students do not yet know the speciality. Only in senior grades do they study the course of «Business English» [11].

Asking high school students: - What can you say about your speciality in English? you hear, as a rule, the answer: So-so, or a little bit. Much less often you can hear something to the point. But there can be no claims to students, since they are not taught that. However, our students and specialists, despite the lack of our universities in the top rankings are not the worst, at least. They work all over the world, in Silicon Valley, in particular. What needs to be done to reach the boundaries set by the Ministry of Education and Science regarding the English language teaching? Here, in our opinion, is one of the options for solving this problem.

2.2. Suggestions for improving the process of study

Given the latest guidelines of the Ministry of Education and Science on the English language, it is necessary to start work immediately, literally from the beginning of September. Why? The ancients said: «Periculum in mora», translated as "Danger in delay". Here are our thoughts on this matter.

2.2.1. The work of foreign language departments

Departments of foreign languages should restructure their work in the way it is organized, for example, in NAU, Kyiv, on the example of the professional English language training in the "Industrial and Civil Engineering" speciality (one of many). Specifically the terminology of construction materials: stone, brick, cement, concrete, wood, metals, glass, polymers, insulating materials; the main structural elements of buildings: types of foundations, types of walls, heat and sound insulation of walls, roofs and floors, stairs, etc; engineering networks and communications: water supply, drainage, heating, ventilation, air conditioning, power supply, communication, video surveillance, and so on in all

specialities, under the guidance of profiling, graduation departments. This approach will provide students with knowledge of all the necessary professional terminology in their speciality.

Compulsory external examination in a foreign language when entering a bachelor's degree will encourage students to take a more responsible approach to learning foreign languages at school.

In addition, it would be useful to get acquainted in detail with the experience of Prydniprovskiy State Academy of Construction and Architecture in studying a second foreign language, German or French, to put this issue on the agenda, given that 75% of school graduates are expected to learn two foreign languages.

2.2.2. The work of general technical departments

In the study of general technical disciplines, we consider it necessary for these departments to give the English translation of the terminology that will be needed in the study of the speciality. Let's take for example, the Department of Higher Mathematics. Students have to master in English the whole of the mathematical apparatus that will be required in the relevant engineering disciplines, such as: "+", "-", "x", ":", roots, degrees, etc. And it's the same with all other disciplines, such as the theoretical mechanics, resistance of materials, descriptive geometry, drawing etc. It is clear that the support of this work, management is the task of profiling departments.

2.2.3. The work of profiling departments

Lectures, practical classes, laboratory work. Each classroom session is accompanied with the translation of key terms into English. Homework assignments, term papers, course and diploma projects – basic points, sections, diagrams, drawings are prepared with translation or in English. Oral answers, reports or tests, exams, defending diploma papers are performed with a summery or a few final phrases in English. The same applies to reports on practical training as well.

Methodological resources. In the methodological literature each section (subsection) is supplemented with Ukrainian-English vocabulary of keywords, basic terms, names of technological processes on a subject. The names of each section, figure, diagram, chart, table are given with translation. By the way, KNUCA has issued a Lectures synopsis on engineering equipment of buildings and structures (section "Water supply and drainage") for architects where each lecture is accompanied with the relevant Ukrainian - English vocabulary, with transcriptions.

It is reasonable to prepare Ukrainian-English dictionaries for each speciality according to the curriculum (for KNUCA "Water supply and sewerage" specialty and for architects in the specified major, such dictionaries are being compiled).

We consider it expedient:

- to teach the "Introduction to the speciality" course in the first semester of the first year of study in English with translation of certain items into Ukrainian, if need be, so that students are immersed in the English-speaking environment from the very beginning, to be oriented towards studying in English.

- to introduce the subject "Fundamentals of the speciality" in English, starting from the second year of study to be taught in the second semester of each academic year, to summarize and gradually enrich the acquired knowledge in English and communication skills on specialty. Such organization of the educational process will contribute to getting students ready for educational mobility and increase the future specialists' competitiveness in today's labor market.

2.2.4. Organizational issues

At each department, each faculty, in the rector's office it is necessary to hold relevant meetings; consider all opinions, proposals, ideas; discuss, make proper decisions and work to secure their implementation. There should be appointed those responsible for teaching professional subjects in English at each department and each faculty. And one more item – we shouldn't underestimate the role of the leading personality to coordinate this work. In the above mentioned higher educational institutions they are: the rector (Kyiv, NAU), vice-rector (Dnipro, PSACA), head of the department (Zhytomyr, ZhSTU). Their role is crucial.

Of course, the above proposals for some changes in the organization of the educational process will require serious efforts on the part of the HEI administration. The most difficult, in our opinion, will be to orient the entire teaching staff at teaching in English. The language was taught when they were school children, students, graduate students, PhDs. It was 10, 20, 30, 40 or even more years ago. Much, of course, has been forgotten. Though neither the foreign language department efforts, nor the efforts of individual enthusiasts from the profile departments will be sufficient to rise to the appropriate level of educational process and solve such a grand problem, time demands it. Let's recall the Latin proverb "Tempora mutantur et nos mutamur in illis" meaning: Time changes and we change with it." Once, there was painless transition in calculations from the logarithmic ruler to computers, and from drawings - to computer graphics. Society is changing, evolving, there are new requirements, challenges, needs, and, of course, there is a need to respond appropriately to these challenges, including the problems of higher education. And again Latin: "Omne initium difficile est" translated as "Every beginning is difficult". But, all the difficulties can be overcome for sure.

2.2.5. Masters

The final stage of higher education is training masters. When applying for a master's degree, it would be reasonable to take not a national external examination in English, but an exam in the professional English at the university. This must be decided either by the Ministry of Education and Science or by the HEI administration within the framework of university autonomy. "Patent Activity" and "Fundamentals of Scientific Research" courses for undergraduates should be delivered in English with translation into Ukrainian, if necessary.

3. Results

To increase the level of HEI graduates professional training it is necessary to put on the agenda the solution of the following issues:

1. To provide root and branch changes in teaching foreign language at Ukraine universities.
2. To involve the HEI teaching staff in the process of teaching professional disciplines in English by studying professional English.
3. Come back to the practice of examining applicants for the master's degree in professional English at the HEI platform.
4. To set a task of training graduates to communicate freely in English on their professional matters.
5. To raise the issue of learning a second foreign language by students of technical specialties.

The authors of this article have previously published their views on the HEI education in English [10], but after the publication of the latest extremely important, let's not be afraid to say, revolutionary MES guidelines on a radical change in the attitude to English at Ukraine universities, we have decided to express our unconditional support of these MES initiatives.

We are confident that introduction and implementation of the above program of studying professional foreign languages will enable our graduates to utilize effectively the knowledge obtained at the university in their future professional activity and be competitive on the world labor markets.

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