

MEDICAL EDUCATION IN THE EU AND CHALLENGES FOR UKRAINE.  
МЕДИЧНА ОСВІТА В ЄС ТА ВИКЛИКИ ДЛЯ УКРАЇНИ.

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**Summary:** The article contains overview of the issues (non-exhaustive listing) to be addressed within the ongoing process of integration of the Ukrainian higher education system to the European standards, from the point of view of a newcomer at a medical higher education institution in Ukraine.

**Анотація:** Стаття містить оглядовий опис (невичерпний перелік) питань, які можуть бути адресовані в рамках процесу інтеграції Української системи вищої освіти до Європейського простору, з точки зору новоприбулого співробітника медичного вишу в Україні.

*Keywords: Ukraine-EU Association Agreement; higher education; European integration; European concept of Research University, scientific writing, project management, educational projects.*

*Ключові слова: Угода про асоціацію Україна-ЄС; вища освіта; Європейська інтеграція; Європейська концепція Дослідницького Університету, написання наукових текстів, управління проектами, навчальний процес.*

According to the Ukraine–EU Association Agreement [1], Ukraine has to adopt numerous EU directives and regulations on medical services. This presumes that the higher medical education system in Ukraine has to be updated. The overall goal of the changes is to bring Ukraine closer to EU standards, which will lead to solving substantial long-term Ukrainian problems in public healthcare system.

Being a part of Europe, Ukraine still bears a heavy burden of unresolved economic and social problems from the colonial soviet past. One of the most extraordinary challenges is to bring Ukrainian medical system in accordance with

the EU directives and regulations. This in turn requires optimization of medical education system in Ukraine. In fact, the task might seem straightforward as Ukraine is not the first to go through such changes. However, to adopt clear cut regulations requires to know real situation at various regions in Ukraine, as real situation can sometimes be different even from the well-educated theoretical assumptions.

The author of this article has been born, received education and spent initial years of his scientific carrier in Ukraine. Later however he moved abroad and spent the over 20 years at various universities in Finland, Czech Republic, and then in Brazil. In 2017 he returned back to Ukraine and started a new job at a medical higher education institution. In this article he would like to summarize his new Ukrainian experience, with the emphasis on a few points which deserve to be addressed (listed NOT in order of importance):

- **Textbooks.** The textbooks at the medical university can be a major point of criticism, as many of them are issued some 20-50 years ago during soviet times, or at best are in fact their recent translations and editions. Moreover, the textbooks were authored by old generation professors which themselves were lacking comprehensive scientific vision due to heavy influence of soviet dogmas, including pseudoscience imposed by infamous T.D. Lysenko [2]. Moreover, the teaching materials often give a strong feeling that we do not know about what kind of information and to what details have to be taught to our students that it would help them to become good doctors. To tackle this problem, the most optimal and straightforward way is to translate and adapt to Ukrainian realities European textbooks, e.g. issued by the Finnish Medical Society Duodecim (Lääkärisseura Duodecim). Moreover, the Duodecim has developed a comprehensive Doctor's Handbook (Lääkäriin Käsikirja), which is widely regarded to as a unique resource for practical doctors. It has already been translated into over 30 languages and is

used in other countries. Importantly, the Ministry of Healthcare of Ukraine has recently signed an agreement with the Duodecim to translate their Handbook into Ukrainian language and use this resource to adopting international treatment protocols, which will be implemented into routine medical practice within the ongoing medical reform in Ukraine. As a result, this will contribute to implementation of modern teaching materials to our students according to the newest European methodologies.

- **Teaching practices.** European concept of a university as a service provider and students as customers is not yet considered in Ukraine [3]. Being still disputable, the "student-as-consumer" approach can be considered as optimal basis for relationships in modern market based realities. In Ukraine however the students still are not put into the central place at universities, while the teachers still dominate the students instead of making partnership with them. Moreover, the students generally are not encouraged to participate in discussions. Clearly, it is not easy to change behaviors. However, there is an urgent need to implement the European teaching practices [4].

- **Electronic information workflow system.** The teachers still often have to use paper based flow of documents, largely as if the computers were not yet available. The schedule of lessons is still designed using numerous sheets of paper, and only then is transferred to the electronic online system. The marks are fixed on papers, and the teachers use calculators and paper-and-pencils e.g. to calculate average marks. There are very few opportunities for students to give feedback on the teachers and their lessons. The bureaucratic paperwork for any official purpose is troublesome. It becomes simply prohibitive to e.g. receive an official clearance for a visit of a conference even within Ukraine. Implementation of an electronic communication system (e.g. Moodle) is necessary, according to the modern practices of universities in the EU. The progress is going on however. Thus, last

couple of semesters the teachers were already using electronic online system to communicate semester results of the Dean's office instead of paper based forms. The main obstacle here is a lack of IT expertise. The IT specialists do not generally want to work at universities simply because they easily can earn an order of magnitude more in an IT company. Therefore, much is still to be done. One suggestion would be to use qualification of young IT students to set up digital services at university during e.g. their practical Diploma projects, etc.

- **Academic integrity.** It is still common that the students copy-paste their individual writing exercises from already published sources; and they generally do not think about that as of a serious offense. Moreover, there is severe lack of understanding of the problem even at the level of the teachers. However, the problem is already being addressed. There is already a growing infrastructure to check the texts for plagiarism. Other solutions are already considered, e.g. offering for students exercises with e.g. writing their own CV/resumes; or letters of motivation; or e.g. writing an introduction to a scientific article on a particular problem with a realistic requirement to be concise and informative. The students generally respond positively for such ideas. However this issue still requires much of attention.

- **Copyrights.** People in Ukraine generally do not respect copyrights, and it is still a common practice to download copyright content without considering any obligations to authors. One way to tackle this is to involve students e.g. in translating/adapting/distributing the textbooks, such that young people will understand the values of the abused copyright, in line with common European practices.

- **Research.** In the former so called soviet union the research institutions were separated from universities. At present, Ukrainian higher education system is actively considering adopting the concept of the Research University, which is

common in Europe. Luckily, our University has recently achieved major developments, and is now considered as having by far the most advanced research infrastructure among the medical higher education institutions in Ukraine. Moreover, even specifically dedicated research positions at our university are now possible, which were not available in the recent past. As a result, many students got already engaged in active lab work. However, many of them still generally have little ideas about how they can participate in research projects. On the other hand, with the due professional research approach, it is possible to find research topics which can be feasible at the present state of the research infrastructure, e.g. to monitor population tooth health by the dentistry students. However, such projects require grant support, which in turn demands knowledge on general grant requirements and grant writing. Back in 2017 almost no students knew what means the word ERASMUS+. Today however an increasing number of students and teachers learn about vast European resources for academic exchange and to support research projects. They also get increasing experience in ways to achieve grant support.

- **Teaching content.** In accordance with the ongoing Ukrainian healthcare reform, it is essential to give our students a chance to communicate directly with experienced medical doctors from European countries. Thus, with a kind support from the Jean Monnet Module grant, we received advising assistance and a visit of a Finnish medical doctor and a Finnish medical student to our university. His lectures were full with valuable up-to-date information and were met with extremely high interest. This has greatly added to motivation and professional knowledge of both our students and the staff. By participating in such round tables and discussions, they can gain really valuable information on what it is like to study medicine at European universities and to work as a medical doctor in the EU. Moreover, we preliminary agreed with the representatives of the local Ukrainian

policy makers e.g. from a United Territorial Communities of the region, that they would also participate in our discussing events, thus directly benefiting from the Jean Monnet programme.

- **Practical exercises.** Practical exercises at the university are generally based on simple microbiological staining; while all other demonstrations are mostly mocked imitations. However, many students are deeply interested in developing realistic practical skills e.g. in immunological tests. Therefore, we have made arrangements with the biotechnological company Diaproph-Med in Kyiv that they generously sent over to us their immunological diagnostic kits, which have their validity dates already expired, but which are still in perfect working state for educational purposes. Such initiatives will be able to contribute to development of realistic and up-to-date course content in microbiology and immunology, in line with commonly established practices in the EU.

- **Healthy lifestyle.** Ukraine generally lacks behind in implementing healthy lifestyle [5]. Therefore, we have in mind a project to organize a runner's club for our students and staff. We plan to go jogging outdoor together, according to the modern healthy European trends. We have already managed to organize some outdoor activities, especially for foreign students. The students however meet our initiatives with skepticism, referring to a lack of time for such activities due to heavy studying workload. Yet, we still believe that such activities should be a part of the studying routines. The progress is going on in this direction, and the students get increasingly engaged into outdoor activities for both supporting healthy lifestyle and for getting to know local historical and natural attractions, which is in line with European social engagement policies.

- **Communication habits.** Ukrainian students, and not only students, have specific ways of communicating. It is not uncommon for them to not respond to e.g. email enquires at all, or respond without due care. This sometimes may give

impression of being uninterested or impolite, while the problem is rather simply in a lack of proper communicating skills. Teaching the students some basic rules of communication will greatly add to development of proper communication skills, which in turn substantially increases the student's chances for successful careers and to qualified international mobility, as suggested by the modern European guidelines.

- **Behavioral patterns at public lectures.** Being at a conference or a seminar in Ukraine gives mixed feelings for an unprepared listener. Ukrainians generally talk quite loudly with each other in the auditorium, which gives impression that they pay little attention to the lecturer and have little respect to other listeners. They also use their phones as if they were not at the lecture hall but rather in a shopping mall. This culture, or rather a lack of it, is striking and often disappointing. Therefore our students, and also professors, indeed require guidance in giving respect to both the lecturers and to other listeners.

- **Lack of proper infrastructure.** Generally, the basic infrastructure in Ukraine hardly corresponds to requirements of a modern society. In fact, the most shocking is not the very fact of the state of infrastructure (e.g. toilets and hand washing facilities), but the fact that people, both students and teachers, accept this as normal. The students generally agree, that this is a problem which has to be actively addressed by themselves. However, this will most probably still remain a burning issue in future. Needless to say, this is not only a question of convenience, but is rather an important public health related issue.

- **Independent critical thinking.** The teachers here often see their job in interrogating students rather than in encouraging discussions and independent critical thinking of the students. However, critical thinking is a valuable concept for modern young specialists, and ability to think independently has to be systematically cultivated [6]. The staff needs training in ways to develop

involvement of the students and their thinking habits, in line with requirements for successful implementation of the medical reform, according to the modern European practices, and in accordance with the requirements of the modern knowledge based economy.

- **Orientation of activities towards practical outcomes.** Both study and research activities of our students should be oriented towards practical results in order to be interesting and to make the students motivated. We already discussed with the students our chances to carry out projects e.g. in monitoring local isolates of viral pathogens (e.g. hepatitis C virus) using our own practical experience in PCR based assays [7]; or development of immunological assays in collaboration with biotechnological companies. Such projects however require much of attention and efforts in grant elaboration and writing. Development of such project will substantially add to independent activities of our students with goals close to the real life, in line with contemporary guidelines of EU for research at universities.

- **Languages.** Majority of our students still do not speak foreign languages. They however often show interest in studying English. Moreover, nowadays at least a part of the examination questions at medical universities will be in English, and this trend will be rising. The problem with studying foreign languages in Ukraine is mostly in a lack of effective English teaching techniques, and in general belief that to study a foreign language is something very difficult and unrealistic. The solution can be in establishing an informal English studying group, where students will have a chance to bring the process of studying a foreign language to the level of a hobby. This can be facilitated by availability of modern communication tools to study English.

In fact, most of our students, being potentially bilingual, as they perfectly understand both Ukrainian and russian, still do not use their bilingual potential – they still tend to use only one language. Majority of the students are russian

speakers, and they tend to speak russian even at our classes taught in Ukrainian. However, with only a small effort, they will have a good chance to train their language-switching bilingual capabilities. It is known that bilinguals outperform monolinguals on measures of executive control [8, 9]. Moreover, it was shown that bilingual students show higher level of competence in acquiring their third language [10]. Therefore, we have a good chance to increase foreign language capabilities of our students, if only we pay due attention to its importance.

- **Dormitories.** The students which live in their dormitories still have to cope with an old soviet style guided entrance system, where a person at an entrance has a power to decide who can enter the building and who can not. Strikingly enough, there are no guards at student dormitories neither in Finland nor in Germany. From our discussions with the students, we realized that the Ukrainian students also deserve more dignity at their dormitories. The dormitory entrance system has to be updated in a civilized way, as it is common in the EU countries. For instance, the door can be equipped with an electronic locking system. This will enhance independent thinking of the students and their responsibility. This can also be economically beneficial, as it will eliminate costs of keeping personnel employed as the entrance guards. But most important, this will increase feeling of human dignity for the students, future healthcare professionals.

- **Civil society.** Students generally do not feel as having capability to influence important decision making at university. Even things with which they clearly do not agree, they let them go without any thinking them over and trying to change them for better. The students think that if one or two of them start to complain, the authority will cope with it by punishing the students. They do not realize however that if many of them unite together and start to critically evaluate situations constructively, then they will indeed constitute a powerful force. However, little by little, the students have to realize that nobody but they

themselves are responsible for arranging their comfortable, safe and self-respectful studying and living.

● **Tolerance.** Diversity and tolerance is what European Union is promoting in the first place. Our city is situated very close to the Eastern border. A professor from the USA once said that some 10-15 years ago he was the only foreigner in Sumy when he was visiting Sumy that time. However, nowadays, it is common to meet foreigners of various nations throughout the city. Luckily, to my great delight, I never heard about any cases of open ethnic intolerance towards the foreigners. However, foreign students sometimes acknowledge that it is not easy for them to establish contacts with the locals in the city. With a clear trend to increasing number of foreign students, the question of tolerance and more friendly approach towards foreigners and minorities is of increasing importance. In general, clearly the progress is going on, but still requires some guided assistance and promotions.

**Human Relations.** Ukrainian job placement and hiring habits still largely relay on personal and family relations. This means that social lifts can often be distorted by subjective factors. In fact, this tradition stems from the soviet past, where family relations at job placements were considered even positive. Thus, so-called “dynasties of medical doctors” are still regarded as a mark of high quality specialists. However, this in fact means that for the younger generations of doctors the competition is not fair and just, as it is influenced by high profile parents of some young doctors. We can hear about 3 and more generations of doctors, in which the older and more established specialists promote professional carriers of their children and other relatives for the price of carrier opportunities of other candidates. This phenomenon is wide spread, and is not generally regarded in the society as a negative selection factor. As a result, it is not uncommon to see whole families together having jobs at the same department. In contrast, European

traditions presume that the fair competition, based on qualifications and skills and not distorted by personal relations, is beneficial for the development of professional abilities. In Germany, for instance, it would be highly unusual if a son of a professor gets a job at the same department or even at the same university. Therefore, Ukrainian job placement traditions require attention and corrections via educational measures.

**Conclusions.** There are numerous challenges which Ukraine is still facing, including in its higher education system, in overcoming its colonial past and going towards its European future. Presently, great progress has been already achieved. Further progress will be facilitated by careful analysis of the current state of the Ukrainian higher education system. Grant writing and fundraising are among the first priorities to address the challenges. By evaluating specific issues, together with our European partners, we will be able to build a European-ready civil society in Ukraine, and implement necessary reforms according to the European models.

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