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## REFERENCE POINTS FOR THE DESIGN AND DELIVERY OF DEGREE PROGRAMMES IN "MEDICINE" BY USING OF THE TUNING METHODOLOGY

#### Vikhrov I., Ashirbaev S.

In this article, on the example of the Tempus project UZHELTH describes the Tuning methodology and the results of the public consultations held for the development of degree programmes in medicine in the Republic of Uzbekistan.

# ТИББИЁТ СОХАСИДА ЎҚУВ ДАСТУРЛАРИНИ ИШЛАБ ЧИКИШДА ТЮНИНГ УСЛУБИЯТИ ВА ЖАМОАТ МАСЛАХАТЛАШУВЛАРИ НАТИЖАЛАРИ

### Вихров И., Аширбаев Ш.

Ушбу мақолада Темпус UZHELTH лойиҳаси мисолида Ўзбекистон Республикаси тиббиёт соҳасида ўқув дастурларини ишлаб чикишда тюнинг услубияти ва жамоат масалаҳатлашувлари натижалари акс эттирилган.

# КЛЮЧЕВЫЕ ОРИЕНТИРЫ ДЛЯ РАЗРАБОТКИ И РЕАЛИЗАЦИИ ОБРАЗОВАТЕЛЬНЫХ ПРОГРАММ В ПРЕДМЕТНОЙ ОБЛАСТИ «МЕДИЦИНА» ПРИ ПОМОЩИ МЕТОДОЛОГИИ ТЮНИНГ

### Вихров И., Аширбаев Ш.

В данной статье на примере проекта Темпус UZHELTH, описывается методология Тюнинг и результаты общественных консультаций при разработке учебных программ по медицине в Республике Узбекистан.

#### I. Introduction

In the present reforming process in medicine, the key point consists of training highly qualified medical personnel. Currently, a number of institutions and professionals are involved in such educational process led by the Tashkent Medical Academy. This is the case of the Tashkent Institute of pediatrics, pharmacy, and each medical doctor. Again, higher medical schools in Samarkand, Andijan, Bukhara, Urgench, Nukus and other cities are involved as well. Recently, according to the decree of the President of our country on July 22, 2014 another institution of higher education was established - the Tashkent State Institute of Dentistry. Within this context, a new system was developed to train nurses through higher education programs.

These achievements in medical standards along with other benefits we fully endorse represent a proof of principle that the health care system we have built up is very effective and appropriate. To further symbolize the great achievement of this health system, nowadays, high-tech and articulated surgical interventions are carried out even within regional hospitals located far from the capital.

It is worth to be mentioned that, year after year, there is a constantly increasing trend concerning the amount of funding allocated from the state budget to improve the health system. For instance, while in 2012 2.8 trillion Sums from the state budget were allocated for the development of health care, in 2013 this budget rose up to 3.4 trillion Sums. In 2014, 4.3 trillion Sums were allocated to further improve the health care system.

Investments in the health sector in 2013 increased 3.8 fold compared with 2010. These allowed to project and renovate a total of 295 health facilities.

The current effort aimed at f improving Education includes the development of training programs on various subjects and specialties. As part of these programs and methods there is now a special effort based on the so-called "Tuning Methodology" This was developed for the first time in 2000 when it began as a project initiated by European institutions under the support of the European Commission. Over time, Tuning has gone beyond the borders of the European Union and it became a global methodological system that covers higher education in many regions and subjects worldwide such

as South America, Africa, Asia and so on. As part of tuning higher education in the health care is now progressing. This consists in dissecting key points in different higher education systems in order to align them to reach a sort of enhancement to improve the awareness and educational insight in all the parties being involved. The tuning methodology does not transfer a system across different counties, it rather allows to align and converge on common needs, which can be achieved in different ways based on different geographic and cultural contexts.

Being rooted on tuning methodology, the Tempus project named UZHELTH is started in December 2013 and it has already became popular. The UZHELTH project is aimed at defining information on competencies and learning outcomes in the field of medicine, agriculture, veterinary medicine, the environment and food safety. Project team members express their profound gratitude for all the support of colleagues from European universities, as well as the project coordination based at the University of Pisa.

#### II. Description of the subject area

The proficiency of a health system and the quality of health in the population are bound to the level of development of each society. In fact, updated medical practice along with excellence in scientific activity and an effective higher education in medicine and healthcare represent constant challenges for the social and economic development of the society itself.

As a part of the reforms promoted by the State Program, the formal improvement of the health care system was the main regulatory document planning and forecasting health workforce in the country. The key points to reform the medical education system are established within specific Laws of the Republic of Uzbekistan known as «Law on Health Protection,» «On Education», «On the National program for personnel training» and a number of other regulatory documents.

To date the earlier two stages of the National Programme for Personnel Training are completed. On this basis, by analysing the outcomes of these two stages since 2005, a new plan of development, improvement and implementation was carried out based on such a training experience.

In fact the efficacy of each policy is bound to the ability to adapt to reality based on previous experience. Moreover, the social and economic context may vary and the flexibility of a good policy needs to cope with changing in social needs, trends and developments of the global context. This is also the case when dealing with key issues in the field medical education and healthcare.

In article 41 of the Law on Health Care it is established that only persons who have received the diploma of higher medical educational institution in the Republic of Uzbekistan have the right to engage in medical activities.

Training of medical staff in the health care system of the Republic takes place in 9

recognized institutions which represent the system of higher medical educational of the state: 1 Medical Academy, 5 Medical Institutes and 3 branches of these Institutes.

Presidential Decree of 10.11.1998 N UP-2107 «On State program of reforming the health care system of the Republic of Uzbekistan» opened faculties for training nurses since the 1999/2000 academic year. This establishes the highest education and qualification level for nurses attending specialised programs held within the medical faculty of medical schools for duration of 3 years. Concerning the education of physicians, the main point of the 1998-2005 state program of reforming the health care system was the transition to two-level training. This establishes that general practitioners need 5-7 years of training while subspecialty physicians need 2-3 years (This variable durations depend on the specific undergraduate degree).

Graduate medical education, according to the approved state educational standards is designed to train general practitioners, general specialists - pediatricians, dentists, hygienists epidemiologists and as well as training faculty members.

Training is conducted in accordance with state educational standards for all specialties. A graduate from medical school based on a certification issued by the State, named diploma is considered a doctor with the rights of practicing independent activity in primary care.

At present time, the higher education system it is inspired and shaped by governmental laws and norms however, this is supposed to take into account the need of all the people involved (in health care this apply for instance to patients, physicians ect.). In keeping with this, when planning higher education countries are committed in using a variety od approaches in order to select the best planning and forecasting in different educational areas. This allows dynamic interactions between rules and norms with the dynamic nature of the working environment and changes in primary needs. As a part of such a dynamic approach, in the training of specialists is carried out on budget and contract (paid) basis.

Much attention is paid to market research in the field of vocational education in the health care. The market reality requires that the training takes into account the needs of public health and medical care within the context of regional culture and economy. Indeed this process is taking place in the enrollment of personnel. All this requires a preliminary study that indicates the present scenario concerning principles of planning, training, skills development. This is mandatory to predict the state of health, disease and subsequently the future quality of health in any give region.

In line with such a virtuous process, in recent years our country profited from positive experience obtained in the process of education, enrollment, spreading and allocation of medical personnel. This is based on a few key principles:

- Transition to international standards of education;
- Education of general practitioners (family doctors).
- Public distribution of graduates (2006).

- Creating a system of continuing education, including health workers.
- Improving statistics concerning the capability of human resources.
- The possibility of studying and cure a higher number of medical patients and selecting best medical staff.

In addition, a number of government decisions significantly upgraded the equipment and all the technical tools to improve the process of higher education. This was achieved also by ameliorating the living conditions of students by introducing new facilities and renovating the structures dedicated also to recreation such as sports facilities.

In the course of this process of renovation, new technologies were introduced and the necessary "know how" was provided through specific education on how to use updated information technology. The leading medical universities of the country have started to introduce the so-called modular training aimed at solving clinical problems as a whole. The new technologies in the field of medical education are very advanced and they contribute to the development of logical thinking adding on traditional education; all these steps are seminal and need to be developed during the education and training of future medical doctor.

In addition, the country's leadership initiated to adopt norms to regulate the widespread introduction of information and communication technologies in the learning process and improve the educational level of foreign languages faculty. These steps seem to be very important because medicine is recognized as one of the fastest growing industry, and often the methods and directions that are common today, tomorrow may lose their relevance.

In this regard, training programs at all stages of medical education is constantly updated by the introduction in the educational process of new approaches to understand the causes and mechanisms of human diseases, as well as their diagnosis and treatment. One of the most important modern requirements in the health care system starting from the whole Republic and spreading through regional and district level consists in sharing and adopting standard protocols for diagnosis and treatment. These standard protocols are developed by the leading medical education and research institutions in the country and they are based on the so-called evidence-based medicine. The latter involves making recommendations based on the analysis of cumulative accurate scientific data, to be placed on internet resources.

It should be noted that over 80 percent of Internet resources in the field of scientific medicine is available in English language. Thus, in order to complete the educational approach to the use of evidence-based medicine, knowledge of the English language is required. This will allow the use of scientific data online as well as the development of standards and treatment protocols, along with curriculum renewal and, ultimately, it will make easier to expand new professional horizons.

However, one aspect of medical education is a compulsory acquisition of practical (clinical) skills «at the bedside» (enrolling patients to participate at clinical rounds, operations, manipulations, etc.). Therefore, a preliminary step for a high quality 40

training of doctors is the integration of education and production, in this case, medical schools and clinical leading centers. That is, the medical schools are expected to provide the clinical database to be used by leading medical institutions. This training process should involve students, along with university professors, and scientists and experienced doctors.

These activities demand great responsibility for the faculty in the medical schools of the country. Therefore, teachers are actively exploring and implementing training programs in the recommendations of international organizations (WHO, UNICEF, the Global Fund and others) and high-performance practices of leading foreign states in the field of maternal and child health, as well as in the control of infective and non-infective diseases to grant a high health level as reported by epidemiological studies as the welfare of the country.

#### III. Level descriptors in terms of competences

To clarify the origin of the terminology used in the development of the key benchmarks by project participants Tempus UZHELTH tuning processes have been studied in the EU countries, South America and the Russian Federation. In this context, we present a number of definitions used by all project participants Tuning around the world and have been developed in the framework of the Bologna Process.

#### **Competencies and learning outcomes**

Competence - a dynamic combination of a number of parameters - knowledge and its application, skills, attitudes and responsibilities, describing the results of development programs / training modules. Within the framework of the Bologna process agreed to divide the competence to subject (related to the subject area) and general (for all courses / modules in this series). More on this will be discussed below.

Learning outcomes are statements of what students should achieve, in terms of development of knowledge and understanding of the formation and the ability to demonstrate achievements at the end of the learning process. Learning outcomes are different from the problems of training since they represent the achievements of the student, not the teacher's job. Learning outcomes must be supported by appropriate assessment (evaluation) criteria used to measure the results achieved by the student. The learning outcomes and assessment criteria, thus describe the minimum requirements to be met by the student to obtain credits in the evaluation.

In this way, all the basic documents of the Bologna Process the main vector of development of higher education programs, including programs of double and joint degree are defined as the «harmonization of the architecture» (Bologna and Sorbonne Declaration) through the adoption of all the countries of the three cycles of higher education (Bachelor - Master - Doctor).

## **Dublin descriptors**

The ability to compare programs of three cycles of higher education is given shape

and received educational community frame of higher education qualifications, known as the «Dublin descriptors». Descriptors contained in this document should be used as broad guidance for the design of innovative programs in higher education.

According to the Dublin descriptors, short-cycle qualification (120 credits) associated or included in the first cycle, suggest that their owners can:

- Demonstrate knowledge and understanding in the field of study and apply this knowledge and understanding in occupational (employment) situation,
- Search for and use the new information to solve concrete and abstract problems
- Communicate their understanding, skills and ways of working colleagues, management and customers
- Continue their own learning with a certain degree of autonomy.

**Descriptors first cycle** (on average 180-240 credits) suggest that the holders of the relevant degree / diploma are able to:

- Demonstrate knowledge and understanding in the study area, including elements of the most advanced knowledge in this area, and can apply this knowledge and understanding at the professional level,
- Formulate arguments and solve problems in the study area,
- Collect and interpret information to form judgments taking into account social, ethical and scientific considerations;
- Communicate information, ideas, problems and solutions, both to specialists and non-specialists.

**The second cycle** (normally 90-120 credits) suggests that the holders of diplomas / degrees in this series are capable of:

- Demonstrate knowledge and understanding based on and beyond and / or develop knowledge and understanding obtained at the bachelor's level, which are the basis for the original or the possibility of the development or application of ideas, often in the context of research;
- Apply knowledge, understanding and ability to solve problems in new or unfamiliar situations and contexts within broader (or multidisciplinary) areas related to the field of study;
- Integrate knowledge, to cope with the difficulties and make judgments based on incomplete or limited information, taking into account the ethical and social responsibility for the use of judgment and knowledge;
- Clearly communicate their conclusions and the knowledge and support of specialists and non-specialists;

• Continue learning on their own.

The third cycle suggests that the holders of diplomas / degrees in this series are capable of:

- Demonstrate a systematic understanding of the field of study, mastery of the skills and methods of research used in this field;
- Plan, develop, implement and adjust complex process of scientific research;
- Contribute their own original research in expanding the boundaries of the scientific areas that may merit publication at the national or international level;
- Critically analyze, evaluate and synthesize new and complex ideas;
- Communicate their knowledge and achievements of colleagues, the scientific community and the general public;
- Promote the development of a society based on knowledge.

Adopted at the European level description 3 cycles of Education (Higher Education Qualifications Framework) define the main vectors, which have to be formed according to the requirements for learning outcomes for each cycle higher education programs.

When designing the educational programs of all cycles' basic requirement is the formulation of learning outcomes. It allows learning outcomes to determine the place of the program in terms of its academic role and significance for external customers - employers and students. Using the results of training programs provides greater flexibility as compared to conventional programs, as it involves the possibility of different paths to achieve the same results.

The formulation of learning outcomes is carried out in terms of competences, which include the following aspects:

- Knowledge and understanding (theoretical knowledge and understanding)
- Knowing how to act (practical and an operational application of knowledge in specific situations)
- Knowledge of what should be (values, integrated into the social context in which there is a valid ID).

Thus, competence includes knowledge, application of knowledge, skills, attitudes and responsibilities, which increases from level to level.

## IV. Level descriptors in terms of learning outcomes

Participants of the project were designed questionnaire that is part of a large-scale consultation organized by the project UZHELTH. The consortium is developing a holistic student-oriented approach to public health disciplines. It includes 10HEIs in Uzbekistan, the Ministry of Health, Agriculture and Water Resources, Higher and

secondary special education, as well as 4 major European universities. The European Commission through the Tempus program supports the project.

The project UZHELTH expected improvement of the quality and relevance of educational programs in the fields of agriculture, environmental protection, General medicine and veterinary science. This is a pilot project developed for the Central Asian region. To achieve these objectives, the project participants conducted a study involving a questionnaire about competencies that students will acquire by the start of their work. To improve the quality and relevance of curricula specialists GP, we examined the opinion of a number of different and equally important groups of people: students, teachers who work in universities, alumni (former students), patients and their relatives, and, last but not least, those who take on our graduates (employers).

By means of this questionnaire was evaluated, first, General, and then subject specific competences GPS for professional and personal life, distribution of competencies and the level of development/implementation of them in Medical HEIs where you are studying or who has finished (students, graduates); where I work (teachers) or, where graduates employed (employers).

The questionnaire consisted of two sections, in the first section the respondents were asked to assess and determine the importance and degree of implementation in practice of 26 generic competences, in the second part of the questionnaire were evaluated 30 specific competences and level of its achievement are presented. Then at the end of each section, respondents indicated the five most important in their view of competence, which should have a GPs.

Table 1. The number of survey participnts by the Uzbek HEIs

Respondents	TPMI	TMA	ASMI	BSMI	SamSMI	TOTAL byMedicine
Students	190	176	190	125	257	938
Masters	88	48	86	52	85	359
Medical residents	35	35	34	50	44	198
Teachers	127	59	126	55	145	512
Managers (employers)	12	10	10	10	12	54
Patients	57	64	55	50	43	269
Relatives of the patients	23	25	20	20	22	110
TOTAL	532	417	521	362	608	2440

The results of the survey among 7 groups consisting of 2440 respondents, which Included 938 students (38%); 359 masters (15%); 198 medical residents (8%); 512 teachers (21%); 54 managers (2%); 269 patients (11%); and 110 relatives of the patients (5%) showed the following results.

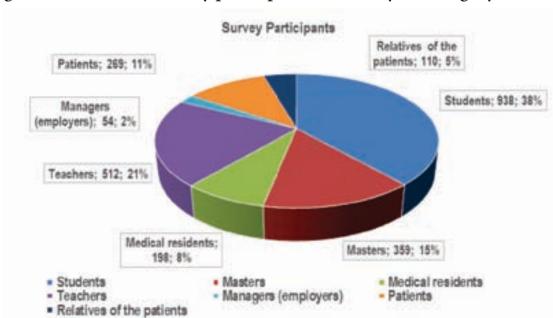


Diagram 1. UZHELTH Survey participants divided by the category

From 26 specific competences by the SAG Medicine were decided to analyze more deeply 10 most important competences according respondents answers.

Table 2. Total number of participants marked the importance and level of achievement of the 10 most importance specific competences

	TOTAL								
SC number in Survey		Impo	rtance		Level of Achievement				
	1=not important	2=quite important	3=very important	4=essential	1=not important	2=quite important	3=very important	4=essential	
1	77	165	732	1466	130	503	946	861	
2	58	135	568	1679	99	450	1051	840	
5	56	167	772	1445	135	490	1052	763	
4	54	134	684	1568	95	503	1017	825	
11	44	144	772	1480	132	568	992	748	
18	72	186	869	1313	196	578	983	683	
9	46	190	774	1430	148	586	1003	703	
10	86	137	670	1547	107	443	1066	824	
12	68	220	704	1448	130	500	1067	743	
3	117	230	866	1227	175	512	1047	706	

Table 3. The rating of the 10 most important specific competences (SC)

(1=not important; 2=quite important; 3=very important; 4=essential)

SC number in Survey	SC Description	Rating (from total number of participants)
2	To carry out a full physical exam (signs and symptoms)	3,59
4	To cluster data from anamnesis, physical and instrumental exams to diagnose treat or address the patients to other specialists/colleagues.	3,54
10	To prescribe appropriate drugs (fully informing the patients) or addressing him to other specialists	3,51
11	To know the mechanisms of actions (pharmacodynamics and pharmacokinetics) of the drug prescribed (including side effects and drug/food/disease interactions)	3,51
5	To Provide basic life support/to know when address the patient to appropriate emergency facilities	3,48
1	To take a patient's and familial history (including environmental exposure/food intake genetic predisposition social and cultural background).	3,47
9	To know and apply evidence based medicine	3,47
12	To possess the basic skills to perform standard practical procedures (i.e. sutures, injections et al.).	3,45
18	To be flexible and adapt strategies when dealing with sudden changes, unexpected effects, and pitfalls in medical practice	3,40
3	To request appropriate instrumental/lab investigations.	3,31

In order to compare the level of importance and the level of implementation up-to-date in the survey project team asked to mark it. Below is the result of this comparison (see table 4).

Table 4. Importance vs. Achievement

(1=not important; 2=quite important; 3=very important; 4=essential)

SC number	SC Description	Importance	Achievement
in Survey	SC Description	Rating	Rating
2	To carry out a full physical exam	3,59	3,04
	(signs and symptoms)		
4	To cluster data from anamnesis,	3,54	3,08
	physical and instrumental exams to		
	diagnose treat or address the patients to		
	other specialists/colleagues.		
10	To prescribe appropriate drugs (fully	3,51	3,05
	informing the patients) or addressing		
	him to other specialists		
11	To know the mechanisms of	3,51	3,00
	actions (pharmacodynamics and		
	pharmacokinetics)of the drug prescribed		
	(including side effects and drug/food/		
	disease interactions)		
5	To Provide basic life support/to know	3,48	2,97
	when address the patient to appropriate		
	emergency facilities		
1	To take a patient's and familial history	3,47	2,88
	(including environmental exposure/food		
	intake genetic predisposition social and		
	cultural background).		
9	To know and apply evidence based	3,47	2,93
	medicine		
12	To possess the basic skills to perform	3,45	3,07
	standard practical procedures (i.e.		
	sutures, injections et al.).		
18	To be flexible and adapt strategies	3,40	2,99
	when dealing with sudden changes,		
	unexpected effects, and pitfallsin		
	medical practice		
3	To request appropriate instrumental/	3,31	2,94
	lab investigations.		

As we can see from the figures, the level of importance and the level of implementation of the SC are different and the level of SC implementation is in all cases lower than the level of importance. The differences between them are from 11% till 17%.

Let us have a look on the Importance items ranking - Employers vs. Students, for the consideration of the Employers expectation from graduate's competences (Table 5).

**Table 5. Importance items ranking - Employers vs. Graduates** 

Students	Employers			
	2 0			
To carry out a full physical exam	To carry out a full physical exam			
(signs and symptoms)	(signs and symptoms)			
To know the mechanisms of	To possess the basic skills to perform			
actions (pharmacodynamics and	standard practical procedures (i.e.			
pharmacokinetics) of the drug prescribed	sutures, injections et al.).			
(including side effects and drug/food/				
disease interactions)				
To know and apply evidence based	To cluster data from anamnesis,			
medicine	physical and instrumental exams to			
	diagnose treat or address the patients to			
	other specialists/colleagues.			
To possess the basic skills to perform	To prescribe appropriate drugs (fully			
standard practical procedures (i.e.	informing the patients) or addressing him			
sutures, injections et al.).	to other specialists			
To be flexible and adapt strategies	To take a patient's and familial history			
when dealing with sudden changes,	(including environmental exposure/food			
unexpected effects, and pitfallsin medical	intake genetic predisposition social and			
practice	cultural background).			
To cluster data from anamnesis,	To request appropriate instrumental/			
physical and instrumental exams to	lab investigations.			
diagnose treat or address the patients to				
other specialists/colleagues.				
To take a patient's and familial history	To Provide basic life support/to know			
(including environmental exposure/food	when address the patient to appropriate			
intake genetic predisposition social and	emergency facilities			
cultural background).				
To prescribe appropriate drugs (fully	To know the mechanisms of			
informing the patients) or addressing him	actions (pharmacodynamics and			
to other specialists	pharmacokinetics)of the drug prescribed			
	(including side effects and drug/food/			
	disease interactions)			
To Provide basic life support/to know	To be flexible and adapt strategies			
when address the patient to appropriate	when dealing with sudden changes,			
emergency facilities	unexpected effects, and pitfallsin medical			
	practice			
To request appropriate instrumental/	To know and apply evidence based			
lab investigations.	medicine			

As can be seen from the table, the rankings of specific competences between students and employers is highly uncorrelated with nine from ten of the specific competences

were ranked within two to seven places of each other. Only 1place is equal (To carry out a full physical exam, signs and symptoms) and the SC (To know and apply evidence based medicine) is seven places apart. As a first conclusion, the employer's importance expectation is quite different from students.

Medical teachers and current students were asked to rate all 30 competences in the same way as the students and employers. Average responses in rank order comparing Teachers with Students are presented below (Table 6).

Table 6. Importance items ranking. Teachers vs. Students

Teachers	Students						
To carry out a full physical exam (signs and symptoms)	To carry out a full physical exam (signs and symptoms)						
To cluster data from anamnesis, physical and instrumental exams to diagnose treat or address the patients to other specialists/colleagues.	To know the mechanisms of actions (pharmacodynamics and pharmacokinetics) of the drug prescribed (including side effects and drug/food/disease interactions)						
To prescribe appropriate drugs (fully informing the patients) or addressing him to other specialists	To know and apply evidence based medicine						
To Provide basic life support/to know when address the patient to appropriate emergency facilities	To possess the basic skills to perform standard practical procedures (i.e. sutures, injections et al.).						
To take a patient's and familial history (including environmental exposure/food intake genetic predisposition social and cultural background).	To be flexible and adapt strategies when dealing with sudden changes, unexpected effects, and pitfalls in medical practice						
To know and apply evidence based medicine	To cluster data from anamnesis, physical and instrumental exams to diagnose treat or address the patients to other specialists/colleagues.						
To know the mechanisms of actions (pharmacodynamics and pharmacokinetics) of the drug prescribed (including side effects and drug/food/disease interactions)	To take a patient's and familial history (including environmental exposure/food intake genetic predisposition social and cultural background).						
To be flexible and adapt strategies when dealing with sudden changes, unexpected effects, and pitfalls in medical practice	To prescribe appropriate drugs (fully informing the patients) or addressing him to other specialists						
To possess the basic skills to perform standard practical procedures (i.e. sutures, injections et al.).	To Provide basic life support/to know when address the patient to appropriate emergency facilities						
To request appropriate instrumental/lab investigations.	To request appropriate instrumental/lab investigations.						

Again there was a high degree of uncorrelation between many of the rankings of the specific competences between teachers and students, particularly at the lower ranked competences, with six (6) being within three places of each-other. The most striking difference are five (5), ten (10) and eleven (11) however, which students rated five places lower than did teachers.

It was also interesting to know more on specificity of judgment on importance and level of achievement perceive by patients relatives and patients themselves. The project team counts that it could be very intriguing to understand in general how medical practice is perceived and how is it changed when it concerns us or someone who is under treatment process (See table 7).

Table 7. Importance items ranking. Patient vs Patient relatives

Importance										
SC	Patient			Rating	Patient relatives				Rating	
1	9	24	66	170	3,48	1	2	21	86	3,75
2	10	28	59	172	3,46	1	5	21	83	3,69
5	12	36	76	145	3,32	0	3	25	82	3,72
4	10	23	54	182	3,52	1	3	24	82	3,70
11	4	21	98	146	3,43	0	1	15	94	3,85
18	12	33	102	122	3,24	2	23	22	63	3,33
9	7	35	111	116	3,25	2	4	26	78	3,64
10	6	16	93	154	3,47	2	2	17	89	3,75
12	15	30	72	152	3,34	2	0	18	90	3,78
3	21	38	86	124	3,16	1	15	22	72	3,50
				A	chieveme	nt				
SC	Patient				Rating	Patient relatives				Rating
1	30	94	113	32	2,55	3	7	41	59	3,42
2	22	95	114	38	2,62	2	9	42	57	3,40
5	50	95	90	34	2,40	1	20	35	54	3,29
4	33	97	106	33	2,52	1	16	27	66	3,44
11	34	99	99	37	2,52	1	18	38	53	3,30
18	48	80	101	40	2,49	15	18	31	46	2,98
9	45	94	99	31	2,43	1	13	32	64	3,45
10	35	65	119	50	2,68	2	12	38	58	3,38
12	40	81	105	43	2,56	8	10	33	59	3,30
3	54	84	104	27	2,39	14	18	31	47	3,01

As we could see from the data in all 10 cases the perception of the patients is more critics and the level of SC achievement is lower in compare with patient relatives. Of course it could be a matter of patient who suffers from disease, but also it could be a reality for the time being. In this regards this issue could be further discussed between project partners and stakeholders as well.

#### V. Conclusion

The main purpose of this work was to study and summarize national and international experience in the field of education programs in medicine. This study showed that the Uzbek medical higher education as a whole is aligning with international experience in the training of doctors and other health care providers.

This is confirmed by the obvious similarity in the overall methodology and approach to medical education. For example, in the countries participating in the Bologna Process is a clear trend of a three-level education (bachelor-master-doctorate), also in Uzbekistan carried out a three-level training of doctors (bachelor-master-doctorate).

The duration of training in the EU is 3 years for a bachelor degree, 3 years for a master degree (medical doctor) and 3 tot 7 years for a master-after-master specialty medicine. Family medicine is a master-after-master of 3 years of practical training. Uzbekistan in turn, the first level depending on the received function also lasts from 5-7 years, the second level of 2-3 years, and a third layer (Doctorate) - 3 years. The modular system of education is dominant in the Bologna Process, and in Uzbekistan in the medical education system uses a modular some educative programs.

As conventional units comparability study load in the countries participating in the Bologna Process uses a system of transfer of credits (ECTS), Uzbekistan also used its own national ranking (100-point) control system knowledge.

Almost all EU countries as a document certifying the degree has a standard for all countries of the Bologna Process so-called Diploma Supplement (Diploma Supplement), Uzbekistan also has its own national Diploma Supplement.

Available in the level descriptors of the Bologna Process are close enough to the understanding of this division in the Uzbek education at the undergraduate, graduate and doctoral programs.

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## РИВОЖЛАНГАН ХОРИЖИЙ МАМЛАКАТЛАР ОЛИЙ ТАЪЛИМ ТИЗИМИ РИВОЖЛАНИШИДА КРЕДИТ СИСТЕМАСИНИНГ ЎРНИ ВА АХАМИЯТИ

## Тожиев М., Мамадалиев К. Р., Хуррамов А. Ж.

Ушбу мақолада кредит ситемасининг ривожланган хорижий мамлакатлар олий таълим тизими ривожланишидаги ўрни ва ахамияти таҳлил этилган бўлиб, унда кредит ситемасининг мазмун ва моҳияти, устувор томонлари, кредит ситемаси вужудга келиш тарихи, талабаларни билимини назорат қилишда балли-рейтинг ситемаси кредит ситемасининг ижобий томонларидан бири эканлиги илмий томондан асослаб берилган.