

Quality Assessment of Medical Education at Faculty of Medicine of Sarajevo University – Comparison of Assessment Between Students in Bologna Process and Old System of Studying

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Original paper ABSTRACT

Introduction: The quality of the teaching-learning process at the universities in Bosnia and Herzegovina and abroad depends mainly of infrastructure that includes an optimal teaching space, personnel and equipment, in accordance with existing standards and norms. For the assessment of teaching at the faculties, the opinion of students is very important (4, 5). Students are often unhappy with the educational process. **Goal:** To compare the results of the teaching process evaluation between students studying according to the Bologna

system and the old system of education. **Material and methods:** We used the questionnaire as a carrier of data created with variables relevant for assessing the success of the educational process at the Medical Faculty in Sarajevo. The survey was conducted among students of the sixth year of the Medical Faculty in Sarajevo. There were 103 students surveyed, of which 32 were studying according to the Bologna and 71 by the old concept of studies. **Results and discussion:** Results of survey which measured students satisfaction with the educational process (theoretical and practical instruction, interactive learning, testing, use

of IT and technical aids in teaching, availability of instructional literature etc.) lead us to the conclusion that the lowest satisfaction is associated with factors depending on financial resources, specifically related to library funds and the degree of computerization of educational process, and also with the level of teachers capability to convey knowledge to students with the application of modern medical information technology and technical teaching aids.

Key words: medical education, quality assessment, Bologna process studying.

1. INTRODUCTION

The quality of the teaching-learning process at the universities in Bosnia and Herzegovina and abroad depends mainly on infrastructure that includes an optimal teaching space, personnel and equipment, in accordance with existing standards and norms at the cantonal or entity level, which are required to implement adequately the educational curriculum for students of first to sixth year by Bologna concept. For all of this it is necessary to ensure adequate funding. Technologies (medical and information, including communications) have a special role and value in ensuring the quality of medical education at universities and their organizational units (faculties). Unfortunately, in the current situation there are not sufficient technologies available to implement the plan and pro-

gram of the Bologna concept in an adequate manner (1, 2, 3). For the assessment of teaching at the faculties the opinion of students is very important (4, 5). Students are often unhappy with the educational process. However, some departments of the faculties typically do not collect information to what extent students are satisfied with the process and methods and methodologies of the teaching staff. Because of that this survey included as a response of the final year students of the Medical Faculty of Sarajevo University, who responded to the questions that are related to different aspects of the teaching process.

1.1. Main features of the Bologna system

Acceptance of the system which is based on two main cycles of study: undergraduate and graduate. The de-

gree awarded after three years is considered to be a necessary condition for qualification on the European labor market, and the second cycle should lead to the master and/or doctorate degree. Access to the second cycle shall require successful completion of first cycle studies, lasting a minimum of three years.

Introduction of the credit system—such as the CTS/ECTS/ACTS system (as a proper means to improve the most widespread student mobility). Points can be accumulated outside of higher education, including through so-called Lifelong Learning (LLL) programs, provided they are recognized by the university.

Promotion of mobility by overcoming obstacles to the free movement of students, teachers, researchers and administrative staff. Promotion of European cooperation

in quality assurance in order to develop comparable criteria and methodologies. Promoting the necessary European dimensions in higher education, especially in curricular development, inter-institutional cooperation, mobility schemes and integrated programs of study, training and research.

Introduction of the system of study credits presents an introduction of the European Credit Transfer System (ECTS) in facilitating student mobility and the development of international curriculum. ECTS should become not only the system but also transmission and accumulation of credits.

ECTS is based on the availability of information on the mode of study, i.e. study programs and their implementation. The scoring system is based on „student workload“, which are reported for individual subjects, normalized to a total of 30 credits per semester and thus shows the student workload throughout the study. Instruments are determined by ECTS to facilitate positive fluctuation of science and teaching staff, especially students, and facilitate and equalize academic and professional recognition studies.

1.2. Elements necessary for successful implementation of ECTS are:

- University ECTS coordinator and staff at faculties.
- ECTS workload in each study program.
- Contracts between the partner institutions.
- A transcript of grades and a list of completed topics.
- Diploma Supplement describing the curriculum and Transcript.
- Student's mobility.

And what is the content of the Bologna reform process? First of all, it focuses on the events at the university for the student, i.e. it creates „student centered university“ as opposed to what we have now and where the teachers are at the focus – „Teacher centered university“. According to the Bologna reforms, all events at the University should be provided for transfer of knowledge learning–studying.

1.3. Methodology of training and evaluation of teaching by Bologna Declaration

Bologna process is serious reform of higher education, and Bosnia and Herzegovina has insufficiently engaged in this activity in order to achieve the level that many of the other signatories of the Bologna Declaration made in the previous five years. Harmonization of the higher education sector in B&H and its harmonization with the relevant sector in other European countries should be our first ticket to an integrated Europe. But what do we know about all of this? What do the students and teachers in higher education institutions know about the necessary changes types, content, methods and methodologies (theoretical and practical) course content, the evaluation of the teaching process, standards, norms, and many other changes that must occur in our universities through the Bologna Process? Basically everyone is talking about the need to respect the Bologna Declaration, and who rarely speaks about the content of these reforms.

The Bologna process introduces standards and norms that include the duration of study and weekly workload in teaching and overall work needed to master some skills, so that there is no arbitrariness. Under this process, the duration of study is divided into three clearly defined segments: undergraduate, postgraduate and doctoral graduate studies, which have precisely defined duration. For most professional profiles model is the 3 + 2 + 3 or 4 + 1 + 3. Number of hours of direct instruction (direct communication between students and teachers) is reduced to 20-25 hours per week).

Students are assessed and continue to progress through their total workload and not only through the grating systems of their exams. This allows that the total workload of a student receives the appropriate number of points. If the student collects sufficient points he or she can apply to study at another university, which encourages student mobility.

But to achieve the mobility of students, compatibility is necessary, but that does not mean uniformity. Spe-

cifically, the compatibility for mobility, practically, means uniformity when it comes to the duration of the study on the first and second level.

Exams are, as a rule, written. Direct exams are, in fact, very unusual on good reformed universities. Orally working seminar, debates, exercises with students are a regular part of studying, but exams must be written and must leave written evidence—a written document. These documents are collected from the first to the last day of studies in the so-called student record and present documentation proving that the student has successfully completed the process of mastering the knowledge and skills needed for a profession. So forging diplomas, which is not exactly a rare occurrence in our area, in that case it becomes impossible. In addition, the prestigious universities, for objectivity, apply external assessment or at least a „double check“ to test the student record.

It is necessary to make many other changes in our universities through the Bologna process. First of all there are necessary changes to curriculum of studies (changes in teaching content, theoretical and practical), modernization of facilities and harmonizing programs with other European universities, the new method of selection of teachers and their involvement in the university. In doing so assistants should not be employed at the university, but only temporarily hired to help in the classroom while completing their postgraduate studies (Master's and/or PhD).

1.4. Improving teaching in public health using Bologna Declaration

The Bologna process implies also implementation of detailed analysis and evaluation of the teaching content of biomedical subjects, including a comparison of preclinical and clinical subjects, and then synchronizes the theoretical and practical work according to the principles of the Bologna Declaration. They must be completely modified, technologically innovate, where the responsible are teachers of certain subjects, and rules that are made at the Department of Medical Informatics and Department of family medicine, Medical Faculty,

University of Sarajevo who were assessed positively by the appropriate experts in the field of medical informatics and family medicine, accepted as adequate, with the possibility of valorization and scoring system for the European study points (ECTS). Special generator for database of student test questions, i.e. minimal sets of methodical units, can be generated in a single database and used by individual media by teachers and students, or „on line“ in the system of the Internet of Medical Faculty and the Intranet of the University of Sarajevo within the current project of E-learning (distance learning). Reform and innovation in undergraduate and graduate education is a priority task of every faculty, administration, and compliance with the principles of the Bologna Declaration and the program organization in the neighboring countries of Southeast Europe and the developed countries, while adequately and real dynamics involved new educational and information technology. Reform must embrace change and innovation regime of studies (from admission to graduation time), medical curriculum content, methodical individual (the introduction of new content and reducing or omitting outdated, etc.), changing the method of assessment, etc. The regime should be aligned with the principles of Bologna Declaration but given the specificity of the science of medicine and health care as a profession, the Bologna Declaration in medical schools should be used in a modified form. In the first phase should consist of all preclinical subjects, including public health, which include a faster pace in the credit scoring system (ECTS), because the nature and content of these subjects is very similar or identical in all medical schools in the immediate and distant environment in B&H and the interpolation and exchange specialists of these disciplines, with listening to subjects at one medical school and its recognition on the ECTS scale of the Bologna medical School (4, 5).

1.5. Bologna declaration on biomedical faculties

Biomedical faculties, as part of an integrated University of Sarajevo, will soon adapt their curricula to the pro-

visions of the Bologna Process and the Law on Higher Education. True, group of medical faculties is excluded only when it comes to grading graduate classes (according to the BD two-step teaching in medical schools by type 3 + 2 or 4 + 1, as it is in other faculties of the University, will not be run in this way or cannot be performed by the principle Bachelor + degree, but will run into the pieces and varying duration at different universities—5 sometime, somewhere around 5.5 and 6 years, as it is with us. Example, the School of Medicine in Stockholm radically reformed medical education, so that the Karolinska Institute in Stockholm has 19 academic orientations in health, from which to study medicine accounts for only one of these nineteen and takes five and a half years, with a tendency to be reduced to five years. All other studies last five years, including management and nursing, occupational therapy, dietetics, etc., because a lot of university education by Bologna Declaration requires licensing of 300 ECTS. Furthermore, graduate nurses (for a master) in Budapest last five and a half years, as the doctor in Stockholm, and the licensing authorities must deliver 330 ECTS points. Likewise in Vienna, Sofia and other cities. In all listed post graduate studies, candidates listen to postgraduate studies for the degree of doctor of medical sciences, which generally lasts three years. According to BD there is only one form of postgraduate studies.

These are the studies for the doctoral diploma from a certain area. From this concept, according to BD is not exempt any medicine, and in the countries of Europe postgraduate doctoral study for a doctor of medicine (MD), attending medical school graduates (they have already been evaluated as masters of medicine for medical schools after graduation) for a period of three years. It prescribes standards COHEHRE – European Consortium for Higher Education, health and rehabilitation, which has a mandate of General of the European Commission to establish a high standard of education for human health by BD, which we cannot accept and harmonize. These standards are established for two groups of study orien-

tations: medical (medicine, dentistry and pharmacy) and health (general therapy, physiotherapy, patient care, dietetics, toxicology, obstetrics, public health, health management, laboratory and radiological diagnostics and analytics). Graduates receive the medical profession as physician, dentist, pharmacist, and health professions in the respective areas that were previously mentioned. Physicians must meet the standard of a minimum of 300 and a maximum of 360 ECTS, and pharmacists and a dentist of 300 ECTS points and everyone indivisible in two steps, but as a second level automatically (with a bachelor's degree). Graduates of medical faculties must fulfill norm of 300 ECTS, the share of two step education which awards 210 ECTS for a bachelor degree and 90 ECTS for the Master's degree.

The tendency at the medical schools in Europe of „cleansing“ the curricula of all relevant non-medical disciplines (these are only the medical and surgical disciplines), and is, for example, complete rehabilitation. Current system of higher education in the medical management and others excluded from medical studies, and studies on the attached medical colleges.

Faculty of Medicine, University of Sarajevo has a twelve semester organized cycle courses in family medicine, according to the curriculum of the Medical as defined in the Statute of 1991. Like other cycle courses that medical students pass on the sixth year of the study, and this teaching is conceived as a method and as a way to better prepare physicians to work independently with patients after graduating. Teaching duties under this type of course as it is now being implemented, performed within the course of Social medicine and health care organization. True, the subject of family medicine is independent of the school year (2007-08) for enrollment generation for the year 2002-03.

2. GOAL

To compare the results of the teaching process evaluation between students studying according to the Bologna system and the old system of education.

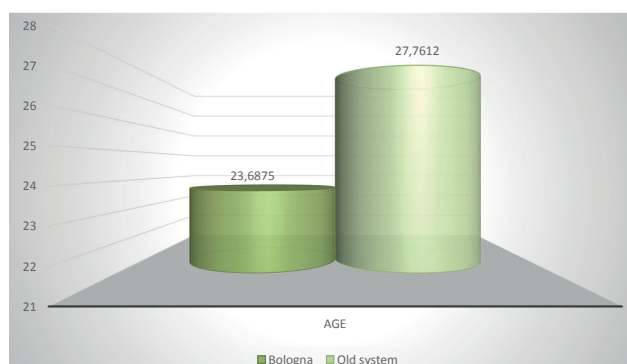


Figure 1. Average age of the students

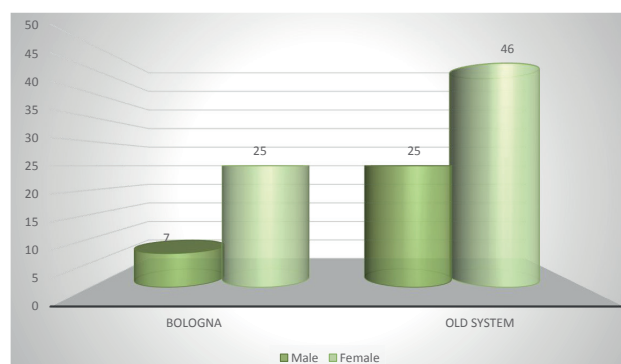


Figure 2. Gender comparison between two groups of students

3. MATERIAL AND RESEARCH METHOD

We used the questionnaire as a carrier of data created with variables (author Izet Masic) relevant for assessing the success of the educational process at the Medical Faculty in Sarajevo.

The survey was conducted among students of the sixth year of the Medical Faculty in Sarajevo. Surveyed were 103 examinees, of which 32 studying according to the Bologna and 71 by the old concept of studies. To form an estimate of the realized quality of the teaching process created a set of questions relating to staff who educate students, methods of education, availability of personnel and the use of ICT and other teaching aids (1).

The survey responses were of open and closed type and it mainly used Likert scale for assessment (scale 1-5), as follows (1):

- Grade 1: I am completely dissatisfied;
- Grade 2: I'm not satisfied;
- Grade 3: I'm partly satisfied;
- Grade 4: I'm basically satisfied;
- Grade 5: I'm fully satisfied.

The survey consisted of eight groups of questions: a) basic information; b) the evaluation of the basic elements/variables on realized quality of the teaching process; c) the assessment of availability

and quality of the teaching space (space, equipment, personnel); d) the evaluation of the quality of the educational process (teachers, methods, effects); e) the evaluation methods and quality assessment of students (exams, method, objectivity); f) the evaluation of the organization for implemented teaching process (number of students in the group, time, classroom technical equipment, technical aids, etc.); g) rating the degree of computerization of the educational process; h) the availability, accessibility and quality of literature in the faculty library.

Questions on which students did not provide answers were excluded from statistical analysis.

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4. RESULTS

Statistical analysis involved 103 respondents of which 32 are studying medicine according to the Bologna system (31,1%) and 71 student studying according to the old system (68,9%).

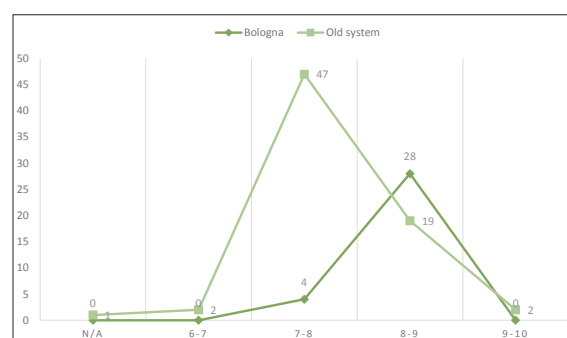


Figure 3. Grade of the students according to groups

		Group		Total
		Bologna	Old concept	
Repeating year	Yes	N 0	71	71
	%	.0	100.0	68.9
	No	N 32	0	32
	%	100.0	.0	31.1
Total	N	32	71	103
	%	31,1	68,9	100.0

$\chi^2=103.000$; $p=0.0001$

Table 1. Repeating year of studying

	Group	N	Mean	SD	t	p
Physical facilities	Bologna	32	3.1875	.69270	.726	.469
	Old concept	71	3.0563	.90849		
The organization of teaching	Bologna	32	3.2813	.68318	3.599	.000
	Old concept	71	2.7042	.78184		
The quality of teaching	Bologna	32	3.3438	.60158	3.339	.001
	Old concept	71	2.8028	.82149		
Quality of knowledge testing	Bologna	32	3.2188	.79248	1.210	.229
	Old concept	71	2.9437	1.16970		
The degree of computerization of the study process	Bologna	32	2.3750	.90696	-.166	.869
	Old concept	71	2.4085	.96477		
Availability and quality of literature in the library	Bologna	32	2.4688	1.01550	.826	.411
	Old concept	71	2.2817	1.08474		

Table 2. The rating of the basic elements/variables of teaching process quality

According to the age there are statistically significant differences in average age between two groups of students ($t=8.531$; $p=0.0001$). Students studying according to the Bologna system have the average age of $23,7\pm0,6$ years, while the students studying according to the old system are older with average age of $27,8\pm2,7$ years.

Gender comparison does not indicate statistically significant differences between two groups ($\chi^2=1.832$; $p=0.130$) with domination of female students in both groups.

Comparison of students grades indicate statistically significant between success of students studying according to the Bologna system compared to the old one ($\chi^2=32.933$; $p=0.0001$).

Table 1 indicates that all students studying according to the old system are repeating the year while none of

	Group	N	Mean	SD	t	p
Capacity of the lecture rooms	Bologna	32	2.8438	.88388	-2.572	.012
	Old concept	71	3.4085	1.08992		
Capacity of the premises for practical exercises	Bologna	32	3.0938	.73438	1.854	.067
	Old concept	71	2.7324	.98500		
Capacity of space for administrative purposes	Bologna	32	3.0625	.71561	-.670	.504
	Old concept	71	3.2113	1.15777		
Capacity of space for the examinations	Bologna	32	3.0000	.84242	-1.399	.165
	Old concept	71	3.2817	.98826		
The quality of space for student's social activities	Bologna	32	2.1250	.87067	2.271	.025
	Old concept	71	1.6761	.95281		
The quality of student's social standard	Bologna	32	2.3125	.89578	2.117	.037
	Old concept	71	1.9155	.87418		
The quality of library space-space for learning	Bologna	32	2.9688	1.12119	-.993	.323
	Old concept	71	3.2113	1.15777		

Table 3. Rating of the availability and quality of the teaching space (space, equipment, personnel)

	Group	N	Mean	SD	t	p
Preparedness of teachers for teaching	Bologna	32	3.7813	.79248	3.001	.003
	Old concept	71	3.2535	.84038		
Eloquence (a way of transferring knowledge)	Bologna	32	3.7500	.87988	3.880	.000
	Old concept	71	2.9577	.99192		
Motivation of teachers	Bologna	32	3.3750	.87067	3.227	.002
	Old concept	71	2.7042	1.01972		
An interactive approach to teaching	Bologna	32	3.5000	.80322	4.443	.000
	Old concept	71	2.5915	1.02229		

Table 4. Rating the quality of the educational process (teachers, methods, effects)

the students studying according to the Bologna system.

According to the rating of the basic elements of teaching process it is important to notice that the students from both groups had similar average rating, except the organization of teaching and the quality of teaching indicating better satisfaction of students with the Bologna system.

Rating of the availability and quality of the teaching space was also similar between groups, but it is noticeable that because of the Bologna systems students are less satisfied with the capacity of the lecture rooms and more satisfied with the quality of student's social activities and standard.

From Table 4 it is obvious that the Bologna process has brought changes for the better in the quality of the educational process in all tested areas (teachers, methods and effects).

Although there was no difference in the precision of questions and possibility to choose examination

sight into their success. However the reform could not influence still the work of the administrative part of the Faculty which is reflected in the similar rating of the administrative services operation.

Although there is no difference in the scope of the literature, students studying according to the Bologna system have better access to the literature, especially in the electronic form.

5. DISCUSSION

It is obvious that Bosnia and Herzegovina is far away from the European Higher Education Area which provides Europe with a broad, high quality and advances knowledge base. With cur-

method, Bologna system of studying has increased teachers objectivity in evaluation of knowledge.

From the Table 6 it is obvious that the Bologna system of studying lead to better organization of teaching, more appropriate teaching groups, and better technical equipment of the laboratory and teaching rooms.

Because the Bologna process affected the distance learning and methods of taking exam, the results from the Table 7 are expected. The students studying according to the Bologna system have better availability of to the online content, better method of taking exams, and electronic in-

terent education system it not possible to move from one university within Bosnia and Herzegovina, not to mention movement to the member states of European Union for the purpose of further study and employment. Also, we are not in the position to attract so many people from non-European countries to come and study in Bosnia and Herzegovina as it was before 1992 when we have had large number of foreign students especially from developing and third world countries.

Now we have "teacher centred university" in contrary of "student centred university" how is proposed Bologna Process. Purpose of our studies for students is to pass exam, instead acquiring knowledge and to gain skills. Bologna process has a positive effect on the role of higher education in the lifelong learning framework. Lifelong learning must not mean that people's knowledge is automatically considered outdated or expired after a certain time period and everyone is obliged to update their skills. Also, when we talk about medical doctors and having in mind that 50% of medical information is outdated after period of 3-4 years than continuous medical education (CME) is of essential interest.

Faculty of medicine of University of Sarajevo is the faculty with tradition of many years standing which successfully cultivates generous medical knowledge. High norms, fast tempo and in surplus duration of 6

	Group	N	Mean	SD	t	p
Objectivity of teachers in evaluating knowledge on exam	Bologna	32	3.3750	1.21150	4.774	.000
	Old concept	71	2.2535	1.05178		
The precision of the questions	Bologna	32	2.7188	1.14256	.063	.950
	Old concept	71	2.7042	1.06092		
Possibility to choose the examination manner	Bologna	32	1.6875	.89578	-1.852	.067
	Old concept	71	2.1408	1.24552		

Table 5. Rating methods and quality assessment of students (Exams, objectivity)

	Group	N	Mean	SD	t	p
The synchronicity of the organization of teaching	Bologna	32	3.2500	1.04727	2.997	.003
	Old concept	71	2.6056	.99253		
The size of teaching groups	Bologna	32	3.7188	.88843	8.353	.000
	Old concept	71	2.0563	.95450		
Technical equipment of the laboratory/room for teaching	Bologna	32	2.9375	1.01401	2.768	.007
	Old concept	71	2.3239	1.05254		

Table 6. Rating organizations to realize the teaching process (the number of students in the group, time, technical equipment of classrooms, technical equipment, etc.)

years represent challenge calling for the student's competence and ability for confrontation with different situations. All this requires a system that will secure environment and the opportunity for a student to give his best, and the Bologna system means attempt to actually happen. First generation of students who finished their study by Bologna model of education shown an attempt that was successful, but not without defects. It is a system that encourages continuous assessment of knowledge. By continuous assessment of knowledge, a student comes into the situation to distinguish relevant from the irrelevant, in a short period of time, and that he devotes his attention to the substantial. So the student gradually builds a proper way of thinking, which is one of the key features of a real doctor. On the other hand, continuous assessment of knowledge builds capability for the daily and systematic learning, making this way the foundation for lifelong learning, which is also a key feature of a real doctor. In addition to continuous assessment of knowledge, careful arrangement of subjects through semesters contributes to an understanding of correct thinking. At first it is a combination of preclinical with clinical studies, in which the preclinical predominates, and later they are only clinical courses. Written mode of expression is advantageous because it forces the student to say the most important things in a few sentences, while large number of hours devoted to practical skills leave much space to the student to refine key skills that every doctor needs to know, as well as ability to communicate with patients and colleagues.

In addition to everything mentioned, student's opinions expressed some kind of disadvantages and moments when the system is not even functioning at the highest level. There has been a problem of evaluation of knowledge. For example, the vast majority of tests are designed in such a manner as not to give the students a chance to show what he has learned and often resulting score is not a real indicator of the student's knowledge. However, it should be seen as an opportunity in which the

best students will come to the fore, because these students maintain a high level regardless of the pros and cons of the system. They are the ones who have realized the wisdom: "Who wants finds a way and who doesn't want finds an excuse."

The objection is also a small number of staff involved in the teaching process, which results in large groups of students. In large groups, the harder it is to get to the desired knowledge in comparison to the group with a smaller number of students. It is critical as well to emphasize the knowledge that doctors of the general practice need to have, while studding of the high specialist knowledge should be brought down to a minimum.

It should be understood that progresses is possible as we go, so that students, along with teachers, be actively involved in the process of quality assurance. It is necessary that the process of quality assurance is progressing as well, be more stringent and stays "up-to-date" within the globally accepted standards of quality including continual "external evaluation" by medical education experts.

Quality of medical education at University of Sarajevo assessed by students who are studied by "old model" is not satisfactory as several variables proven in this research. With current education system it not possible to move from one university within Bosnia and Herzegovina, not to mention movement to the member states of European Union for the purpose of further study and employment because of different curricula. Some teachers already proposed concrete activities in order to achieve accomplishments in regard to Bologna process.

	Group	N	Mean	SD	t	p
General records of enrolled students	Bologna	32	3.4063	1.18755	1.117	.267
	Old concept	71	3.1268	1.17022		
Records of attendance	Bologna	32	3.6563	1.06587	1.975	.051
	Old concept	71	3.1831	1.15028		
Obtaining certificates	Bologna	32	3.2188	1.23744	1.579	.118
	Old concept	71	2.7887	1.29742		
Method of registration for exam	Bologna	32	2.8125	1.28107	.963	.338
	Old concept	71	2.5493	1.28495		
The availability of online course content	Bologna	32	2.0938	1.17389	2.366	.020
	Old concept	71	1.6197	.81707		
Method of practical exam	Bologna	32	3.5000	1.13592	3.625	.000
	Old concept	71	2.6901	1.00842		
Theoretical methods for taking exam	Bologna	32	3.2500	.91581	2.868	.005
	Old concept	71	2.6479	1.01557		
Electronic monitoring of the success of students in each subject	Bologna	15	1.7333	1.09978	2.313	.026
	Old concept	28	1.1786	.47559		

Table 7. Rating the degree of computerization of the educational process

	Group	N	Mean	SD	t	p
The scope of the literature in relation to educational needs	Bologna	32	2.6563	1.12478	.484	.630
	Old concept	70	2.5429	1.08595		
Access to the literature (time, personnel ...)	Bologna	32	2.8750	1.03954	2.766	.007
	Old concept	71	2.2676	1.02759		
The possibility of electronic access to the literature	Bologna	32	2.5938	.97912	4.027	.000
	Old concept	71	1.8451	.82198		

Table 8. Availability, accessibility and quality of literature in the library fund of the Faculty

cess. State institution for quality assurance and criteria should be established as soon as possible in order to "ratifies unique norms for licensing of higher education institutions and establishes clear, transparent and accessible criteria for accreditation procedures, accreditation reviews, quality reviews and quality assessment of higher education institutions". Measuring student's satisfaction with concept and methods of education at Faculty of medicine of University of Sarajevo is useful way to getting relevant information about quality of medical education. Students studying by Bologna concept are more satisfied and all variables used for assessment of quality of education are significantly positive within Bologna group. Giving exams "one by one"–"exam by exam" is better and more useful method, but sedation of knowledge accepted by previous studied medical disciplines is more poor. Also, system of knowledge evaluation by tests are not enough relevant for measuring of the level of accepted knowledge.

Based upon a survey of students, measuring their satisfaction with the educational process realized (theoret-

ical and practical instruction, interactive learning, testing, use of IT and technical aids in teaching, availability of instructional literature for preparing for the exam, etc.), we came to the conclusion that the worst evaluated are those factors that depend on financial resources that are available, which is specifically related to library fund of the Medical faculty and the degree of computerization of educational process, and also the level of training of teachers to convey knowledge to students with the application of modern medical information technology and technical teaching aids.

Comparison of the rating between the two groups indicated the benefits of the Bologna system which is reflected in better overall success of the students, better quality of teaching, better social status of the students, more quality educational process, availability of the online resources and more convenient manner of taking exams.

6. CONCLUSION

In order to reach improve quality of medical education at biomedical faculties in Bosnia and Herzegovina is to accomplish the following:

- Adopt “Framework Law on Higher Education” on the state level with fundamental principles of Bologna Process;
- Structure of public authorities responsible for higher education and financing must be clearly defined;
- Working group for Higher education comprising representatives all eight universities in Bosnia and Herzegovina should accelerate activities on implementation of the Bologna Process;
- State institution for quality assurance and criteria should be established as soon as possible in order to “ratifies unique norms for licensing of higher education institutions and establishes clear, transparent and accessible criteria for accreditation procedures, accreditation reviews, quality reviews and quality assessment of higher education institutions”;
- Foreign experts from EU member states must be included for the implementation of accreditation procedures;
- Teachers and staff mobility should be increased from as well to and within the Bosnia and Herzegovina;
- Higher education institutions should be privileged in terms of wide autonomy in order to decide on internal organization, staffing, new study programmes and financing;
- Allow student to participate in and influence the organization and content of education at universities;
- University staff must have wide support from decision makers and political authorities and institutions in Bosnia and Herzegovina.

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