

The experience of using distance learning means in training students of Higher Medical Educational Institutions

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Abstract. This article analyzes the class ranking of medical faculty students of Bogomolets National Medical University who have taken the licensing examination “Krok 2” in the 2019 academic year. State certification and licensing examination “Krok 2” results have been compared for pediatrics faculty students. The effectiveness of using distance learning tools in training students of Higher Medical (Pharmaceutical) Educational Institutions (HM(P)EI) for taking the licensing examination “Krok 2” and state certification has been studied.

Keywords: distance learning, HM(P)EI, test, performance, class ranking, state certification.

Introduction. In the time of informational technologies, many aspects of life are being transferred into the global network, educational processes are no exception. In the last decade, distance learning in Ukraine has undergone positive changes, although it falls short of the European system of education. This is mainly due to the insufficient level of perception of distance learning opportunities in Higher Educational Institutions (HEIs). The advantages of using distance learning in combination with the traditional system of education are, no doubt, obvious. As a result, many HEIs intensively implement distance learning technologies, however, this dynamic is almost absent in medical universities. Quite often issues are raised concerning distance learning effectiveness for students of Higher Medical Educational Institutions and whether it is at all possible to obtain medical training remotely. To be sure, distance learning cannot replace proper workshops and laboratory sessions.

Nevertheless, distance learning can solve a wide range of issues connected with learning bulky theoretical blocks and self-test assignments, lesson preparation and control measures, familiarizing with the supplementary material of the study course, online teacher consulting and active discussions among students on contentious issues.

Graduate students of Higher Medical (Pharmaceutical) Educational Institutions, in turn, have to successfully pass the licensing examination “Krok 2” and the state examination in order to obtain qualification in General Medicine. The Medical licensing examination “Krok” is objective external independent evaluation of professional competence conducted by the Test Centre at the Ministry of Health of Ukraine. An effective and optimal way of raising the level of preparedness of graduate

students is to create a distance learning environment at university.

A Brief overview of publications on the subject. The following scholars have studied the specifics and various aspects of using distance learning tools in their works: O. Abacumova, O. Borzenko, B. Shuneych and others. The works of N. Zhevakina, H. Kozlakova, I. Kozziar, I. Kondius and others are devoted to the issues concerning informational and program software for distance learning. V. Artemenko, V. Bekh, V. Bykov, N. Monakhov and others studied the concepts of modeling developmental environments of distance learning in their works. The works of I. Bulakh, L. Voitenko, V. Honcharenko, M. Ioltukhiv’skyi, N. Kuzniak, M. Mruhy, N. Obernikhina, L. Yanits’ka and others are devoted to the issue of optimizing student preparation for taking the licensing examination “Krok”.

The purpose of the article is to study the effectiveness of using distance learning tools in preparing students of HMEIs for taking the licensing examination “Krok 2” and state certification.

Results and their discussion. The following faculty ranking can be compiled by comparing the performance results among the students of Bogomolets National Medical University (Table 1) [2], who have taken the licensing examination “Krok 2” in 2019 General Medical Preparation:

- 1 place Medical faculty №2,
- 2 place Medical faculty №1,
- 3 place Medical faculty №3,
- 4 place Faculty for Training Doctors for the Armed Forces of Ukraine (FTDAFU),
- 5 place Medical faculty №4.

Table 1. Licensing examination “Krok 2. General Medical Preparation” results comparison for the 2018–2019 academic years

Faculty name	Internal medicine		Difference in performance	Surgical speciality		Difference in performance	Pediatric speciality		Difference in performance	Obstetrics and gynecology		Difference in performance	Hygienic speciality		Difference in performance
	2018	2019		2018	2019		2018	2019		2018	2019		2018	2019	
Med. №1	78,5	76,8	-1,7	80,5	78,1	-2,4	80,8	72,1	-8,7	79,2	75,8	-3,4	83,3	80,6	-2,7
Med. №2	82	80,6	-1,4	84,1	80,1	-4	84	74,1	-9,9	84,7	80,7	-4	86,1	82,6	-3,5
Med. №3	76,6	73,2	-3,4	79,1	74,7	-4,4	80,6	67,3	-13,3	81,4	77,6	-3,8	80,1	76,9	-3,2
Med. №4	70,3	68,1	-2,2	73,2	70,7	-2,5	72,3	64,9	-7,4	76,4	72,9	-3,5	73,8	72,9	-0,9
FTDAFU	77,4	71,4	-6	82,3	73,6	-8,7	79,5	66,2	-13,3	75	69,5	-5,5	82	76,2	-5,8

Fig. 1. contains a diagram which shows the dynamics of change in the licensing examination “Krok 2. General Medical Preparation” results for the 2019 academic year in comparison with the performance in the 2018 academic year [1].

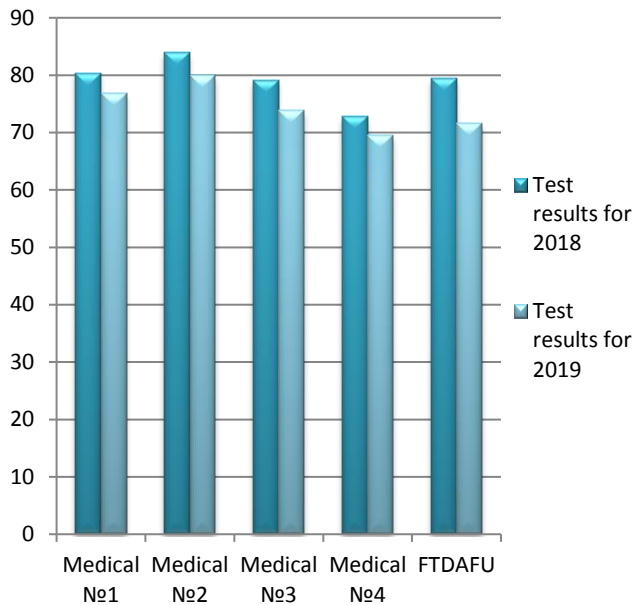


Fig. 1. Diagram of “Krok 2. General Medical Preparation” exam results for the 2018-2019 academic years.

Throughout the academic year, not only traditional study tools but also the NEURON educational and information platform [4] were used for training medical students. This platform contains courses arranged according to categories, filled with test tasks from the booklets for the 2005–2018 for interactive training during student preparation for the licensing examination “Krok” (Fig. 2).

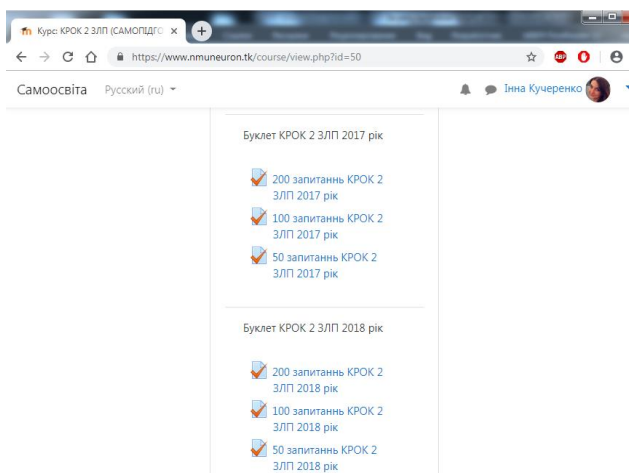


Fig 2. NEURON educational and information platform page

The average performance rate in the testing of medical students on the platform with questions from previous year booklets is 85 %, while the testing performance rate of the pediatrics faculty, on average, comprises 83,08 %. The average state certification results for 2018 on medical faculty №3 (pediatrics faculty) was 77,94 %, which is 1,26 % lower than the performance on the licensing examination “Krok 2. General Medical Preparation” for the 2018 academic year (Fig. 3), while the performance for 2019 academic year is 79,56 %, which is 5,8% higher than the results of the licensing examination “Krok 2. General Medical Preparation” (Fig. 4).

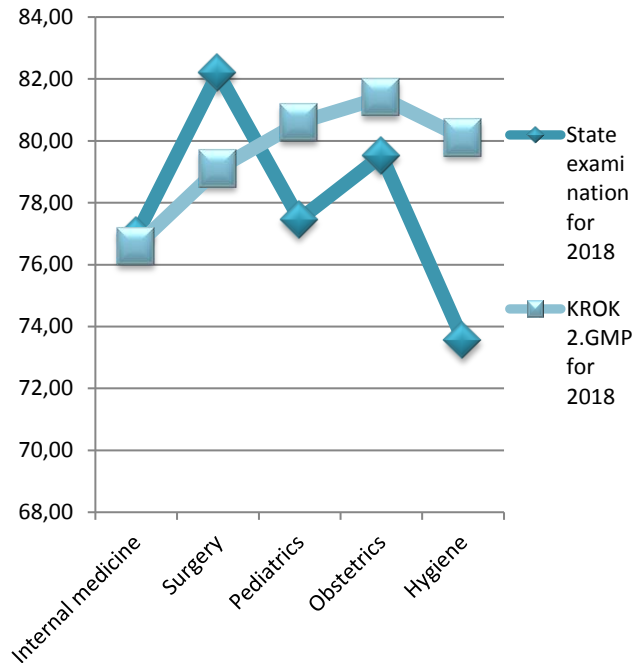


Fig. 3. Results of the state examination and “Krok 2. General Medical Preparation” for the pediatrics faculty in the 2018 academic year

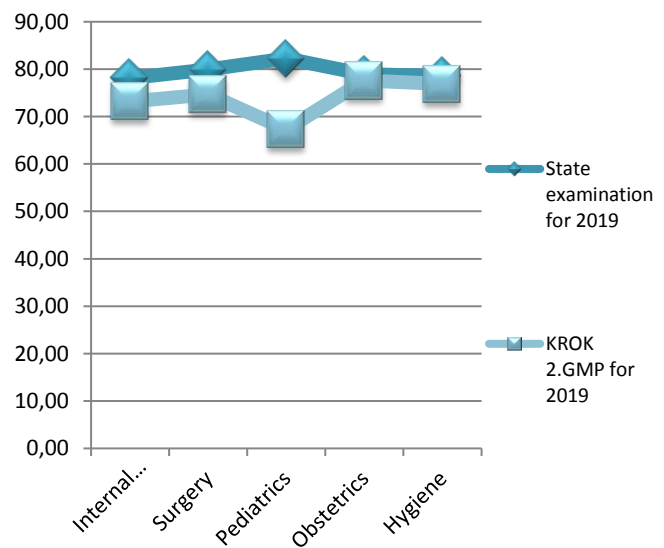


Fig. 4. Results of the state examination and licensing examination “Krok 2. General Medical Preparation” for the pediatrics faculty in the 2019 academic year

Upon analyzing the students’ testing data in the NEURON educational and information platform, state examination results as well as the licensing examination “Krok 2. General Medical Preparation”, we can conclude that, on average, the results of “Krok 2. General Medical Preparation” differ very little from the state examination results in comparison with the previous years. In the interactive testing system, the performance rate is higher which is due to several factors, such as:

- random testing schedule,

- the absence of the controlling factor (teacher, proctor),
- questions in the on-line testing system differ in volume.

Despite the fact that test questions [3] in the 2019 academic year varied slightly both in volume and in structure (test tasks were constructed by analogy with the United States Medical Licensing Examination USMLE STEP 2), medical faculty №3 student preparation for the state certification proved to be effective.

Conclusions. Rational and methodologically reasoned use of modern distance learning means in combination with traditional methods, no doubt, facilitates the improvement of the preparation of students of Higher Medical Educational Institutions. Distance learning is one of the most progressive systems of training specialists, including medical ones. This is

due to the fact that the educational process in the sphere of higher professional medical education is subject not so much to passing informationally charged material of medical nature but rather to forming productive thinking of future medical professionals, developing the intellectual potential of an individual capable of self-education and self-organization under the conditions of complex medical professional activity.

It is obvious that the preparation system for medical students will face new challenges, which call for the development and implementation into medical education practice of new approaches based on modern informational technologies and resources, which require adequate scientific support.

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