

**PEDAGOGICAL ANALYSIS OF THE OBJECTIVE
STRUCTURED PRACTICAL (CLINICAL) EXAM (OSP(C)E-2)
«HYGIENE AND ECOLOGY» PART RESULTS RECEIVED
BY FOREIGN STUDENTS OF THE 6th YEAR OF STUDY**

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The administration approved initial developments in changing the form of graduates' certification at Bogomolets National Medical University in

the 2019/2020 academic year [1]. However, restrictive measures due to the coronavirus disease pandemic delayed the start of this initiative. The full-scale invasion of the Russian Federation increased the complexity of the technical aspects of organizing this type of exam.

The introduction of a new form of graduate certification (6th year of study, specialty 222 «Medicine») [2] became a particular challenge and test of the effectiveness of discipline teaching models during the previous years of study. Thus, teachers were tasked with creating an effective complex of students' knowledge monitoring according to the new requirements. Students, in turn, had to learn new methods of demonstrating the acquired skills and abilities.

Therefore, the components of the innovation of such an exam were the time frame for completing the received task at the station, raising the level of skills and abilities demonstrated by students to automaticity and perfection under the new form of scoring – a checklist, the simultaneous completion of various components within one day in the directions that also included a preventive part in the form of a «Hygiene and Ecology. Healthcare Organization» station.

At the same time, the mixed form of education, taking into account the realities of wartime, gave students of the Faculty of Training Foreign Citizens (English-language form of education) opportunities to use the online or offline mode to demonstrate their knowledge during certification. The specified conditions created heterogeneity in the organization of the graduates' skills and abilities assessment process performed by examiners.

The aim of our study was to analyze the results of the «Hygiene and Ecology» part of the objective structured practical (clinical) exam (OSP(C)E-2) taken by foreign students in their 6th year of study, taking into account the online and offline forms of assessment.

Research materials and methods: The study utilized the method of pedagogical analysis and various statistical methods, including Spearman's rank correlation coefficient, Wilcoxon's T-test for dependent samples, and Kendall's correlation coefficient. The analysis was based on

the results of intermediate knowledge assessments during the exam (3rd year), final module control (6th year), and final graduation control OSP(C)E-2.

Results: A total of 229 foreign students passed the certifications in the «Hygiene and Ecology» part. The calculated average score for studying the discipline «Hygiene and Ecology» over 3 and 6 years was 133.5 ± 1.321 (132-136.5, 95%). The average score for the «Hygiene and Ecology» part OSP(C)E-2 was 184 ± 1.806 (180-188, 95%). Wilcoxon's T-test yielded a result of <0.001 , Spearman's rank correlation coefficient was $R_o=0.390$ at a significance level of $p<0.01$, and Kendall's correlation coefficient was $\text{Tau}=0.288$ at a significance level of $p<0.01$.

Out of the students, 57 underwent offline certification. The calculated average score for studying the discipline «Hygiene and Ecology» over 3 and 6 years was 132 ± 2.297 (126.5-134.5, 95%), and the average score for the «Hygiene and Ecology» part OSP(C)E-2 was 184 ± 3.250 (180-200, 95%). Wilcoxon's T-test yielded a result of <0.001 , Spearman's rank correlation coefficient was $R_o=0.233$ at a significance level of $p>0.05$, and Kendall's correlation coefficient was $\text{Tau}=0.187$ at a significance level of $p<0.04$.

Regarding online certification, a total of 172 students underwent it. The calculated average score for studying the discipline «Hygiene and Ecology» over 3 and 6 years was 134 ± 1.573 (132-138.5, 95%), and the average score for the «Hygiene and Ecology» part OSP(C)E-2 was 184 ± 2.147 (180-188, 95%). Wilcoxon's T-test yielded a result of <0.001 , Spearman's rank correlation coefficient was $R_o=0.448$ at a significance level of $p<0.01$, and Kendall's correlation coefficient was $\text{Tau}=0.329$ at a significance level of $p<0.01$.

Comparison calculations between the offline and online forms of certification for the average results of OSP(C)E-2: Wilcoxon's W-test (unrelated samples) yielded a result of $p=0.392$, Kendall's correlation coefficient was $\text{Tau}=0.017$, $p>0.05$, and Spearman's rank correlation coefficient was $R_o=0.031$, $p>0.05$.

Conclusions. Based on the calculations using a comprehensive set of variable statistics methods, no significant difference was observed in the results between students who underwent online and offline forms of assessment. Wilcoxon's W-test (unrelated samples) did not yield a statistically significant difference, and both Kendall's correlation coefficient and Spearman's rank correlation coefficient indicated no correlation.

The conducted pedagogical analysis of the results of the preventive part of the objective structured practical (clinical) exam by foreign students in their 6th year of study revealed the absence of bias and differences in the approaches of teachers when evaluating the acquired knowledge and skills of graduates based on different forms of examination. This analysis also demonstrated the viability and pedagogical justification of organizing the examination process in a mixed online/offline format.

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