

## **USING GOOGLE FORMS TO TEST KNOWLEDGE IN GENERAL AND INORGANIC CHEMISTRY**

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**Abstract.** *Monitoring the level of knowledge of students is one of the important components of the educational process, which makes it possible to assess the success of learning. Analysis of the results of monitoring the level of knowledge makes it possible to adjust the teacher's further actions in order to improve the learning outcomes of each individual student.*

*The rapid introduction of information technologies into the educational process has led to the fact that innovative methods of monitoring learning outcomes, such as Google Apps services and tools, are increasingly being used to control the level of knowledge and assess learning outcomes, instead of traditional assessment methods.*

**Key words:** *Google forms, monitoring, analysis results, test tasks.*

**Presentation of the main material.** The paper analyzes the features of the application of educational resource methods based on Google Forms for monitoring the academic achievements of first-year students of the Faculty of Pharmacy of the Bukovina State Medical University in the subject "General and Inorganic Chemistry".

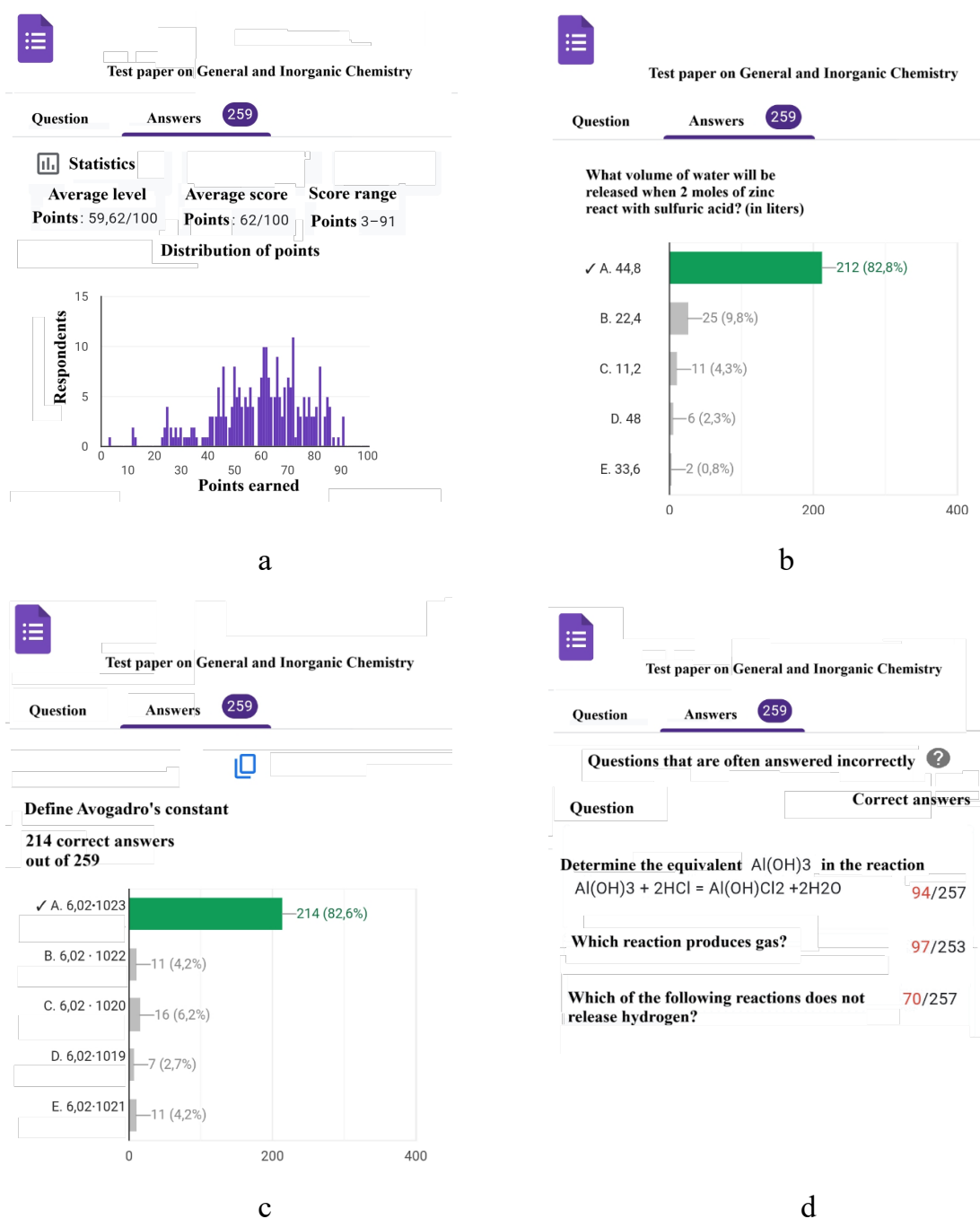
To ensure effective and high-quality control of the level of knowledge, tasks in the form of tests were used. In forming the test task database, test tasks of the open (the answer is formed by the student) and closed (the answer is chosen from the available options) type were used. A block of tasks with 100 questions has been created for this Google Forms. Various types of test tasks have been prepared taking into account the level of complexity of the material covered. The task database includes multiple choice tests, alternative choice tests, tests for establishing correspondence with one extra answer, tests for determining true or false statements, tests for comparison and phrase continuation.

Google Forms is configured in such a way that immediately after completing the

online test, students receive a test result with errors and correct answers, respectively, students have the opportunity to analyze their results.

Particularly informative are the results of statistical processing of all received responses, which makes it possible to identify the average level of knowledge of the surveyed group (Fig. 1, a), the average score (Fig. 1, a), the questions that are most often answered correctly (Fig. 1, b, c), and incorrectly (Fig. 1, d).

**Figure 1** - Results of the knowledge control of students of the Faculty of Pharmacy of BSMU using Google Forms “General and Inorganic Chemistry



**Conclusions:** Analysis of the obtained testing results allowed us to identify the most difficult tasks in the tests - 8%, the easiest tasks - 12%, the maximum complexity of the test is 0.07, and the minimum complexity is 75. For repeated testing, difficult tests were removed and replaced with simpler tasks.

Repeated testing using the Google Forms service allows you to identify the dynamics of qualitative changes in the learning process and develop action measures to improve results. The success of testing using Google Forms depends on the systematic use of this method of quality control of students' knowledge and on the selection of test tasks.

Advantages of using Google Forms in knowledge control: process automation, quick testing and obtaining results, data storage, personalized analysis of results, changing the composition of the test, transferring test results to spreadsheets, and performance logs.

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