

Using the iSpring Suite computer platform in distance learning

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Abstract. The article discusses the experience of using the iSpring Suite 9 computer platform as an information tool for conducting distance classes with second-year students in the training for "Business Informatics". Self-isolation requirements in the face of the COVID-19 pandemic have required the development and use of innovative remote learning methods. The need to conduct practical classes on solving technical problems with mandatory time control and prompt receipt of the results of the solution by the teacher determined the requirements for the choice of a computer program as a tool for providing distance work in the field of education. As a result, the choice was made in favor of the corporate training platform iSpring. According to the results of the spring semester, the experience of working with iSpring Suite 9 in creating electronic tests and conducting practical exercises in distance mode was recognized as successful and will be used in the future to conduct classes with students of the distance department of Novosibirsk State Technical University.

1 Introduction

The COVID-19 coronavirus pandemic has seriously affected all aspects of human activity. The requirements of almost universal self-isolation caused a significant decrease in the overall level of production the lack of effective measures developed to combat infection only worsened the already difficult situation.

This terrible disease had no less impact on the development of education. The urgent requirements to ensure the safety of the health of all participants in educational activities (from schoolchildren to heads of universities) have led to the need to look for various forms of distance education that would sufficiently compensate for the lack of full-time education opportunities.

2 Information tools requirements for distance learning

In these difficult conditions, practically each of the school teachers and university professors tried their own methods of working with remote access, using the capabilities of modern information technologies.

The matter was complicated by the fact that there was absolutely no time for a serious study of the distance learning methodology: it was necessary to ensure the implementation

of the curriculum every day. That is why, at first, all the variety of methods of remote work was reduced to conducting lectures and seminars in the form of webinars, as, for example, at the Novosibirsk State Technical University (NSTU).

However, if the webinars helped students and teachers of the humanities, then for technical and information specialties this was not enough for the following reasons:

- 1) firstly, in order to write mathematical formulas, as well as draw drawings and diagrams, the teachers did not have a corresponding blackboard at home, moreover, it turned out that many students did not have webcams at home;
- 2) secondly, the lack of necessary technical means has led to the fact that practical training on problem solving has become virtually impossible to conduct. If the performance of laboratory work (not requiring special equipment, but only computers, such as at the business faculty of NSTU), which by definition require independent work of students, could be supported by sufficiently developed methodological support and supplemented with video tutorials from the Internet on key points of the topic under consideration, then the process of solving problems for teachers could not be controlled either in content or in time;
- 3) third, even when creating tests (which were overwhelmingly used by teachers), it was necessary to look for such information tools that, on the one hand, would make it relatively easy to pack test questions and tasks with multimedia tools for a sufficiently deep understanding of their economic or physical meaning by the student, and on the other hand, to control and limit the time for their implementation;
- 4) fourthly, information and tools for creating electronic tests should automate the process of checking and evaluating completed tests, in order to reduce the time for their processing, since, ultimately, there is only one teacher, and there are many students;
- 5) fifth, the information tool for creating electronic tests should interact well with MS Office programs, which for the vast majority of teachers are a working tool for creating methodological support for the educational process.

All the above reasons became the basis of the system of requirements for various software products in order to choose among them an information tool for creating electronic tests and solving practical problems in remote mode in the direction of training 38.03.05 "Business Informatics" at the business faculty of NSTU in the spring and autumn of 2020.

3 Selection and features of the iSpring Suite platform

Distance learning systems (LMS) have long been known to university teachers. With the help of distance educational technologies, it is possible not only to shift a number of routine pedagogical actions onto the shoulders of a computer, but also to organize truly high-quality, individual, differentiated education. Below is a brief overview of the most famous distance learning systems that are used in Russia.

1. Moodle. Free platform with extensive customization options. Installed only on your server. There are many plugins to expand the functionality. Requires web development skills for administration.
2. WebTutor. A modular HRM platform that allows you not only to build training, but also all HR processes: competence assessment, automate the selection and initial training of personnel. A complex system with broad capabilities.
3. Teachbase. Cloud-based learning platform. There is a built-in course editor - the course page is built on Tilda like a regular landing page. It is possible to sell courses.
4. GetCourse. The most popular platform among info businessmen. Webinars, integration with multiple payment systems, protection against theft of courses.
5. Memberlux. Plugin for WordPress that allows you to create a learning portal based on a regular website. One-time payment, suitable for beginner information businessmen.

6. iSpring. A platform focused on the corporate sector. Ready to go right after registration. Support for all types of training materials, webinars, detailed statistics and a course editor that allows you to quickly create courses and simulators from office documents and videos. iSpring is the flagship of corporate training. The system allows you to create beautiful interactive simulators that are popular with large businesses for staff training.

As a result of the application of the requirements given in item 2 to various software products in the e-learning market, the choice was made in favor of the iSpring Suite 9.7.9 software package based on the following features of this product.

1. iSpring Suite 9 is a PowerPoint add-on, so it is simple and easy to use. Allows you turn an ordinary presentation into a professional training course. iSpring products are trusted by educational organizations and businesses as the best e-learning tools. Many world famous companies such as Oracle, Sony, P&G, IBM, Adidas, AMD use iSpring products to organize corporate training.
2. Support for all PowerPoint effects. iSpring Suite supports and allows high quality reproduction of all PowerPoint effects, including transitions, triggers and complex animations. You can convert your presentation to cross-platform format: Flash + HTML5. All the effects that you have applied to your slides will be perfectly displayed on your computer and any mobile device.
3. Viewing on mobile devices. iSpring Suite 9 is an innovative e-learning tool that allows you to quickly and effortlessly create cross-platform projects for any device: computers, laptops, pads, iPad, iPhone, Android and Windows devices.
4. Tests and surveys. iSpring Suite 9 allows you to quickly and without special skills create effective tests to test knowledge and surveys to get feedback from the audience. The program contains 11 types of assessment and 12 types of questionnaire questions for the most complete and effective testing of students' knowledge.
5. Configuring notifications. Feedback elements that will appear if the user answers a question correctly, incorrectly, or partially correctly will help to make distance learning more individual.
6. Adding multimedia. You can make testing even more useful and interesting for students by adding audio and video to the questions. You can also insert images and formulas in both questions and answer options.
7. Setting up testing rules. For example, you can limit the number of attempts to answer a question and pass a test; set the response time for a question or the entire test. You can also prevent completion of testing with unanswered questions.
8. 4 levels of protection. To preserve the uniqueness of the created projects and protect the copyright of course developers, iSpring offers 4 methods of protection. You can restrict access to electronic materials using a password, add a watermark, make the presentation available only for a certain period of time, or allow viewing only from the domains you specify.
9. Publishing settings. iSpring Suite 9 offers a variety of publishing options for your content. The main innovation of iSpring Suite 9 is the publication of created courses, tests and interactions in universal HTML5 format so that your materials can be viewed in any browser and from any device: from desktop to smartphone.
10. Interactive tools. iSpring Suite 9 has 14 interactive templates for a wide variety of learning situations. They will help to visually present information and involve students in the educational process, this will help them quickly assimilate the course material. For example, interactivity can help you present structured information, create a glossary of terms, reference or catalog with easy navigation, or explain the design of complex equipment to focus attention on detail.
11. Developed help system. iSpring Suite 9 provides both regular text help and video tutorials in Russian, as well as the ability to get a quick answer to your question in the forum.

12. Using online learning systems. The iSpring Suite Course Builder is part of the iSpring Learn Learning Portal, a comprehensive enterprise online learning solution.

Software required to run iSpring Suite 9: Microsoft Windows 7/8/10 operating system (32- or 64-bit versions), MS Office 2007/2010/2013/2016 (32- or 64-bit versions), modern versions browsers Internet Explorer, Google Chrome, Firefox, etc.

4 Using the iSpring Suite Platform

After installing the iSpring Suite 9.7.9 distribution, this product can be used as a universal learning platform both offline (see figure 1) and as a separate tab in PowerPoint.

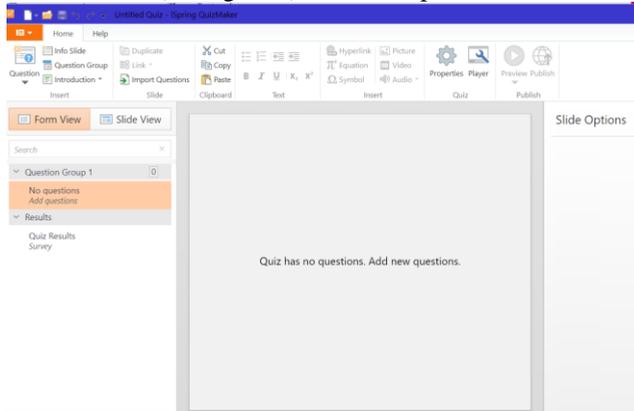


Fig. 1. Learning platform.

The formation of questions, tasks, and test properties is presented below in the following sequence of operations:

- 1) select a question option, as shown in figure 2;

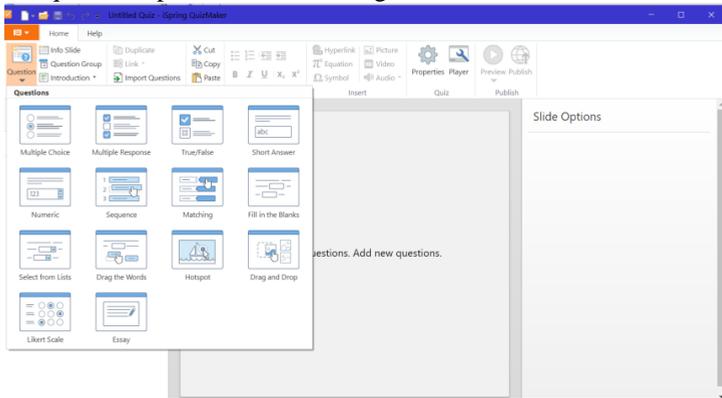


Fig. 2. Select a question option.

- 2) the question using a numerical answer is shown in figure 3
 - in the "Feedback and branching" section of figure 3, you can configure the response rating: true – 4 points, incorrect – 0 points; repeated – minus 2 point;
 - in the section "Slide properties" you can limit the response time;
 - on the Insert tab of the menu ribbon, you can insert multimedia elements into the question text using the corresponding buttons;

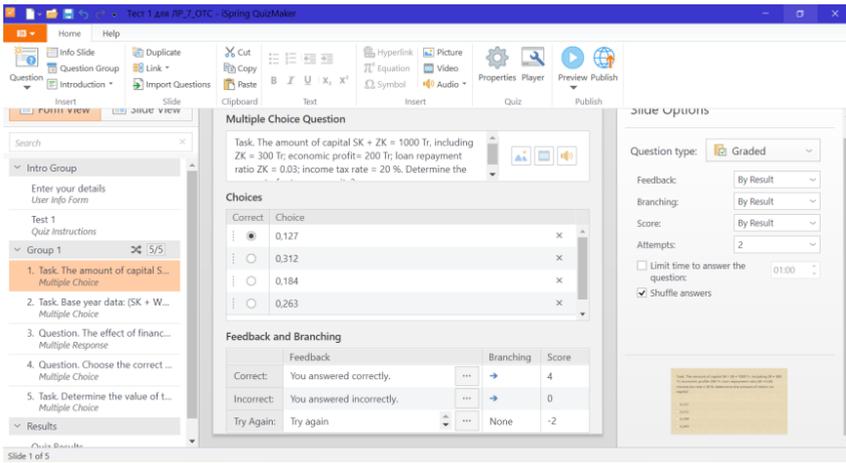


Fig. 3. Using a numerical answer.

- 3) the question created using mathematical formulas is shown in figure 4;
- in the "Feedback and branching" section of figure 4, you can configure the response rating: true – 2 points, incorrect – 0 points; repeated – minus 1 point;
 - in the section "Slide properties" you can limit the response time;
 - on the Insert tab of the menu ribbon, you can insert multimedia elements into the question text using the corresponding buttons;

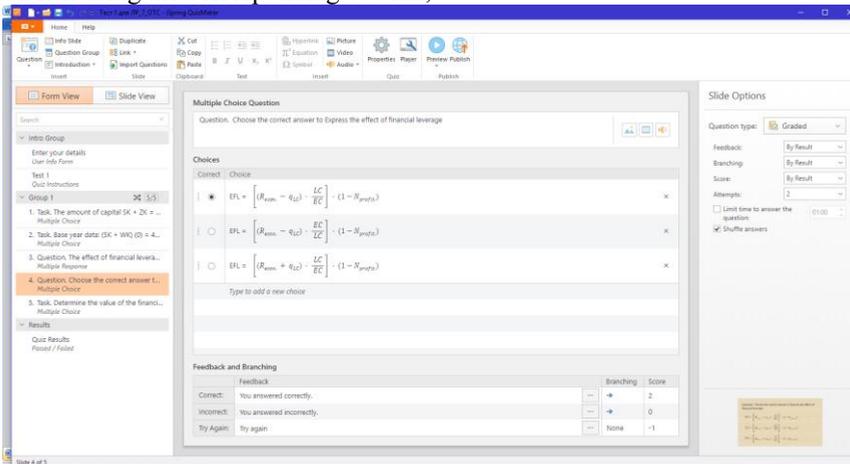


Fig. 4. Using mathematical formulas.

- 4) after the formation of all questions and tasks of the test, it is necessary to use the "Properties" button on the Test tab of the ribbon menu to determine its properties when displayed in the browser at runtime:
- the size of the slide and the total time limit for its implementation (see figure 5);

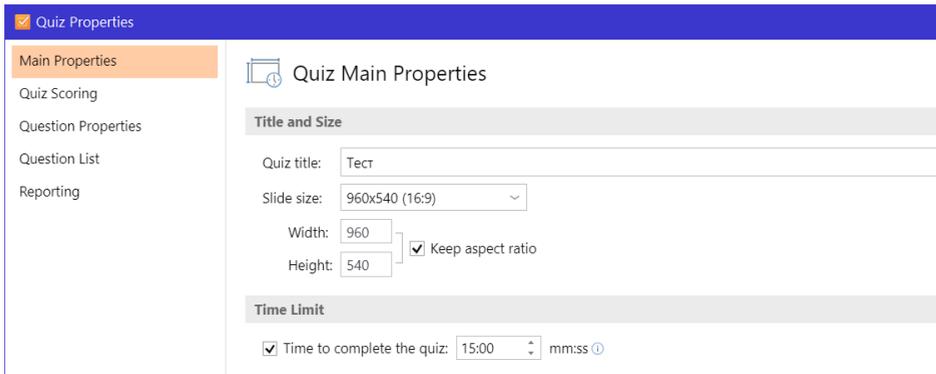


Fig. 5. Time limit.

- general properties of the test score (see figure 6);

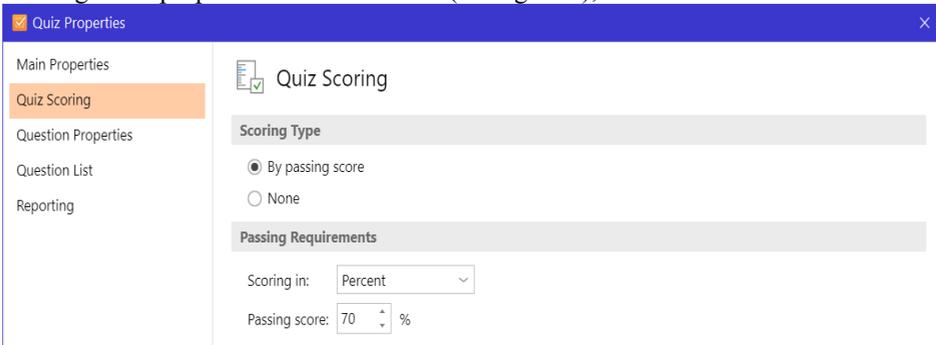


Fig. 6. General properties.

- properties of selecting questions from different test groups and mixing them (see figure 7);

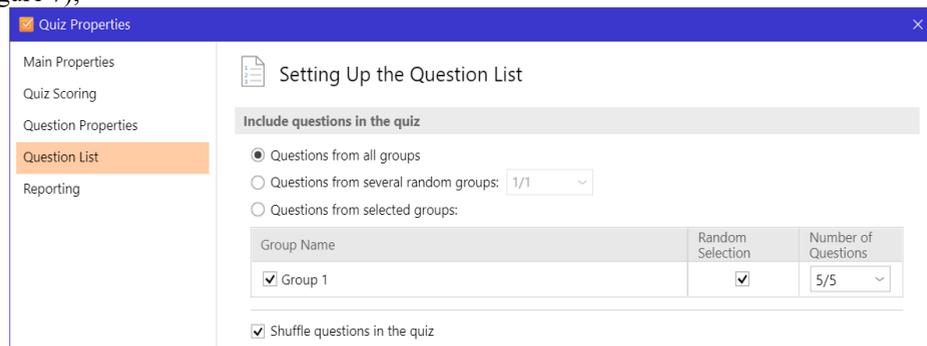


Fig. 7. Properties of selecting questions.

- properties for automatically sending test results immediately after completion to the teacher's email address with the ability to demonstrate correct and incorrect student responses (see figure 8);

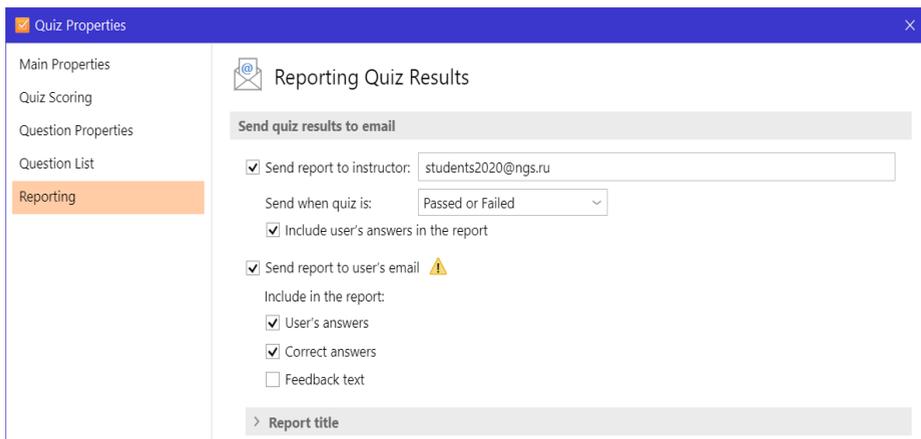


Fig. 8. Properties for automatically sending test results.

- 5) the result of forming the test with all its questions, rules, ratings and publications is recorded in the corresponding *.html* file, which is stored in the folder defined in the properties of its publication when you click the "Publish" button on the program menu ribbon.

The teacher sends the test file to students, which, when opened, is displayed in the browser with the specified properties:

- 1) the first page is displayed (created in the test data generation mode), where the student must enter their data (figure 9), which will be included in the test result when sent to the teacher's email:

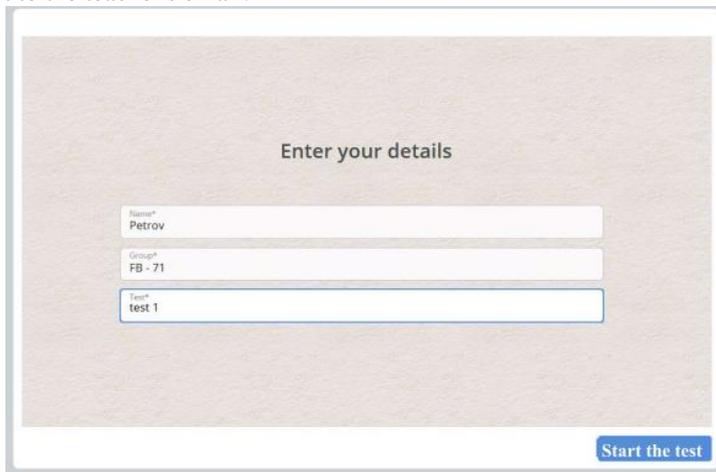


Fig. 9. The first page of test.

- 2) when you click the "Start test" button, a slide opens with the first question of the test and in the upper-right corner, the timer for limiting the time for all answers set in the properties is turned on (see figure 10)

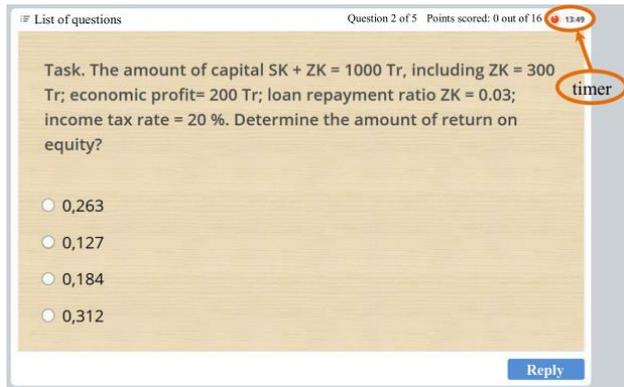


Fig. 10. The timer for limiting the time.

- 3) if the answer is incorrect, a retry notification appears (see figure 11), if this property was set when setting up grades; if the answer is correct, a corresponding notification appears and an invitation to continue running the test (see figure 12)

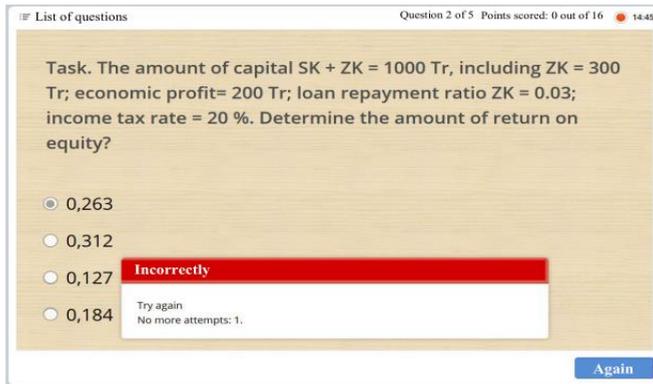


Fig. 11. The answer is incorrect.

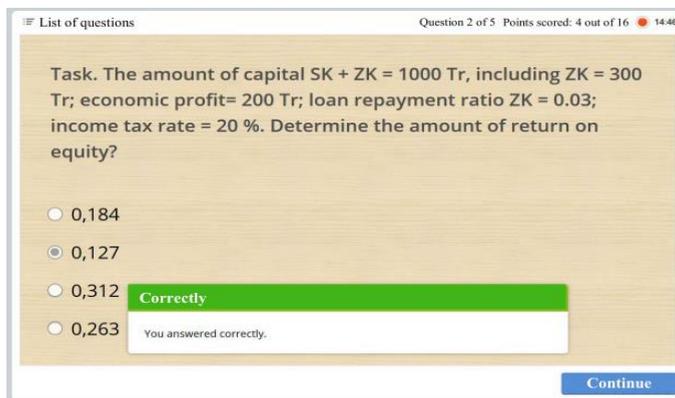


Fig. 12. The answer is correct.

- 4) after answering the last question of the test, as well as if the timer is reset, the results are automatically sent to the email specified in the test properties (figure 13);



Fig. 13. The results are automatically sent.

- 5) after sending, the overall test results are displayed on the screen of the student being tested (figure 14)



Fig. 14. Test results are displayed.

with the possibility of detailed viewing (by clicking "View the test") - figure 15

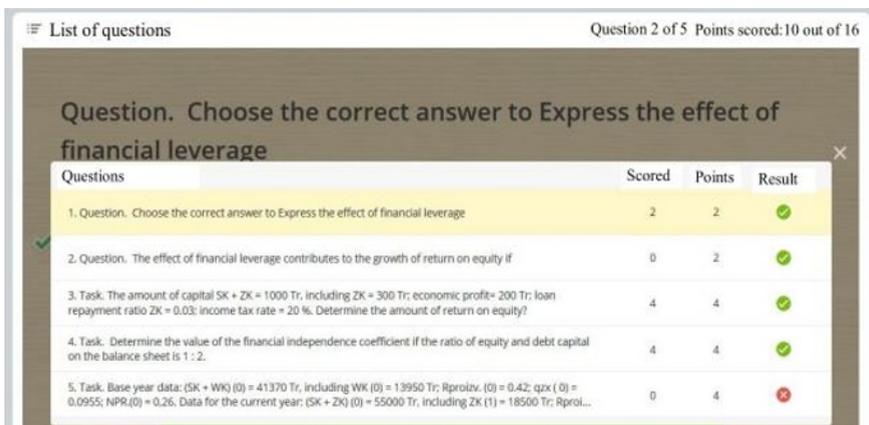


Fig. 15. Detailed viewing.

- 6) a fragment of the test results on the teacher's email is shown in figure 16



Fig. 16. A fragment of the test results.

5 Conclusion

The results obtained in item 4 show the possibility of conducting remote classes on the iSpring Suite platform. In addition to creating and conducting electronic tests, this platform was used when students performed homework and control work in the form of solving problems with remote access, when it was necessary to give not only the correct answer, but also to present the entire course of solving the problem. At the same time, the results of the solution were automatically sent to the teacher's email address in the same way as when performing tests. In general, the experience of conducting classes in remote mode on the iSpring Suite platform can be considered successful and it is mandatory to use it at the remote department of NSTU, as well as if students cannot attend face-to-face classes for good reasons.

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