STRUCTURE AND CONTENT OF THE ELECTRONIC SCHOOL-METHODICAL COMPLEX ON THE DISCIPLINE "MECHANICS OF SOILS, FOUNDATIONS AND FOUNDATIONS"

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ABSTRACT

The article examines the component composition of the electronic educational and methodological complex in the discipline "Soil mechanics, about the basics and foundations". A description is given of the main elements of the complex, the structure of the course in an electronic environment. The purpose: development of recommendations for creation of an effective electronic educational-methodical complex taking into account specificity of the chosen discipline. The relevance of the chosen research direction is determined by the need to resolve the contradiction between the potential capabilities of the electronic educational and methodological complex in the graduate training system and the insufficiently developed theoretical foundations for their design. The specifics of the electronic
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educational-methodical complex are analyzed; the main provisions of its construction are covered. Distinctive features are distinguished. Since the legislation does not provide a clear definition of the concept of an electronic educational and methodical complex, we proposed copyright. As an example, we considered a complex developed by a team of teachers from the Minin Nizhny Novgorod State Pedagogical University on the electronic platform Moodle. We discussed in detail and analyzed the contents of each section. By providing a comprehensive impact on students, the course combines the conceptual, illustrative, reference, training and controlling parts and identifies its additional capabilities. And specify the principles on which the first modern electronic educational and methodical complex and stages of its construction. It is noted that the complex we are considering meets the established requirements, which favors the formation of students as professionals. The results will create an educational and methodical complex is entirely consistent with the requirements of Federal state educational standard with all the features of discipline.

Keywords: educational-methodical complex of discipline, electronic educational-methodical complex, and engineering disciplines, a student, the content of education, and educational technologies.


1. INTRODUCTION
The insufficient development of specialized training techniques is one of the problems professionalization of future specialists in the sphere of "Construction". Educational-methodical complex of discipline is a means of realizing the objectivity of instruction and the scenario of the learning process.

The quality of education depends on the educational and methodical complex, so it should be updated in a timely manner, and the electronic educational and methodical complex has a number of features that should be taken into account. The educational-methodical complex is the main means of education in the information-educational environment of the university and the scenario of the educational process, which operates on the basis of the requirements of the Federal State Educational Standard To the composition of the main elements of the teaching and methodical complex the system of normative and educational-methodical documentation, the means of training and control, providing the teaching of the discipline "Soil mechanics, foundations and foundations" (Abramova et al, 2017).

2. METHODOLOGY
In this study, in developing the structure and content of the teaching and methodical complex the discipline "Soil mechanics, foundations and foundations" implemented the competence and system-activity approaches that make up the conceptual basis of the complex.

Approbation of the electronic educational and methodological complex of the discipline "Soil mechanics, foundations and foundations" was carried out from 2016 to 2018 on the basis of the Faculty of Management and socio-technical services of the Nizhny Novgorod State Pedagogical University named after Kozma Minin. The number of participants was 117 people. The effectiveness of the use of the course was assessed using the method and peer
review and self-assessment with the help of specially designed forms diary reflection of the discipline. After completing the course, the subject was asked to answer a number of questions, for example. What is your goal of mastering the course? How much do you rate the course? What was your activity during the course? How much were you active on the course? With 1 (not active) for 5 (very active) how do you assess the usefulness of the course for your professional development? With 1 (not useful) for 5 (very useful) points what were the most interesting topics for the course? What topics did you find most difficult? What of the learned, in the course of the course, you could apply in practice? What ideas did you include in your professional experience in the course of the course? What results could not be achieved in the course of the course? What was the reason for not achieving these results?

3. RESULTS

To develop an electronic training and methodical complex there are several stages

- The target audience is determined.
- The goals and objectives of the course are set.

Defining the electronic educational-methodical complex as a system, we must point out the specifics of the connection of elements and the distinguishing features of this object:

- The use of a set of educational and methodological materials makes it possible to realize the nonlinearity of the content links of the educational material of the discipline (Fedorov et al, 2017).
- Invariant and variational components of the electronic educational and methodical complex I contribute to the implementation and methodological support of the content variability and learning process (Bulaeva et al, 2018).

The main goal of the electronic educational and methodical complex- this is an increase in the effectiveness of the educational process and the development of students' independence in mastering the discipline (Smirnova et al, 2017). The tasks of the educational and methodical complex include:

- Determination of the content, scope of studying the discipline, setting requirements for the level of mastering the content of discipline by students.
- Determination of the content and volume of independent work of the student, as well as the establishment of forms and means for monitoring the performance of independent work.
- Methodical and information support of the educational process (Ajeenkya et al, 2014).

Electronic first educational and methodical complex must contain

- Recommendations for planning and organization of the student's independent work: types of work and description of the sequence of actions, implementation rules, criteria and evaluation indicators.
- Instructions for the implementation of practical / laboratory / design / graphic / design coursework.
- Advice on working with scientific or special text.
- Recommendations on the use of specially selected materials and the electronic educational environment.
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- Advice on working with literature.
- Recommendations for the implementation of test examinations, tests and others.

The curriculum and curriculum guide are of key importance in the development of the teaching and methodological complex. The manual is a basic publication in relation to the academic discipline. Others give specifics, complement and develop those provisions that are included in it (Markova et al, 2018). In other words, the textbook is the nucleus around which a set of educational publications is formed (Smirnova et al, 2017). Considering this topic within the framework of the competence approach, it is necessary to show the basic structural elements of the electronic educational and methodical complex. This can be case materials, training projects and laboratory workshops (Barber et al, 2013).

Based on all the above, we can say that the electronic is the first educational and methodical s complex is the main means of teaching in the modern information and educational environment. Modern educational and methodical s complex - this is a kind of scenario of the learning process, which has the flexibility, variability, nonlinearity (Vaganova et al, 2017).

Next, we will talk about the electronic educational and methodological complex, as education develops in the conditions of informatization and technological development (Khizbullin et al, 2017). And ensuring the effectiveness of the educational process is achieved due to the totality of the methods and methods of teaching used, the ways of organizing the educational activity and the independent work of the students. To date, the electronic environment provides ample opportunities (Zulkharmaeva et al, 2017).

Electronic the educational and methodical complex of them the so-called information educational resource, which is intended for the presentation of structured educational material of the discipline (Kutepov et al, 2017). By providing a comprehensive impact on students, he combines the conceptual, illustrative, reference, training and controlling parts and allows

- To assist the students in studying and systematizing theoretical knowledge.
- To help form new skills and develop existing ones.
- Students to develop the ability to presentation material being studied in various ways (test, graphics, using audio and video, animation on-line) (Yashin et al, 2017).
- Evaluate the quality of training (both for students and teachers).
- Manage the independent work of students in mastering the teaching material.
- Individualize learning.
- To manage the cognitive activity of students in the implementation of the basic educational programs of higher education with the use of distance educational technologies.
- Provides the student with the opportunity to study the discipline at any time (Fedushkin et al, 2017).

In other words, the electronic educational and methodical complex is the main means of solving the issues related to equipping the educational process with educational, educational, methodological, reference and other materials, using the methods of e-learning in the educational process and improving the quality of graduate training (Nemova et al, 2016). The Federal Law "Of education in the Russian Federation" provides a clear definition of "electronic methodical complex", so on the basis of material specified by us above, we can say that this complex is a system designed to provide organizational and substantive integrity of the methods and means training for effective organization of independent work of students.
and the most complete implementation of the requirements set by the Federal Law of the State educational standard (Il’taldinova et al, 2017).

The development of an electronic complex is based on several principles

- The relevant federal state educational standard in.
- A clear structure of the educational material.
- Completeness and availability of information.
- The complexity of the structure (the availability of theoretical and practical, control and measuring materials).
- Mobility of the structure (possibility to make changes if necessary).
- Relevance and relevance to scientific achievements in the relevant field.
- Accessibility of elements for students (openness of materials) (Salyaeva et al, 2016).

In Minin Nizhny Novgorod State Pedagogical University the development of network training and methodological complexes pay great attention. The quality of the construction of educational and methodical complexes also depends on the platform, which is used as an electronic base for its deployment. In Minin Nizhny Novgorod State Pedagogical University is used by Moodle.

The complex was developed in accordance with the stages indicated by us earlier. The target audience here is the students. The form of the intermediate certification is indicated. The content of the course reveals the requirements of the score-rating system, activity, personality-oriented approaches to bachelor's training (Egorova et al, 2016).

At the very beginning of the course, there is a news forum where the teacher can post information relevant to students. Further, the goals and objectives of the discipline are spelled out so that students are as clear as possible how, for what and how this discipline will be studied. Here are the requirements for the results of mastering the subject. Therefore, the student is aware of what exactly is required of him (Kaznacheeva et al, 2018).

It is worth noting that the teacher can tell students about the specifics of the discipline in the so-called greeting. "Soil mechanics, foundations and foundations" is one of the basic engineering disciplines for students of all construction specialties. Its value can be compared with the value of the course "Resistance of materials". Soil mechanics is one of the constituent parts of geomechanics, based on; on the one hand, the laws of theoretical mechanics - the mechanics of an absolutely rigid body, and on the other - the laws of structural mechanics - elasticity, plasticity, creep.

Goals, objectives, work plan for students can be placed in the syllabus of the discipline. The rating plan is also indicated in one of the sections of the syllabus. This tool helps students prepare properly and on time due to Rieter’s certification of the ongoing work on the subject. They are marked in Figure 1.
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The amount of discipline and types of study work, the content of the discipline and its sections, the individual rating plan (indicating the number of points, the minimum and maximum, for the performance of each specific task) are indicated. Students are asked to perform admission control (testing) in order to identify and determine the knowledge required for training. If the student cannot answer 30% of the tasks, he will need to repeat the material.

The electronic educational and methodological complex of the discipline consists of several sections, each of which has sub-items.

The first section is the mechanics of soils and the practical tasks attached to these materials. Each sub-item is equipped with a lecture that is available to the student at any time convenient for him. The section is equipped with video materials for clarity and better understanding, as well as attached testing.

For example, in Figure 2, the equipment of the first section is clearly shown.

http://www.iaeme.com/IJMET/index.asp
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unusable. Therefore, the purpose of studying the section "Soil mechanics, foundations and foundations" is the acquisition of students of basic knowledge and knowledge

- On the design of foundations of various structures.
- On the evaluation of the stress-strain state of the base soils.

Students at this stage read lectures and perform testing. Further practical tasks and a final test are provided.

4. CONCLUSIONS

In modern education, electronic systems have become an integral part, so placing an educational and methodical complex on an electronic platform is an extremely productive solution that brings beneficial results. We considered Electronic training complex, designed by a team of teachers Minin Nizhny Novgorod State Pedagogical University in the discipline "Soil mechanics, foundations and foundations", located on the Moodle platform shows how effective training can be with the proper structuring of the material. With such a complex organization of the student sees the specific requirements for it, and the results it should achieve at the end of the discipline. The content of the complex reflects the necessary recommendations that guide the student in the right direction to identify their own mistakes and further progress. Recommendations in this case allow the student to organize the learning process in the most optimal way. We have set out the requirements that must be followed when forming Electronic the educational and methodical complex and for its effectiveness. An obligatory element in the conditions of the competence approach is the availability of advice on planning and organizing the student's independent work. Every teacher of the university can apply the available results, making the necessary changes that are suitable for his discipline.

REFERENCES


