

GEOGRAPHICALLY DISTRIBUTED LEARNING NETWORK CONSTRUCTION INDUSTRY

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ABSTRACT

The article discusses the education informatization. Particular attention is focused on the development and introduction of modern information and computer technology to ensure high academic results and research processes.

INTRODUCTION

Today, throughout the world there is a process of global information society. The main landmarks of the modern information society are the computerization of education. This is the process of ensuring the educational field and methodology to creating effective use of modern information technologies, which are aimed at improving the learning process.

National Research University Moscow State University of Civil Engineering (MGSU), created in 1921 - the leader in construction and vocational education in Russia (Figure 1). He heads the branch Strategic Partnership architectural educational institutions of Russia (Figure 2).



Figure 1. National Research University Moscow State University of Civil Engineering (MGSU) www.mgsu.ru

University uses an innovative basis for organizing educational and scientific activities for the preparation of modern engineering staff, creating high-tech products and the transfer of new technologies in one of the most important spheres of human creative activity - construction.

Over the years the University has trained more than 100,000 highly skilled engineers specialists and managers at all levels in the field of industrial, civil, energy, water, special and unique construction, economics, planning and management of construction, information systems and technology, design and building automation buildings and complexes.

MGSU is the coordinator of the organization of scientific research university sector construction science involving architectural - construction and technical universities of Russia, conducting research in various areas of construction science.

To ensure high performance training and research processes based on the National Research University Moscow State University of Civil Engineering Industry established the Intercollegiate Center " Public Education Network in construction » www.os.mgsu.ru - integration network structure uniting the head center Open Network and related contractual relationship with him Regional Centers Open Network. The complex was established in April 2008 and is one of the most significant progress in the implementation of innovative educational program MGSU « Preparation of a new generation of professionals in the field of construction, creating a safe and comfortable living environment ", carried out under the national project "Education".

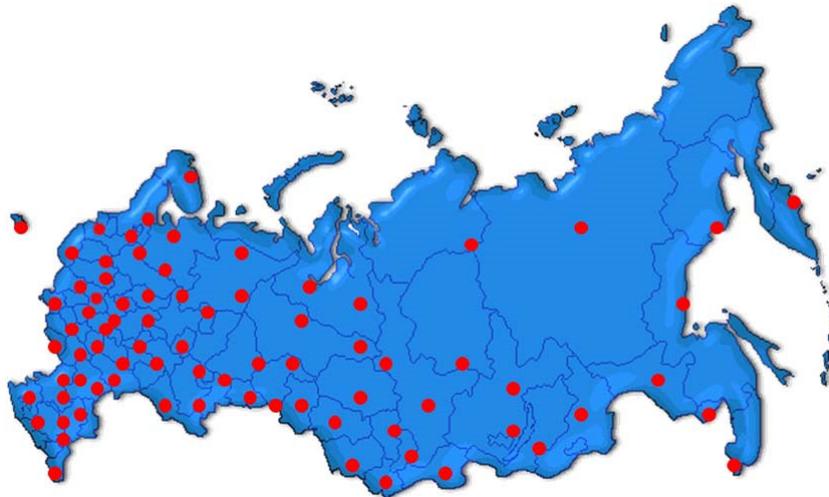


Figure 2. Strategic Partnership architectural educational institutions of Russia
www.asv.mgsu.ru

The main purpose of the Complex - creating a single educational space coupled with an increase in the quality of higher education at the expense of building the actual generation of innovation for the industry knowledge and its dissemination on the latest distance learning technologies.

Educational process in the Open network is based on on-line video broadcasting via satellite and Internet channels, providing high quality of the transmitted signal. The head center is located in Open Network MGSU, and 22 regional centers of open networks are organized in universities, members of the Association and engineering universities located in major centers of investment and construction activities in Russia.

Network of regional centers is constantly expanding (Figure 2) is currently under consideration MGSU are submitting their request for inclusion in an open network of universities not only international association of engineering universities, but also from Russian universities and the adjacent profile of universities located in countries neighboring countries.

Activities of head and regional centers Open Network focuses on 3 main

areas, covering all business processes of creation of modern educational programs:

- Technical support educational programs in the process of developing and updating the content of educational programs, creation of intellectual assets, preservation and storage of unique knowledge of the construction industry.
- Organizational support educational programs - marketing and administrative support for the creation and implementation of the educational product.
- Psychological and educational software educational programs - development and implementation in the educational process of open network of scientific knowledge transfer technologies that enhance the efficiency of development of educational content.

To successfully achieve the objectives of the Open Network Head center is equipped with the most modern equipment and has at its disposal:

- Academic Council Hall with a capacity of 130 people (Figure 3).
- Media center hall of the Academic Council (Figure 4).
- Ballroom with capacity 1100 (Figure 5).
- two - studio audience for recording multimedia educational content and production line for processing (Figure 6).
- translational audience for distance learning on-line in real time, as well as receiving on-line broadcasts of regional centers (Figure 7, 8);
- mobile studio for organizing broadcasts from anywhere MGSU (laboratories, classrooms, meeting rooms, etc.) into the receiving studio MGSU and regional centers.



Figure 3. Hall Academic Council MGSU

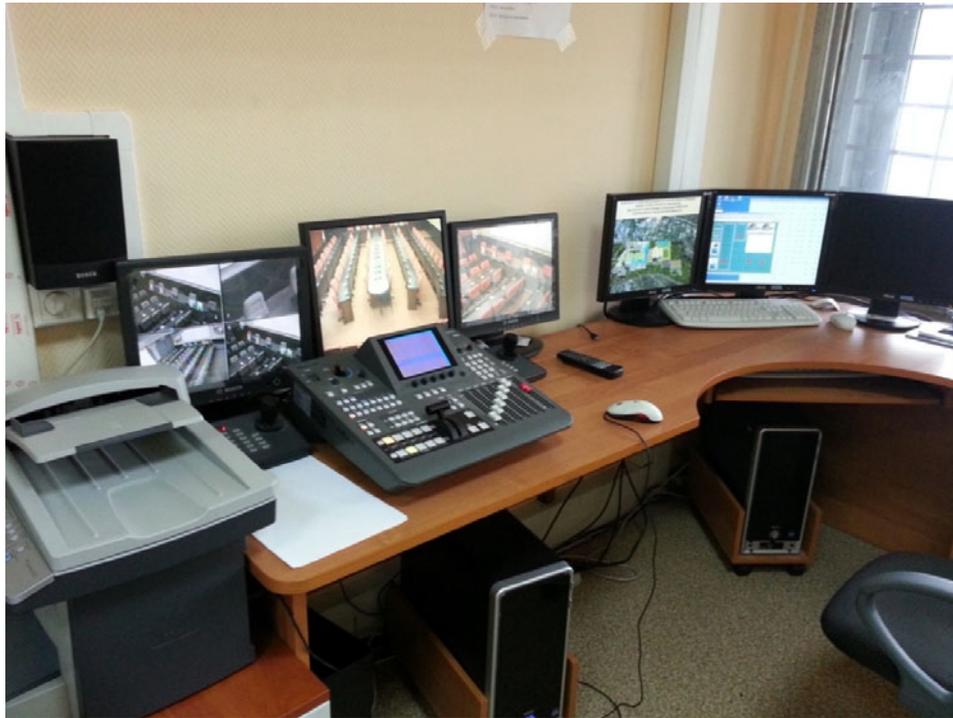


Figure 4. Operator multimedia center hall of the Academic Council



Figure 5. Assembly Hall



Figure 6. Studio recording multimedia educational content



Figure 7. Studio recording multimedia educational content



Figure 8. Operator multimedia center Open Network

Each regional center has a computer network Open class audience reception of satellite streaming Internet broadcasts for up to 25-30 people. Equipment regional centers can not only accept on-line broadcast from Moscow, but also to lead them out of your center.

Through the use of innovative technologies in the educational process of the Open network is constructed as a combination of the following universal modules:

- Educational activities in the mode of on-line (live video);
- Multimedia training materials on DVD;
- Educational web portal;
- Online consultations;
- Testing.

These modules, allowing "design" program of any complexity and configuration, provide the ability to respond rapidly to changing market demands educational services.

Information content of Open Network - is the whole spectrum of short, medium and long-term research and educational programs in various formats. At present the survey record video lectures on general subjects for younger students and successfully operate:

- Regular day 8 -hour on-line seminars on topical issues of investment and construction activities;
- Steadily growing business education program "MBA in Construction".



Figure 9 Alumni Business Education "MBA in Construction".

Created:

- Relevance to teachers and specialists in investment and construction industry 72 -hour refresher courses.
- Multimedia materials for the master's program "Financial Management" in "Management."
- «Golden video fund of the Russian Academy of Architecture and Building Sciences» (record held master classes by leading academics for distribution on DVD and broadcast on an open network).

The most important requirement for educational programs in the world today is the presence of the basis of sound scientific foundation. Based on this principle, the formation of "portfolio" Open Network educational programs based on the results of research work "Comprehensive analysis of trends in human resources development, evaluation of its current state and the determination of the structure needs a new generation of specialists in the business of investment and construction sectors," which was assess the current state of the labor market in the construction industry and developed forward options training needs.

Research and development, which are the basis for the preparation of teaching materials education programs are an integral part of the activities of Open Network, which provides a high degree of relevance and demand developed programs.

Complex promising activity with external partners is carrying one, two-day conferences and implementation of internal corporate training programs geographically distributed structures. Open network reduces the cost of such events in the 5-10 times.

One of the most promising forms of activities to further the development of open network is participation in international projects aimed at the creation of the Internet resources of the international group of students. A prerequisite for participation in the activities of this organization is the presence of an international team of students and teachers - trainers. Established team by means of

telecommunications generates research topic related to the in-depth study of one of the sections of the subject area or several areas, projects his internet resource and puts it on the website or portal. All stages of the creation of the resource, the participants all communications made through the Internet.

This activity allows you to organize closer ties between teachers and students in the learning process, which aims at the creation of a resource on the results of the study of selected topics. This changes the role of the teacher who acts as a consultant and organizer of research student, moreover, teachers, coaches exchange ideas to improve its strategic activities to achieve the objectives and obtain the necessary results. Parallel to this, students who increasingly embracing technology design Web pages, in turn, become consultants for teachers, which increases their value and enhances self-esteem.

Currently, the university together with the International Association Building universities continued successful implementation of the project Public Education Network in construction, in which will be further introduction of new forms and methods in the educational process and management of education through the development of international educational network.

FINDINGS

As a result of the project was made possible:

- Organization of educational process, through remote access to a single educational resources, allowing the use of modern information technologies and advanced pedagogical experience.
- Reduced financial expenses for the organization and implementation of the educational process through remote access to educational resources and create an environment of information exchange between learners and teachers.
- Increased access to education through the organization access to educational resources, regardless of their geographic location.
- Increase in the number of students, including a fee increase revenues from this kind of educational services.
- On the basis of the creation of virtual machines system simulation situations in order to increase the effectiveness of teaching students to analyze different situations in a particular field of knowledge with the use of modeling and information flows.
- Involvement of the building community in the process of discussion, the decision-making on matters of principle construction education.
- Provide opportunities for students, graduate students, doctoral students and faculty opportunities to participate in interactive conferences held by university-based partners.

REFERENCES

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