USING REMOTE EDUCATIONAL TECHNOLOGIES AND ELECTRONIC TRAINING FOR AGRO-INDUSTRIAL COMPLEX OF THE RUSSIAN FEDERATION AT TUITION BY CORRESPONDENCE

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Abstract. Today one of the main facing tasks of the Russian state agricultural correspondence university is the improvement of use of e-learning in educational process. It is connected with the correspondence specialization which the university seeks to keep and to modernize. Solutions of some organizational and technical problems which we faced in our activity are given in this article.

Strategy of use of remote educational technologies in educational process is defined. Solutions of technical problems are chosen. In addition to the LMS resources, in the Russian state agricultural correspondence university it is created interuniversity electronic library - AgriLib system, by association educational and methodical resources of an agronomical and technological profile of agrarian higher education institutions. EBS "AgriLib" contains the electronic educational and methodical resources united on thematic and target signs, is supplied with the catalog which facilitating search of documents and work with them.

Keywords: education, agricultural education, correspondence education, e-learning, remote education.

At introduction of remote educational technologies of electronic training it is necessary to consider successful experience of system of higher education institutions of the Ministry of Agriculture in improvement of the correspondence agrarian education. With development of digital technologies there were also new opportunities for the organization of educational process. The electronic educational and methodical complexes containing in the structure of working program, methodical instructions, a course of lectures, tests in the form of the executed file, additional materials are successfully used. By teachers of university the electronic textbooks executed with use of various program covers and design, with inclusion of multimedia resources began to be developed and used. As a rule, the electronic textbook has the author (group of authors) and the developer (group of developers: programmers and maker-ups). Creation of electronic textbooks is a difficult task. Another matter is the digitized manuals with the contents - menu in the form of hyperlinks copyright on which is transferred to university under contracts on transfer of rights, in fact, of the appearing parallel manuals to printing versions. At digitization the grants recommended for their use in higher education institutions by educational and methodical associations, the Ministry of Agriculture, Ministry of Education are used as a priority. Also on a constant basis video lectures and educational movies are organized.

Education with elements of remote educational technologies is impossible without the use of the Internet as communication medium and an exchange of content. Therefore it is necessary to consider a condition of the Russian segment of a global network and prospect of its development, in particular, in remote rural territories.

According to the report of the Ministry of Telecom and Mass Communications of the Russian Federation, following the results of 2014, 62% of the population of the country or 68 million people use the Internet, from them - 56 million use a network daily, its growth constantly proceeds. Also the audience of users of the high-speed mobile Internet increases (3G).

However, two thirds of Russians who are among also inhabitants of rural areas, still live without global network. Now some more problems remain (long distances between network knots, difficult climatic conditions, small population density, preparation of the personnel and so forth).
Within the priority of the national Education project in 2006 – 2008, more than 33 thousand schools were connected to the Internet, and 2,6 thousand rural schools received sets of specialized computer programs.

According to the concept of a sustainable development of rural territories for the period till 2020 approved by the order of the Government of the Russian Federation of November 30, 2010 No. 2136-r for improvement of living conditions of country people it is necessary to be guided "on … development of distance learning and other modern technologies of education and education, including with use of the Internet; … creation of the multipurpose cultural centers by restructuring of cultural institutions with ensuring access to … the information and telecommunication Internet". "In the field of engineering and transport infrastructure of the village it is provided: … to overcome an inequality of country people in the sphere … ensuring access to the information and telecommunication Internet and providing the state services to country people in electronic form".

Considering above given, it is possible to draw a conclusion that in the near future, temporary difficulties with the Internet will stop being the main reason interfering use of e-learning for training of students in remote rural territories.

Now, all principles of the organization of correspondence course acquired by system of higher education institutions of the Ministry of Agriculture significantly "were modernized" due to introduction of electronic training and use of remote educational technologies. Use of electronic training in educational process, besides improvement of quality of educational services increases the availability of education in rural areas.

Thus it should be noted a number of features, characteristic for the organization of electronic training for the agronomical and technological directions:
- bad knowledge of entrants, not capable to organize the educational process with use of remote full educational technologies;
- a high share in educational process of practical and laboratory works that results in need to use a group method of the organization of studies;
- complexity (and at times and impossibility) to provide the guaranteed identification of the remote educational technologies which are trained when passing the current and intermediate testing.

With the specified factors, educational process on a course is organized with use of both group, and individual operating modes, and is realized as follows. The entire period in a year is divided into two parts - the period of independent training and laboratory - examinations (LES)

 Management of independent work happens by means of the system of distance learning (LMS) realized on the basis of Moodle. In it the training trajectory is educational and methodical materials, control devices of results of training take place, and also communication between the owner of a course (a tutor, a teacher) and a student is realized. Work in system of distance learning is carried out in the individual mode.

 On laboratory - examinations students are trained with the teacher in the synchronous mode (in class or by means of a videoconference / webinar), they perform laboratory works and a practical training, and total testing for disciplines is also carried out. Work is carried out in the group mode, thus the student can choose time of an exit, convenient for himself.

 At university one year for training is for one course, (lasting from 40 to 56 days) is carried out, the reference is issued for the entire all period of session (for receiving educational holiday at work). In turn, the laboratory examinations consist of two parts:

1. Remote part (from 24 to 43 days). Thus lectures, seminar classes are given according to the timetable in the mode of a videoconference (webinar). Students study through system of distance learning, the section "Webinars". The audience gets out according to the timetable.

2. Internal part (from 7 to 16 days) is in the period of which laboratory works are performed, examinations, tests are passed. On internal part of laboratory examinations the students arrive to the university or to branches, classes are given traditionally, in the group.

 Learning management system is the instrument of electronic training of prime necessity without which its effective organization isn't possible. Now there is a number of learning management systems (LMS, SDO), they are free, and paid. It isn’t difficult to choose SDO. List of LMS is far ahead of all Moodle (Free of charge, open source code, opportunities, support of the SCORM standard). LMS is CMS with a number of specialized functions. Now CMS is used everywhere as "source code" for creation of the site by professional developers. Therefore there is no sense to use a commercial product.
Now SDO is used at university for delivery of training materials to the student" [4], for consultation of the student during the intersession period, for the organization of testing, as a platform for an entrance on lectures and seminars in the mode of videoconferences, as the tool for ball and rating system of level of competence of students and formation of the "portfolio".

In addition to the LMS resources, in the Russian state agricultural correspondence university the decision on creation on the basis of a portal of electronic library of university interuniversity electronic library AgriLib [1,2,3] system, by association educational and methodical resources of an agronomical and technological profile of agrarian higher education institutions was made. EBS "AgriLib" contains the electronic educational and methodical resources united on thematic and target signs, is supplied with the catalog which facilitating search of documents and work with them.

For September, 2014 EBS "AgriLib" unites educational and methodical resources of 22 agrarian higher education institutions and 28 technical schools. Its use allows to exclude purchase of educational literature through intermediaries (commercial EBS) that leads to economy of millions of rub of budgetary funds.

For the end of 2013, number of textbooks, manuals and scientific magazines in EBS "AgriLib" is more than 1220 units of storage. Access to resources EBS "AgriLib" for agrarian higher education institutions, technical schools is free on condition of granting own resources by them for placement in EBS of not less than 30 units published over the last 5 years. Higher education institutions transfer a non-exclusive (license) right to use educational and methodical resources in EBS, all property rights remain for owners. Connection is carried out by signing of the license contract in which they take the responsibility for lawful use of the transferred resources.

By inquiries in the main search content of EBS "AgriLib" steadily takes the leading places in search delivery for a geolocation of the Central region of Russia.

Unlike a situation with SDO, for the organization of lectures and seminars in the mode of videoconferences, the tested free services didn't allow to provide the guaranteed quality of video conference. Adobe Connect became one of the main instruments of electronic training on which the system of videoconferences and system of development of the multimedia training content at university is constructed. At university modules of system are used: Adobe Connect Pro Meeting, Adobe Connect Pro Events. Positive sides of this decision are the possibility of preservation of records of videoconferences, and also, possibility of its use at creation of the training content. One more important advantage of use of this system is ability to integrate with Moodle.

For "fast" development of multimedia content by means of presentations of PowerPoint and their code conversion in the Flash format is used Adobe Presenter and ISpring, for more difficult multimedia content is used a software package from Adobe - Adobe CS5 Master Collection.

Important and very difficult task when using remote educational technologies and electronic training at university is creation of comfortable working conditions of the teacher, and also training of the teacher in work in the developed conditions. For this purpose it is necessary to keep as much as possible the schedule of work, habitual for teachers, and also to provide for them comfortable working conditions.

For the organization of work of teachers, besides opportunity to work from the house, on the basis of university the soundproofed cabins equipped with local lighting and system of ventilation conditioning are organized. Workplaces of teachers are equipped on their choice with graphic tablets and marker boards. Remote lectures and seminars are planned so that cases of overfatigue of the teacher were excluded, after 45-minute occupation in the mode of a videoconference the 15-minute break will be organized. So, according to the SanPiN [5], work of the teacher in a learning management system or the organization videoconferences treats to creative work with the computer in the dialogue mode, and at the 8-hour working day shouldn't exceed 6 hours in day. Duration of continuous work at the computer without the regulated break shouldn't exceed the 1 hour.

Consultations of teachers of questions of use of the computer, the Internet and the system of distance learning (SDL) in educational process are continuously conducted.

Conclusion

Thus, thanks to the e-learning technologies, the university solved a number of problems of system of the correspondence agrarian education, including, a problem of compensation of the internal consultations with the teacher which lacking correspondence course by their carrying out in the mode of videoconferences and ensuring participation of students by telecommunication [3]. Students have an opportunity to communicate
with each other and with the teacher, both during the intersession period, and at session with use of the Internet. The electronic educational resources which available to the student in SDO, possibility of constant consultation with teachers improve quality of self-training of students during the intersession period.

For rather small period strategy of use of e-learning in educational process is defined. Solutions of technical problems are chosen. But finally, the solution of technical problems is not the most important aspect of improvement of the correspondence agrarian education. The main task is the organization. And it is necessary to organize correspondence course with use of e-learning, first of all, taking into account the need of practice and the real enterprises of branch.

Though technical problems are partly solved, work on a number of questions is necessary. There are improvement of the pedagogical principles of distance learning, technologies of development of electronic educational resources; optimization of use of the e-learning tools which are available for us, introduction of technologies of network laboratory complexes; and some other.

Support materials
1. The order No. 1953 of 05.09.2011. "About the approval of license standards to existence at the licensee educational, educational and methodical literature and others library information resources and means of ensuring of educational process on realized according to the license for implementation of educational activities for educational programs of higher education"
2. The federal law of December 29, 2012 N 273-FZ "About education in the Russian Federation" (with changes and additions)
3. The order No. 1455 of September 9, 2014 "About recognition become invalid for orders of Federal Service for Supervision in Education and Science"
5. Health regulations and norms the SanPiN 2.2.2/2.4.1340-03 "Hygienic requirements to personal electronic computers and the organization of work"

Additional information


Solutions of technical questions of introduction of remote educational technologies in educational process of the Russian state agricultural correspondence university//State and prospect of development of agrarian correspondence education. The collection of materials of the regional educational and methodical conference devoted to the 75 anniversary of NGAU, Novosibirsk, 2011 of page 7-12 Mozhaev E.E., Zakabunin A.V., Feryabkov A.V.

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