



## Use of digital technologies in education of agricultural students

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**Abstract:** Resolution PQ-216 dated 07.07.2023 "On additional measures to increase quality and efficiency by integrating science, education and production in the agricultural sector" was signed by the President of the Republic of Uzbekistan. From September 1 of this year, cooperation with higher education and research institutions, the introduction of innovative technologies, and the development of human resources are one of the license and permit procedures for the establishment of newly established agricultures, cooperatives, and other large enterprises in the field.

### Keywords:

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Agricultures are well-coordinated strong structures established to ensure independent and innovative development of the agricultural sector. Agricultures create an ideal environment for strengthening cooperation between member firms, agrarian universities, research institutions, local authorities and other organizations. These clusters are designed for the production of quality products, the development of innovations, the training of professional personnel, the study and application of agrotechnology, the development of export potential, the effective use of financial resources, and strong activity in other processes. Newly formed agricultures gather universities and establish strong cooperation in production of products under regional temporary conditions, sale of produced products, conducting scientific research and studying high-quality agrotechnology. These clusters serve as the main platforms for optimization of product production processes, development of marketing and sales strategies, management of new innovations. Other important areas of cooperation with universities:

Scientific-research partnerships: Agricultures, combined with scientific-research institutions in the agrarian sector, establish scientific partnerships for the development of new agrotechnology and scientific research. Vocational training: Agricultures help to train and co-operate vocational training by combining among colleges and universities. Finance and Investment: Develop strong finance and investment partnerships between agricultures, universities and financial institutions. Clusters establish strong integrated activities to optimize production processes and make production more efficient.



Infrastructure and transport: Agricultures can collaborate with universities to develop transport systems and infrastructure, which will facilitate the sale of products. When establishing strong cooperation between universities, agricultures and other organizations, many opportunities are created for the qualitative and effective development of the agricultural sector. Digitization of agricultural education and development of digital economy in agriculture is related to the present and future of the agro-industrial complex of Uzbekistan. Young specialists with excellent knowledge in the field of digital (smart) technologies for agriculture and digital economy can be the reason for the creation of new innovations, discoveries, ideas in Uzbekistan. Today, the agro-industrial complex needs new personnel who can put smart technologies into practice. In this regard, new approaches to the training of personnel for the agricultural sector are necessary. It is necessary to introduce modern information platforms, technologies, information resources and online courses within the framework of digital transformation of agricultural education and agro-industrial economy. For this, it is necessary to develop and introduce new educational programs and training standards for the digital economy, digital agriculture, innovative technologies of plant breeding and animal husbandry into the system of higher professional agricultural education. It is evident that agricultural education and the way students are trained in agricultural universities are moving towards digital technologies, which will enable smart agricultural management in the future. It cannot be done without practical training of agricultural students, smart technology concepts, ERP systems, e-learning, digital learning resources and student participation in innovative projects. A practice-oriented approach in agricultural education is necessary for gaining experience in practical professional activities during the educational process. Agricultural students apply this approach to academic, production, graduate and research internships.

Currently, the innovative development of the agricultural sector requires the training of new personnel and the use of digital technologies - modern information and communication technologies (ICT). The use of digital educational technologies expands the worldview of students and opens up new opportunities for obtaining knowledge in an understandable form. Benefits include reducing red tape, streamlining teaching and student learning. It plays a major role in the development of this field by updating the agricultural education system, providing good training of professional personnel, and creating a scientific research environment with students. It is important to create opportunities to improve the quality and effectiveness of the agricultural education system through training programs, scientific laboratories, virtual learning tools and partnerships.

The development of agricultural education and the provision of personnel for the agro-industrial complex are among the most important priorities of state policy today. The future of the agro-industrial complex and the entire country depends on highly qualified specialists. In the context of digitization, technological platforms should become the main means of supporting agricultural education. Creating and managing digital agriculture requires professionals with new competencies. Digitization of agricultural education and development of digital economy in agriculture is related to the present and future of the agro-industrial complex of Uzbekistan. Young specialists with excellent knowledge in the field of digital (smart) technologies for agriculture and digital economy can be the reason for the creation of new innovations, discoveries, ideas in Uzbekistan. Today, the agro-industrial complex needs new personnel who can put smart technologies into practice. In this regard, new approaches to the training of personnel for the agricultural sector are necessary. It is necessary to introduce modern information platforms, technologies, information resources and



online courses within the framework of digital transformation of agricultural education and agro-industrial economy. For this, it is necessary to develop and introduce new educational programs and training standards for the digital economy, digital agriculture, innovative technologies of plant breeding and animal husbandry into the system of higher professional agricultural education. It is evident that agricultural education and the way students are trained in agricultural universities are moving towards digital technologies, which will enable smart agricultural management in the future. Integrating science, education and production in the agricultural sector is an important step to improve quality and efficiency. This process is related to the development of the agrarian sector through the development of innovations, new technologies and developed services. This integration can be learned and effectively implemented in the following processes:

**Technological innovations and development of agroecosystems:** New technologies are important in making the development of the agricultural sector more qualitative and effective. Using sensors, IoT (Internet of Things), robotics, and other technologies to monitor agroecosystems, collect and analyze data, and create opportunities for several other innovative measures is of great importance.

**Cooperatives and entrepreneurship:** Cooperatives and entrepreneurship in the agrarian sector, in cooperation with research centers, are necessary to be more effective in implementing new technologies, in producing and selling products, and in obtaining finance and investments. Business partnerships are an important approach to innovative and more effective development of the agricultural sector.

The use of digital technologies in the education of agricultural students ensures that they can easily learn information, support them in practice and develop their field knowledge. The following technologies can be used:

**Textbooks and E-books:** E-textbooks and e-books can be designed for teachers to easily access information and support new information.

**Websites and academic platforms:** By using websites and academic platforms specific to the agricultural sector, students can easily access the information they need.

**Interactive lessons and video lessons:** Videos and interactive lessons make learning and learning easier. YouTube, Khan Academy, Udemy and other platforms have a lot of useful material on agriculture.

**Online lab work:** Virtual lab work gives students an opportunity to get hands-on experience. It can be designed for products, performing experiments through virtual devices and other practices.

**Online Tests and Assessments:** Online tests and assessment systems help teachers monitor learning outcomes. This allows students to be easily assessed using tests.

**Cooperation in forums:** creating special forums and online groups for students of the agricultural sector, providing an opportunity for them to help each other, share experiences and answer their questions.

**Graphic design and multimedia lessons:** Illustrations, graphics and multimedia materials make teaching and learning easier and more interesting.

**Real-time video conferencing:** Virtual classes and video conferencing allow students to interact more closely with teachers and get their questions answered in real time.

Teaching with these technologies makes it more convenient for students to learn and learn in the context of modern technology. It is important to use these opportunities to maintain transparency between teachers and students



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