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FORMATION OF STUDENTS' SCIENTIFIC AND RESEARCH COMPETENCE IN THE PROCESS OF TEACHING HYGIENE SCIENCE (ON THE EXAMPLE OF TEACHING COMMUNAL HYGIENE)

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Abstract:Currently, great attention is being paid to the training of comprehensively mature, harmonious, strong-willed, selfless and enterprising personnel through the improvement of the education system. Mutually beneficial innovative cooperation is being achieved between them to train highly qualified personnel for vocational colleges in the professional education system, improve the skills of specialists, accelerate the development of the industry and improve the system of integral communication between production enterprises.
Cooperation in the scientific and innovative spheres increases the country's prestige in the global economic space.
In an era of rapid renewal, inventions, scientific research, innovative ideas, technical developments and their commercialization are considered extremely important. It is their scale and quality that serve to create competitive, high-profit products. In turn, participation in international scientific projects determines the level of a country's scientific potential.

Keywords:education system, personnel, profession, college, specialist, production, scientific, innovative, scientific research, innovative ideas, technical developments, competitive, scientific projects, scientific potential.

INTRODUCTION

In this era, when scientific research and technological innovation are becoming a mechanism connecting all aspects of society, it is impossible to achieve competitiveness in global markets without expanding cooperation in these areas.
The Ministry of Innovative Development also pays great attention to expanding international relations in the field of science and innovation. In order to increase the efficiency of the ministry's activities and introduce advanced foreign experiences, highly qualified foreign experts from Germany, the USA, Kazakhstan, and Austria were involved as consultants.
In order to develop cooperation in the field of science and innovation, intergovernmental agreements have been signed with China, Russia, India, Belarus, Kyrgyzstan, Tajikistan, and the CIS, and close ties have been established with the United Kingdom, Hungary, Germany, Korea, the United States, Turkey, Japan, and all Central Asian countries, as well as with the UN, the World Bank, UNESCO, the SCO, the Islamic Development Bank, the European Economic Commission, the CIS, and other organizations, which also contribute to the development of the sector.
Foreign collaborative research projects: Joint scientific projects with foreign countries play a significant role in international cooperation in the field of science and innovation. Joint projects serve the common interests of both parties. Within the framework of cooperation with Israel, Turkmenistan, Iran, Belarus, Russia, Hungary and the EAPI (Euro-Asian Association for the Promotion of Scientific Research), it is planned to finance more than a hundred international research projects in 2022-2023, covering areas ranging from important areas such as agriculture and engineering to modern high technologies such as artificial intelligence and genetic engineering.

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One of the requirements for the fundamental project competitions announced by the Ministry is to involve foreign experts as co-leaders in the project. The appointment of a leading scientist working at prestigious universities and research centers abroad, who has achieved significant results in the project topic, and who has a Hirsch index of 5 or higher as a co-leader ensures higher quality of research. For example, cooperation has been established between the Center for Genomics and Bioinformatics of the Academy of Sciences and the Kurchatov Institute of Russia to create new grape varieties, and new generation technologies for grape breeding are being created based on genomic information.

Doctoral studies, research internships and advanced training are an integral part of scientific activity. In 2023, 1,800 people were admitted to receive the degrees of Doctor of Philosophy and Doctor of Science, which is 65 percent more than in 2019. The Ministry is also expanding international relations in this area. In particular, as a result of cooperation with Hungary, Russia, Belarus and Turkey, it was agreed to allocate about 150 targeted quotas for Uzbeks abroad.

The results of research should be significant not only for Uzbekistan, but also for the world community. In order to ensure such an international level, young scientists and specialists from our country go to foreign countries to study their experience, infrastructure and achievements. It is worth noting that in 2019-2020, 231 young scientists were sent to 21 countries, including the USA, Russia, Great Britain, Germany, Belarus, South Korea.

In 2021, 37 young scientists from all fields were sent for short-term scientific internships to leading foreign scientific organizations. It is planned to send 161 selected candidates in 2022.

The startup ecosystem is a critical stage in creating innovation: Innovation and startup have become closely related terms around the world. With startups, today it is possible to turn abstract ideas into real products and services, and science plays a major role in this.

MATERIALS AND METHODS

Startup ecosystem is an important stage in creating innovation: All over the world, innovation and startup have become closely related terms. With startups, abstract ideas can now be turned into real products and services, and science plays a big role in this. Medical students should have the following professional competencies through studying science:

– Apply professional knowledge in the field of medicine;
– Master the methods of collecting, storing, processing and using information, and be able to make independent, informed decisions in their professional activities;
– Have competitive general professional training in the relevant bachelor's degree;
– Be able to independently acquire new knowledge, work on themselves, and organize their work on a scientific basis;
– have a scientific understanding of a healthy lifestyle and the need to adhere to it, as well as beliefs, training and skills in physical training;
– be able to use pedagogical control and correction technologies, means and methods of controlling a person’s physical condition, which are relevant for the chosen type of medicine;
– be ready to use innovative ideas;
– know the general hygienic definitions of various social and hygienic factors (nutrition, working, living, educational and upbringing conditions, etc.) and the basics of health-improving measures in connection with their impact on the human body;
– know the hygienic requirements for treatment and prevention institutions and be able to use them;
– assess the adequacy of nutrition;
– study and evaluate the microclimate of hospital rooms;

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– inspection and assessment of anthropogenic chemical pollution of hospital rooms (for example, carbon dioxide);
– assessment of the state of natural and artificial lighting of hospital rooms;
– inspection and assessment of the quality of disinfection of drinking water;
– assessment of conditions for providing therapeutic, protective and sanitary and epidemiological measures in treatment and prevention institutions.
It should be noted that through these competencies, medical students will acquire the necessary skills to work as doctors in the future.

RESULTS

The comprehensive reforms being carried out in the education system of our country require the study, analysis of advanced foreign educational experience and the development of socio-pedagogical and didactic features of adapting it to the conditions of educational institutions. At the current stage of development of society, the transition from a "knowledgeable" educational approach to a competency-oriented educational system and the formation of personal characteristics for the profession that graduates are expected to acquire are considered one of the urgent pedagogical problems. In an education system based on a "competent" approach, the role of the educator and the learner also changes. Because in the "knowledgeable" approach, the educator is an active and main participant, while the learner participates as a passive recipient. In the "competent" approach, the learner becomes an active participant, since his educational activity is more focused on completing independent individual tasks and defending their results, constantly answering questions in creative practical exercises, and conducting individual research work. If the "knowledgeable" educational approach takes State educational standards, curriculum and work plans, and teaching methodological complexes of subjects as regulatory and legal bases, then in the competent approach, a model of a competent person of a learner is added to these. The model of a competent person of a learner describes various aspects of competence that should be formed in a learner based on the State educational standard.
The purpose and content of the "knowledge" approach, the form of education, pedagogical and information technologies are aimed at providing the learner with knowledge, qualifications and skills and controlling their mastery, which are recognized as the main shortcomings of the current rapidly developing education system. As a result of the emergence of a new research direction in education, the competent approach, and the appearance of the categories of "competence" and "competence" in foreign pedagogical and methodological sources, they have widely entered the theory and practice of professional training of learners in higher educational institutions since the late 1960s and early 1970s. Competence-based education (CBE) is formed in the general sense of the term "competence" proposed by the American linguist N. Chomsky (1965, University of Massachusetts). At a symposium held in Bern (1996) under the auspices of the Council of Europe, it was noted that the concept of "competence" is included in the range of concepts such as "learning", "competence", "ability", "skill". The Ministers of Education of European countries in the Bologna Declaration (1999) defined a competent approach as the conceptual basis of educational reforms. The Law of the Republic of Uzbekistan "On Education" states: "Only persons with appropriate education, professional training, rich and high moral qualities have the right to engage in pedagogical activities." To fulfill the requirements of this document, it is important to form and develop professional competence in future teachers, including future mathematics teachers. Because, the competence-oriented education system, along with organizational, technological and methodological changes, requires the creation by the educator of a very large number of didactic creative lesson developments (creative individual tasks for independent work, individual creative tasks for practical exercises, test questions for control types, diagnostic issues, practical tasks, etc.). The widespread adoption of advanced technologies, the

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integration of science with production in continuing education, the introduction of a differentiated approach to education in accordance with the abilities and capabilities of learners, and the creation of advanced pedagogical and information technologies for teaching and modern educational and methodological complexes lay the foundation for the formation and development of professional competence of educators in improving the system of organization and management of pedagogical processes.

DISCUSSION

Effective methods of teaching hygiene provide a high level of teaching the subject and develop critical, cognitive thinking of medical students, increase the quality and results of education. In order to increase the competitiveness of future medical workers in the conditions of development, graduates are being formed with basic competencies that allow them to independently master knowledge closely related to healthcare and apply active teaching methods in practice. Students of medical universities differ from students studying in other fields in that the main goal in the field of medicine is human safety, health and disease prevention. This, in turn, requires a special approach to medical education. In mastering all medical disciplines in medical education, students are required to master not only theoretical knowledge, but also perfect practical knowledge in this field. The use of laboratory instrumental methods helps students to acquire perfect knowledge in this field.

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