

THE IMPORTANCE OF INTEGRATING EDUCATION WITH PRODUCTION IN INCREASING THE COMPETENCE OF CIVIL ENGINEERS ON THE EXAMPLE OF THE KC "KNAUF-SAMGASI"

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Annotation: The article considers the creation and operation of the educational and consulting center KNAUF SamGASI as one of the positive examples of the integration of production with education

Keywords: engineering education, training course, educational program, complete KNAUF systems, energy-efficient finishing materials, modern building materials, the use of modern building materials.

In the Republic of Uzbekistan, construction is carried out on a large scale, the number of construction projects is increasing annually. Providing construction with highly qualified personnel capable of solving urgent problems using the latest achievements of scientific and technological progress is the main goal facing the system of higher and secondary specialized education. Training of students of construction faculties, as well as retraining and advanced training of civil engineers according to modern requirements, the ability to use modern building materials is a requirement of the time. By the Decree of the President of the Republic of Uzbekistan dated 09/11/2018. No. PP-3939 "On measures to organize the accelerated implementation of entrepreneurial initiatives and projects in the regions", the Association of Consulting Engineers of Uzbekistan was established. On November 14, 2018, the Decree of the President of the Republic of Uzbekistan N UP-5577 "On additional measures to improve state regulation in the construction sector" was adopted, which sets the task of developing a training program for specialists in the field of design and construction, as well as creating a system of continuous including distance, vocational training and

advanced training of personnel in the field of design and construction with the obligatory internship in foreign countries, including the teaching staff.

The educational and consulting center "KNAUF-SamGASI" was opened in September 2014 at the initiative of the rector of the institute S.I. Akhmedov, with the support of FE LLC "KNAUFGips Bukhara", in particular, its General Director D.A. Deripalko, in the framework of the implementation of the Cooperation Agreement No. 1/14 of 8.01.2014

The Center's activities are certified.

The main goal of the Center is to educate students and other categories of students (designers, builders, engineers and engineers, teachers of the special vocational education system) in theoretical knowledge and practical skills in finishing work on the basis of advanced technologies of complete KNAUF systems and to train qualified specialists to solve the problems of the construction complex and the national economy of the Republic of Uzbekistan.

The center operates at the department "Technology and organization of construction production" SamGASI.

In order to ensure staffing of the educational process, 6 employees of the department underwent special training courses at the IP KNAUF Gypsum of Bukhara LLC and have certificates of the corresponding type. Of these, two associate professors and two senior teachers with a degree of candidate of technical sciences.

The classroom fund of the Center includes an auditorium for lectures with an area of 30 sq.m., a hall for conducting practical classes with an area of 60 sq.m., a locker room with an area of 20 sq.m. and a master's office with an area of 11 sq.m. The marked premises have interior decoration using complete KNAUF systems, made by SamGASI.

The hall for practical training is equipped with two training stands for practicing "dry" and "wet" processes, racks for tools and accessories and materials.



Figure 1. Training stand for testing "dry" processes

The auditorium for lectures is equipped with computer equipment with modern software, a multifunction printer, a slide projector and a screen for presentations

In order to ensure the educational process, the marked rooms are equipped with visual aids, posters, dummies, transformers, educational and advertising signs, etc.



Figure 2. Posters and visuals in the lecture hall

The fleet of various hand and power tools is 53 units.

The noted material and technical support of the Center was transferred by FE LLC "KNAUF Gips Bukhara" free of charge.

In addition, to ensure the educational process on the part of FE LLC "KNAUF Gips Bukhara" on a gratuitous basis, various consumables are donated annually, including sheet materials, profiles, components and sets of overalls.

In particular, in the past 2019, KNAUF Gips Bukhara LLC provided sponsorship in the amount of 14 602 000 soums, in the framework of which 20 units of consumables, equipment, tools and accessories were received.

The Center is sufficiently provided with the necessary educational and methodical literature - textbooks, manuals, guidelines, brochures, drawing albums, etc. Moreover, the noted educational and methodological support is available both in paper and in electronic format (in Russian and Uzbek in Latin alphabet).

The video fund includes 25 sets of educational and advertising films on CD.

When the Center was opened, the FE LLC "KNAUF Gips Bukhara" handed over 70 units of the noted educational and methodological literature, and in 2017 the library fund was replenished with another 200 copies of the basic educational and methodological manual on KNAUF complete systems (in Uzbek in Latin script) , also donated.

In addition, the teaching staff of the department developed and annually updates the Teaching and Methodological Complexes (UMKD) in Russian and Uzbek, which, in accordance with modern requirements, are entered into the educational on-line system MOODLE.

Since 2014, the discipline "Application of modern building materials technologies (KNAUF complete systems)" has been included in the working curricula in the areas of education 5340200 - "Construction of buildings and structures" and 5340500 - "Production of building materials, products and structures".

Corresponding standard and work programs have been developed, as well as relevant CMD.

The training course with a total classroom volume of 72 hours includes 30 hours of lectures and 42 hours of practical training.

Students who have shown knowledge at the level of "excellent" and "good" on the basis of the results of training are issued a corresponding sample of certificates.

So, in the 2014-15 academic year, 143 students were trained at the Center, 78 of which were issued certificates.

In the 2015-16 academic year, 177 students were trained, 52 of whom received certificates.

In the 2016-17 academic year, 215 students were trained, 72 of whom received certificates.

In the 2017-18 academic year, 95 people were trained, 55 of whom received certificates.

In the academic year 2018-19, 261 people were trained, 88 of whom received certificates.

Thus, during the period of the Center's activity from 2014 to the present, 891 students have been trained in it, 345 of whom received certificates.

In July 2017, in accordance with a preliminary arrangement with representatives of FE KNAUF Gypsum Bukhara LLC (director of the Tashkent branch Sh. R. Abduzhamilov, head of the information and technical center S. S. Saidrasulov and head of the study room S. S. Ataev), a competition of students' graduation projects completed in 2017 with the use of KNAUF complete systems was held. Participants of the competition who won prizes, as well as heads of diploma projects received valuable gifts.

Also, during the summer, training courses for designers and builders are organized annually.

So in 2017, 35 people were trained and received certificates;

in 2018, 20 people were trained and received certificates;

in 2019, 20 people were trained and received certificates.

The activities of the Center and the complete KNAUF systems themselves are presented and advertised during various scientific conferences, meetings, excursions and social events, as well as in career guidance work.

In 2015, the training center "KNAUF-SamGASI" was visited by the head of educational programs of the KNAUF company in the CIS, Elena Vladimirovna Parikova. She noted the high quality and content of the training programs of the KNAUF-SamGASI Consulting Center.

Thus, we can say that the opening of the KNAUF-SamGASI Consulting Center solved two problems:

- The first - students of SamGASI, as well as builders and designers of the city of Samarkand, were given the opportunity to study the product range of KNAUF company, as well as the technology of working with complete KNAUF systems.
- Second, the KNAUF company carries out targeted advertising directly among the consumers of its products - designers, builders, planners.

With regard to some plans for the further development of cooperation and the prospects for the activities of the Consulting Center "KNAUF-SamGASI" the following can be noted:

- development and approval of relevant programs, organization of courses and training of students of retraining and advanced training courses for teachers of the secondary specialized education system functioning at SamGASI;
- The organization and conduct of special training courses for designers, engineers and builders.

Conclusion. As a result of the organization of student learning on the basis of production problem situations, students develop the skill to work with complete KNAUF systems, regulatory and technical literature on the use of complete KNAUF systems. Also, at the same time, skills are developed to independently make a decision on the arrangement of interior decoration of premises, during the construction or repair of buildings, using the complete KNAUF systems. Acquaintance of students with a wide range of components and tools of Knauf allows them to bring to life any design solutions for interior decoration.

As practice and analysis of the production activities of construction engineers of our institute show, the level of interest in this discipline is at a high level due to the relevance of the use of modern energy-efficient finishing materials, the security of the material and technical part and the effectiveness of the organization of work at lectures and practical classes. Getting the opportunity to independently choose the type of suspended ceiling and partitions, and then build them on stands stimulates students' interest in work, the desire to study this discipline more deeply.

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