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CHALLENGES FOR THE THIRD MILLENNIUM

The Benefits of Cooperation with Stakeholders in Implementation of Master Programme "Building design for sustainable development"

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ABSTRACT

The article describes the experience of creating a unique interdisciplinary practical-oriented Master's program "Building Design for Sustainable Development", developed according to the latest educational standards within the international project "Master Degree in Innovative Technologies in Energy Efficient Buildings for Russian and Armenian Universities and Stakeholders". The programme was jointly developed with the members of the consortium, which includes four Russian, two Armenian and five European universities (Universities of Genoa and Naples - Italy, University of Iași - Romania, Kaunas University of Technology - Lithuania, Slovak Technical University), EUCEET. The work was carried out in close cooperation with employers - leading enterprises in the field of construction and energy in Russia, Armenia and Italy. The educational process should be modern and effective, taking into account the Bologna Process, which introduced the concept of a practice-oriented approach to the development of educational programmes. In this context, the role of employers is fundamentally important, since they will establish links with the labor market. Their participation allows formulating the specific content of educational programmes, in order to ensure that they are of interest to employers, and the ability of graduates to find work on the profile will be maximized. Within the framework of the Master's program, students will carry out research work on behalf of the stakeholders.

Educational training has to be directed to form an organizational and management approach to students, laying central emphasis on creative development and application of their own projects and ideas and not just passive learning. Student should acquire conceptual knowledge, be well informed about modern architectural and building trends and gain practical experience. Another effective way to achieve these results are international student Olympiads and competitions organized by world business leaders in the production of building materials, construction and architecture. World experience has shown that this is an important step in the interaction of the students of the master's educational programme and the stakeholders. Motivation of students: the acquisition of practical design skills, with taking into account the latest achievements in the field of construction and architecture; the possibility of

further cooperation in the scientific and research field on the basis of enterprises and design organizations and even employment; skill to work in team; international cooperation with young scientists and students from different countries, etc. Motivations of international olympiads & contests organizers: acquaintance of young generation of builders and architects with materials and engineering of particular corporation or manufacturer; involvement of most talented students and interns in current enterprises; intense media coverage in press, internet and others. To summarize, an international student olympiads & contests – is active and mutually beneficial partnership of education and business.

Thus, the cooperation between education and business is beneficial to both parties, and this implies the main goal of pedagogics - to identify methods of helping students to see, to know, to develop himself and to find his feet in a future profession.

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REFERENCES

- [1] J. Crabb, N. Murdoch, J. Pennman, *A simplified thermal response model*. Journal of Building Services Engineering Research & Technology. Vol. 9, 8-13. 1987.
- [2] Alekhin V.N., Bianco V., Musai A. *An integrated approach for the implementation of Master's programs in the field of energy efficiency in framework of the MARUEEB project*. Russian Journal of Construction Science and Technology. ISSN 2413-5933. 3, 70-75. 2017.
- [3] Krygiel E., Nies B. *Green BIM: Successful Sustainable Design with Building Information Modelling*. Wiley Publishing. 2008, 268 p.