

# Corporate Chair in the System of Higher Vocational Education

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The article examines the questions of the integration of industrial enterprises and higher education institutions to provide bachelor-engineer training in accordance with the modern tendencies in domestic and foreign education systems and employer's requirements.

**Key words:** corporate department, corporate department, professional competence.



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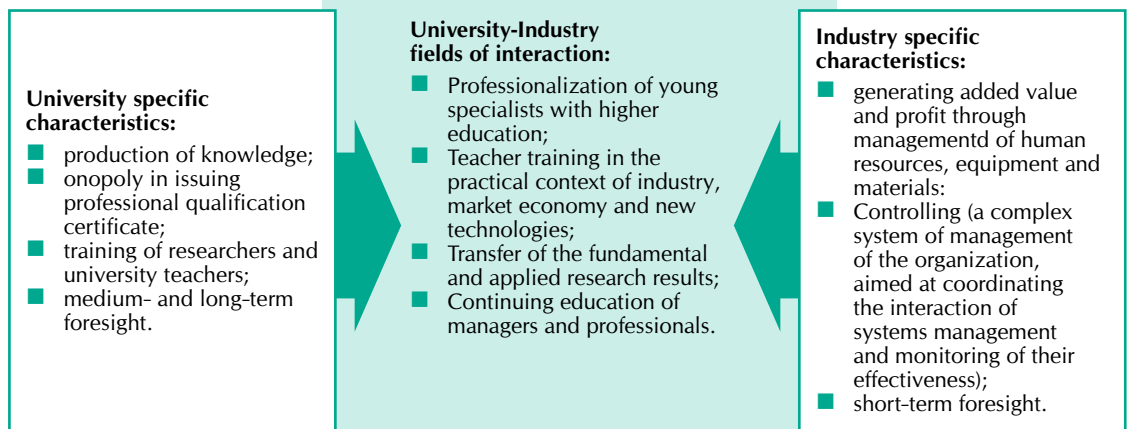


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Today one of the strategic objectives of the Don State Technical University (DSTU) is the transition from traditional to modern and advanced training models. The main internal causes of poor development of innovation in higher education are the «weak links that universities have with industry, economy and social sphere of the regions, and as a consequence, the lack of information

on the needs of the market» [1]. On the other hand, attempts of business to train specialists on their own by establishing their own training centers without universities assistance have not given desirable results. The area of « university – industry » partnership can be defined based on the specific features of partners:

One can conclude that: companies tend to more rapid success in the market and are willing to cooperate with universities to establish contacts with



prospective employees. In addition, they are interested in obtaining specialized knowledge in a particular field of products and processes. Universities are focused on longer-term perspective, interested in innovative methods of teaching and research, but in general there is a lack entrepreneurial spirit development at universities, as it is not foreseen at their structural units.

From these considerations the following should be emphasized:

- cooperation between universities and industry is essential and mutually beneficial for both sides. Regular dialogues should become a basic form of such cooperation;
- dialogue participants often do not understand each other because of differences in their corporate culture;
- to keep competitive positions companies require quick decisions and solutions and universities are generally not ready for that.

From our point of view, today one of the most acceptable ways to solve all above mentioned problems could be establishment of corporate departments and faculties [2]. Actually this idea is not new, such term as basic (industry-based) departments already existed in the Soviet education system. Development of corporate departments allows students to form a specific set of professional competencies, to accelerate the adaptation of graduates to the corporate culture, to bring them up to a certain professional level, and moreover it allows to systemize educational processes. By joint efforts we «tighten the theoretical screw» of future professionals to the real needs of modern industry. At the same time, scientific and educational capacity of the university allows to provide retraining for the employees of enterprises, to teach them modern information technologies to solve problems together in order to increase production efficiency.

The list of key driving forces in cooperation between universities and industry includes the following:

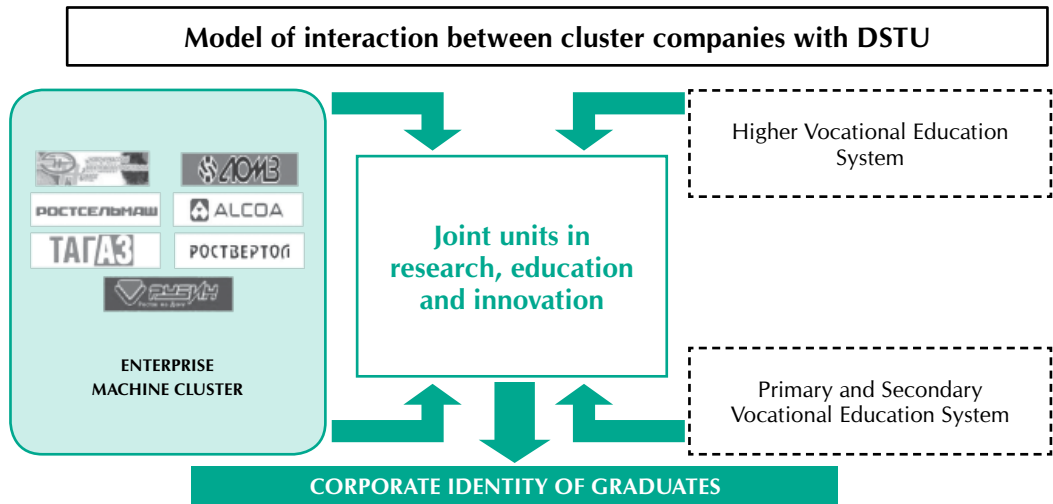
- staffing, knowledge and technology transfer;

- joint designing of educational programs and professional training courses for the labor market needs;
- development of joint officially established platforms (technology parks, technology transfer centers, centers of lifelong learning) in order to encourage knowledge and technology transfer.

Currently, in the absence of the regulatory framework for corporate chairs in the partnership «university-industry» with no intermediates represented by scientific departments we face with a number of problems that require legislative solution. Don State Technical University as a historically (in 2010 we DSTU celebrated its 80 anniversary in 2010) leading technical university with a unique set of training courses in mechanical engineering, today continues its development based on the traditions engineering training for industry, achievements in advanced knowledge, technologies and IT in the field of engineering.

As a part of the university program «Strategic resource for mechanical engineering cluster» a special way of interaction between university and its partner-companies was introduced. It is so-called «DSTU recipe» aimed at solving all the above mentioned problems. Its main goal is the development of engineers training system in Rostov region with joint efforts of higher education, science and professional labor market. The implementation mechanism is to sign long-term strategic partnership agreement in the field of education and research including, among other things, the establishment of joint scientific and educational structures and innovative profiles. For the moment there is a corporate «Oil and gas industry faculty» at DSTU with four departments in it and five more corporate departments in other faculties. This are the departments of «Industrial Metrology», «Transportation Engineering», «Aircraft building», «Technology and equipment of processing agricultural products», «Automobile industry». The reason for establishing the last corporate departure based at media group «Yuzhnyi Region» (Sothern Region)

**Fig. 1. Model of interaction between partner companies of the mechanical engineering cluster of Rostov region with DSTU.**



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at the Faculty of Computer Science was an urgent need and demand from the regional media industry in professions – cross-disciplinary experts in journalism and engineering and technology. Thus, the positive experience of departments related to the mechanical engineering cluster has expanded mutually beneficial cooperation of the university and other regional business partners. The main goals and objectives of corporate departments activities at DSTU are: improvement of the educational process by strengthening relationships with leading companies, business community, social structures and attracting highly qualified teachers-practitioners, organization and implementation of innovative educational technologies (work-based learning) at partner companies, development of research activities, foundation of small innovative educational and research enterprises, systematic work in the field of vocational guidance for students. Heads of corporate departments are the leaders of such companies as OAO Rostvertol (OJSK), Research and production company Novocherkassk Electrovozostoitelnyy zavod (Novocherkassk Electric Locomotive Plant) «(LLC RPC «NEVZ»», Taganrog automobile plant, Federal State Unitary Enterprise Rostov Center of Standardization, Metrology

and Certification and others. Educational programs in research areas presented at departments are developed and implemented with the participation of leading experts of enterprises, who also become co-supervisors of students' graduation thesis and their field trips. Defense of a graduation project takes place at enterprises with their managers and employees and faculty of corporate departments of the university. Projects are carried out on the real data of the partner-companies of corporate departments, aimed at solving real problems and can be recommended for implementation to the business management. All graduates who have expressed their wish to continue working at the partner-companies are employed. One of the most popular and prospective ways to develop the established regional cluster could be foundation of training and retraining centers for the employees of enterprises working in the field of engineering and technology, as well as for university teachers and training centers of enterprises and their certification. The basis for the establishment of such regional center has become the South Centre of professional qualifications and engineering innovation DSTU with the status of non-profit partnership. To meet the requirements of our partner company LLC RPC NEVZ the

faculty of DSTU developed and implemented training programs for engineers and technicians of the company in such fields as press - forging production, foundry engineering, technology and equipment for welding engineering. In 2011, 57 employees were successfully retrained on these programs. At the same time, university students were trained in a real factory conditions at Corporate Training Centre of LLC RPC NEVZ on the program of initial vocational education and got involved in the courses for those trades, which were in highly demand in transport engineering. In the transition to the tiered education system the existence of such centers will create not only a regional system of continuing professional education, but also personnel certification. This model of vertical and horizontal integration of providers of professional educational services at different levels and their customers is a universal adaptive model to meet the changes taking place in the region's economic policy

and the labor market through a range of basic educational programs, retraining programs and skills development, providing continuity and personal focus of education, as well as the mutual interest of all participants and consistency of an overall process of continuing professional education.

In addition, in order to promote products and services of our business partners, as well as providing them with real help in the modernization of their production, introduction of new techniques and technologies university-based information portal Made-in-Rostov.ru was created. Students take an active part in developing database of the portal and communicate directly with partner companies through corporate departments. Good practice of our university in development and implementation of corporate training confirms that this kind of partnership is beneficial for both universities and industry.

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