

DonNTU's Experience in Organization of the Inter-University Students' Exchange and its Development within the Frameworks of the Bologna Declaration

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ABSTRACT: *The DonNTU's experience in students' exchange obtained in collaboration with the partners-universities from Germany (Otto von Guericke Technical University, Magdeburg; Stuttgart University, Agricola Mining Institute, Bohum), Russia (Taganrog Radio Engineering University, Moscow State University), Czech Republic (Ostrava Technical University), France (Grenoble University, Charles de Gaulle University, Lille), Great Britain (the University of Portsmouth), Poland (Silesian Polytechnic Institute) is presented in the paper. It concerns the students' studying abroad within 1-2 semesters with having exams to take the Bachelor and Master degree. The inter-university collaboration agreements are the basis for training post graduate students, their further skill development at short - term (up to 3 months) and long – term (up to one year) probation courses. The leading qualifications curricula of the partner-universities are being analyzed and coordinated in order to make their unification.*

The XXI century has put forward new problems related to the planetary aspects of different cultures and civilizations co-existence, globalization of the problems of mankind surviving within the aspects of ecology, resources, etc.

These problems within the cause-effect complex are obviously extrapolated to the education which is the most important sphere of the human being's vital functions. The inter-state and inter-university cooperation, establishment and intensive development of worldwide, continental, and trade unions, congresses, associations, other institutions makes it apparent. These organizations provide efficient communication, the university attempts coordination in order to synchronize the education and its adaptation to the dynamics of the society development and give forecasts as to possible fluctuations in future. It especially concerns the area of science and technical progress. The Bologna process development is the most vivid and topical illustration of all above-named.

The Ukrainian educational system and the universities it consists of is being developed, despite a number of specific factors, within the general world and European trend and considers integration to be the topical and priority task. Taking into account the DonNTU and its partners' experience as to the international collaboration, rate and dynamics of the integration into the European education system can be divided into a number of specific stages:

- The first, depressive stage covers the period from the beginning till the middle of the 90's. It is characterized by the lack of agreements, closing of research programs, loss of academic contacts, reduction or quit of inter-university students or teachers exchange.
- The second, restoration stage bearing the date of 1995-1998 is characterized by renewal of the lost contacts and links, establishment of new relations in the field of research, and academic contacts. The level of 1989 was reached again.
- The third, accumulation stage is going on. It is characterized by growth of inter-university agreements. From 1999 till 2003 the number of the DonNTU's agreements with foreign universities grew from 27 to 63. As a result, the number of academics and researchers providing the agreement functioning increased proportionally: in 1999 48 members of the staff went abroad in business, in 2002 –224. The number of obtained grants increased from 21 in 1999 to 77 in 2003.

Under these conditions the necessity to change evaluation principles and criteria of the dynamically developed process arose. First of all it concerned the change of evaluation, standard stereotypes to measure what was achieved under the transmission to the qualitative evaluation of the process and intensive methods.

The agreements with Otto-von-Guericke Technical University (Magdeburg, Germany), Stuttgart Technical University (Germany), Taganrog Radio-Engineering University (Russia), Ostrava Technical University (Czech Republic), Stockholm Queen's Technological Institute (Sweden) can serve as good examples.

The departments of 6 faculties of DonNTU have been collaborating with Magdeburg Technical University for 40 years. The German Engineering Faculty established 12 years ago coordinates the collaboration. The Siemens company as well as DAAD, the government of the Sachsen Anhalt land, a number of funds and associations are active as to the collaboration support. The achieved results are as follows: systematic students and teachers exchange, new courses and specialties, practical works, defense of diploma and course works, conferences, seminars, development of the adapted curricula and programs, joint text-books, research results implementation etc. As a logical result of the collaboration DonNTU concluded agreements with the universities of Erlangen and Braunschweig, and Engineering and Technical Center with 100% investment made by the Siemens-Ukraine was established. Besides, the University has an agreement with the Max Plank Institute of Complex Systems Dynamics (Germany) and the Society of Technologies and Technical Cybernetics (Magdeburg).

The growth of international collaboration, number of trends and their specialization require the administration reorganizing. In the conceptual version the key points were highlighted on institutionalization of the process with taking into account methods and models known abroad.

In 1995 the University established the Institute of International Collaboration (IIC) which is to coordinate the work of faculties, departments, laboratories taking part in the process. The Institute also provides enrolment and training of foreign students, raise of efficiency and quality of foreign languages training.

The German Engineering Faculty established in December 1992 was the so called test field which took into account the accumulated experience of collaboration with Magdeburg Technical University supported by the Siemens company. The initial task of the Faculty was to train students on the specialty of electric drive with the further placement at the Ukrainian companies which are reconstructed with the aid of the Siemens company. The company provided training equipment.

In a year, in 1993, the analogous French Engineering Faculty was established. All majors are trained in French there.

It is impossible to describe the history and the achieved results of the operation of the faculty within one paper. But the partners of the Faculty should be mentioned. These are : the Paris Chamber of Commerce, the Versailles Center for Strategic Research and Prognostication, the consulting company COFRAMA (Lion), about 10 French and Belgian Universities.

A number of land governments and the German Federative Republic's government are aware of the achievements of the German Engineering Faculty. The Dean of the Faculty Prof. V. I. Kalashnikov has the government award and is the Honored Consul of Germany in Ukraine.

The English Engineering Faculty was established in June 1995. The Polish Department recognized and supported by the Embassy of Poland in Ukraine was established in spring 2003. It has promising prospects of development.

As the administration cycle was divided and the IIC obtained the right of making decisions and solving working problems as well as controlling and recording of the systematically obtained information the new subdivisions now have freedom of maneuver and widened tactical opportunities.

The Russian-Ukrainian University established on the basis of the agreement with Taganrog Radio-Engineering University in 1997 became the experimental model of inter-university management. It was aimed to develop different forms of collaboration, make experiments on unification and optimization of organizational process and service accompanying business and creative contacts. A number of projects and initiatives were discussed and approved by the seminar Practice and Prospects of Development of Institutional Partnership which was held in Donetsk on April 10-11 2001. The Ministry of Education of Russia allocated two grants (162 thousand roubles) for the implementation of the programs within the

frames of the Russian-Ukrainian University. The analogous support is expected to be obtained from the Ministry of Education and Science of Ukraine.

The experience gained by DonNTU during its participation in the Institutional Partnership Project sponsored by the USAID and administrated by IREX was adopted for the Russian-Ukrainian University project. The obtained American grants were spent to establish the Energy Management Center, the Innovations and Technologies Center, the Small and Medium Business Support Center.

The agreement with the University City Science Center (Philadelphia) combining 27 University of Pennsylvania was signed. The academics from DonNTU had their probation in the USA and got themselves acquainted with some methodic and software. The additional grant was obtained to establish and develop the Industrial Expertise Center and purchase equipment and software for it.

The above-mentioned Centers have also been supported by the British Council since 1995. It supplied the Centers with books, equipment, spare details, software, funds to travel to Great Britain for probation, methodological recommendations.

As a result the Energy Management Center was recognized as the leading one in the region as to the energy conservation tasks solving.

The established Institutes and Centers are stable units with proper technical and professional provision which look for new trends of innovational science and technical collaboration and are aware of methods of practical implementation of international programs.

The academics of the Faculty of Economics and Management are taking part in the joint with American and Polish universities project Business Management of Education in Ukraine which started in 1999 and obtained some extra grants and was crowned with the initiative of establishment of the Ukrainian Association of Development of Management and Business Education.

The International Machine-Builders Union was established on the initiative of the VII machine-builders international conference in 1999. By 2004 the Union had become the authoritative international organization which is also a base for DonNTU's further expansion into the international science and education area. This puts forward a number of problems.

The first is connected to the new projects, agreements, and programs staff. Young people should implement the international programs. Their professional level gives rise to no doubts, but their knowledge of foreign languages in many cases is much to be desired. That is why to make progress at foreign languages besides the obligatory studying of a foreign language the students are given the chance to have optional foreign language classes during their third and fourth year of study.

In 1999 92 specialist who know foreign languages on the level sufficient for business communication and studying abroad graduated from DonNTU. In 2002 this figure made up 147.

In December 2002 the Ministry of Education and Science of Ukraine and the British Council in Ukraine initiated the project on development of the National Program on Foreign Languages Training for the Students of Technical Faculties of the Universities.

During the first stage of the Program the Ukrainian academics, the teachers of DonNTU being among them, attended a number of seminars and were trained at the St Mark and St Joann colleges in Plymouth (Great Britain). The training programs of the leading universities of the country were analyzed, the students, academics, administrators were interviewed. The student tested their English language knowledge with the help of the international test IELTS. It made it possible to drive to the conclusion that Ukraine had accumulated great potential as to foreign languages training.

To implement it the Rector established the perennial seminar on which the experience obtained in collaboration with foreign partners is discussed and certain recommendations are issued. As a result the University has local models of integration into the European system of education on a micro level. Their consequent growth and introduction into higher levels is the University entering to the channel shaped by Bologna Declaration. Overcoming of asymmetry of students exchange is one of the criteria of being integrated. In 1999 DonNTU hosted only 3 foreign students out of 100 sent abroad. In 2001-2003 this changed to 14 out of 100. The students from Germany, France, Russia, Czech Republic, Poland and other countries study at DonNTU. The recognition of the University by foreign students is the main factor speaking about the prospects of students migration. Parity, history, and context of inter-university contacts define the migration scale.

The establishment of a new specialty European Investigations (within the present specialties Foreign Economic Activity and International Economics) supported by the TEMPUS-TASIS grant starting from 2003 can help to prognosticate the University's future. This project won in extremely difficult and prestige tender.

Its aim is to train high quality specialists having competence in economics which will allow them to take part in foreign economic activity of Ukraine with EU countries.

The new specialty European Studies and long-term collaboration with the universities of Ukraine, France, Spain, Finland presented in the project are among the expected outcomes of the DonNTU's participation in the project.

The analysis of the development of the above-mentioned trends proves that Donetsk National Technical University as many other Ukrainian universities is consequently integrating into the European educational area and the education development global processes.

One of the lessons to be learnt is as follows: the participation in Bologna process, immersion into the European environment presuppose not only the development of collaboration but very tough competition the methods and tools of which are widely known among the Ukrainian universities but not mastered enough so far.