



На фото: группа студентов ТПУ в гостях у профессора Огайского университета Чета Хансена, 1992

Photo: TPU students received by prof. Chet Hunsen from Ohio University

алам Кипрского института маркетинга. Первая сессия прошла успешно. По завершении программы студенты получают соответствующие дипломы, признаваемые в США и Великобритании. Сотрудничество с Кипрским институтом маркетинга будет расширяться, поскольку на базе ТПУ официально открыт Центр дистанционного обучения этого вуза, сферой интересов которого является рынок образовательных услуг в Сибири и на Дальнем Востоке России.

Реализация перспективных планов по экспорту и импорту образовательных услуг обогатит учебный процесс и, безусловно, положительно скажется на качестве подготовки специалистов в Томском политехническом университете, позволит ТПУ действительно выйти в мировое образовательное пространство и стать субъектом рыночных

отношений в международной системе разделения труда в сфере образования. В конечном итоге это может принести существенную материальную выгоду университету, что очень важно в условиях бюджетного недофинансирования со стороны российского государства.

*Профессор А.И. Чучалин,
проректор ТПУ
по учебной работе*

In the early XXth century Russia was already rather thoroughly integrated in world educational space. Russian engineers were considered almost the best in Europe. They were distinguished by their fundamentality and practical orientation of training in an optimum combination. It was achieved by application of the special method of organization of educational process at higher schools of Russia, which provided

obligatory participation of the students in scientific research, technological development and industrial activity. The high requirements were imposed upon quality of knowledge on the theory and practice of engineering business.

Revolution and Civil war destroyed the Russian system of high education. Since 30's started to form the Soviet educational system, which in many respects has kept the best traditions of a Russian higher school, and later it successfully solved the problems of training of highly skilled experts for a planned national economy. Soviet scientists and engineers have assured successes of the USSR in many priority directions of science, engineering and technology: in nuclear industry, space exploration, and medicine.

Alongside with doubtless, recognized all over the world advantages the soviet higher school had essential limitations associated first of all, with its international isolation. After disintegration of the Soviet Union and beginning of democratic reforms in Russia these limitations became especially evident. Excessive determinability of the higher education system, deficit of creativity of development and absence of flexibility in realization of educational programs, information backwardness, isolation from world cultural values - all this did not meet the new requirements and inhibited entry of Russia to international education space.

Tomsk polytechnic university from the beginning of the XXth century and during all its history was a part of Russian and soviet higher engineering school. All marked above advantages and limitations are characteristic of it to the full degree. However, from

the point of view of international isolation, TPU until recently has been in especially adverse conditions since Tomsk was close for the foreigners. For Tomsk polytechnic university, one of leading engineering higher schools in Russia having the unique scientific and educational potential, problems of development of international cooperation, integration in world educational space and an entry to the international market of educational services are especially urgent today.

In the decision of these problems from the beginning of the 90's the certain successes have been achieved. Direct relations have been established with many foreign universities in various countries of Europe, Asia and America. The agreements on cooperation in science and education have been made. Tens of specialists and hundreds of students in TPU have been trained and have attended different kinds of special courses abroad, the foreign scientists and teachers constantly work at the university, and foreign students are trained here. The large contribution to the development of international cooperation is brought in by Russian-American, Russian-German and Siberian-Chinese centers working in TPU.

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Our **university in the international market of educational services**

The fulfilment of the task of improvement of language training for teachers and students up to a level corresponding to international certification requires significant versatile resources. For this purpose the new structural subdivision - Department of the language communications - was established in TPU in 1997, which has united all faculties of a linguistic profile.

the world market of educational services still does not correspond at all to its potential. Having gathered necessary initial experience of international cooperation, the university is going to make breakthrough in the field of import and export of educational programs. The basic strategy of TPU in this area is aimed at import of humanitarian and modern socio-economic knowledge, of educational programs on management and ecology. It is supposed to export programs of engineering training in those fields of knowledge, where TPU has well-known scientific schools and powerful educational potential.

To achieve this goal it is necessary to solve a number of important and difficult tasks. First, it is necessary to improve essentially preparation of the students and teachers of the university for active mastering in foreign language - English, first of all. Secondly, it is necessary to study educational systems of various countries in detail, as well as programs of foreign universities, for its coordination with Russian system of higher education and with programs of TPU. It is absolutely necessary both for import, and export of educational services. Thirdly, it is important to exclude some factors interfering entrance of foreign students in the university, associated with the necessity of studying Russian and with poor organization of a Russian life.

The decision of the task of improvement of language training for teachers and students up to a level corresponding to international certification requires significant versatile resources. To reach the first goal the new structural subdivision - Department of the language communications - was established in TPU in 1997, which united all language-related facul-

ties. There is a developed and authorized Concept and Program of language training improvement at the university till 2005. The new speciality "Linguistics and intercultural communications" with assignment of qualification the linguist - interpreter, as well as the program of extra training with assignment of qualification of the translator in a professional area, have been licensed.

In 1998 / 99 academic year in TPU at three faculties - Engineering-economical, Automatics and computer facilities, and Automatics and electro-mechanics - begins unprecedented experiment on study of foreign languages by the students in the amount over a thousand hours. It fourfold exceeds the amount of the State education standard of higher vocational training and corresponds to training for passing the qualifying tests for the international certificates giving the right of training abroad.

For development of educational programs of "export version" in 1997 at the university the working group of the most experienced teachers of some faculties was organized. With the use of a global information network Internet this group has carried out the analysis of educational programs of training experts in Electrical Engineering, Mechanical Engineering, Computer Science and Chemistry in the leading universities of the USA, Great Britain, Germany, France and other countries, and compared them with the similar programs of experts training in TPU.

The analysis has shown, that the programs of foreign universities differ from Russian ones by the greater individualization of training, that is an absence of the standard of initial schooling admission and of stringent requirements for

undergraduates and students' independence and mobility as well, by the dynamics of educational plans, including variety of directions of training and freedom of formation of individual plans of education, and by the credit system of an estimation of students' knowledge.

However, despite of an external variety of curriculums and educational programs on technical directions, disciplines studied at foreign universities are divided into social, humanitarian and economic subjects, disciplines of the natural sciences, general technical and special disciplines. In Russian high schools a portion of educational time assigned on study of natural and special disciplines is somewhat more in comparison with foreign high schools. For example, in Russia, Germany and Great Britain the course of natural disciplines makes up, accordingly, 17 %, 10 % and 9 % from the total number of the curriculum hours, and special disciplines occupy 15 %, 14 % and 10 % of educational time. Abroad the greater attention is being given to general technical training - 46 %, 73 % and 70 %, respectively, for the above-mentioned countries.

The difference in a portion of general technical disciplines is connected, first of all, with a large amount of humanitarian disciplines studied in Russian higher schools (16 %), with complete their absence in the curriculums of higher schools of Germany and Great Britain for engineering specialities. However, it is necessary to note, that the corresponding curriculums of the USA universities contain humanitarian disciplines in the amount of 8-10%. As to social and economic disciplines, their portion in educational plans of higher schools of

Russia, Germany and Great Britain makes up 6 %, 2 % and 8 %, respectively.

As a result of the analysis of the programs of the world leading universities and their comparisons with the TPU programs, general principles of formation of the new integrated educational plans (curriculums) for training the foreign students are developed. The basic criteria for development of educational plans and programs of "export version" for the four above-mentioned directions of the experts training, were their maximal "recognizability" in the international market of educational services and maximal meaningfulness of the educational programs with all the best things, that TPU commands in the given fields of knowledge, including scientific, technical and methodological achievements.

Nowadays Tomsk polytechnic university has educational programs of training of bachelors of sciences in fields of Electrical Engineering, Mechanical Engineering, Computer Science and Chemistry meeting to the international standards. The hard work on organizational, instructional, methodical and personnel maintenance of realization of the programs in English is conducted. The problem of mutual accreditation of the programs with a

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As a place for organization of TPU removed terminal for remote training of the foreign students the capital of Republic Cyprus Nicosia is chosen. With assistance of Association of graduates of soviet higher schools and Russian cultural center, the representation of Tomsk polytechnic university on Cyprus is created, which begins work on attraction to the university foreign students from the countries of Mediterranean, Near East and Northern Africa.



number of foreign high schools are settled, in particular, it refers to Ulsan university (Republic Korea), Compiegne university (France), Aachen higher technical school (Germany), as well as the problem of recognition of the programs by European and American academic community. It is necessary both for attraction of foreign students for training in TPU, and for organization of alternative training, when the students drawing personal educational plans choose elective courses, taught at various universities, including foreign. Distant learning is most convenient for an entrance to the world market of educational services. This form is similar to learning by correspondence. However, the remote form assumes also holding seminars and laboratory-examination sessions, remote terminals of a higher school. To train foreign students such terminals should preferably be installed abroad. As a place for organization of TPU removed terminal for remote training of the foreign students the capital of Republic of Cyprus Nicosia is chosen. With assistance

of Association of graduates of soviet higher schools and Russian cultural center, the representation of Tomsk polytechnic university on Cyprus is created, which begins attracting to the university foreign students from the countries of the Mediterranean, Near East and Northern Africa. In May, 1998 in Nicosia TPU held an exhibition - fair of scientific - educational potential of Siberian higher schools and the section of International video-tele-conference on problems of remote training. Some contracts have been concluded with higher educational institutions on Cyprus, in particular with Frederick technological institute, for use of their laboratories to train the foreign students of TPU.

The important component of remote training is the use of a World Wide Web and telecommunication channels for dialogues between teachers and students at intervals between seminars and laboratory-examination sessions. In this connection the TPU educational terminal on Cyprus is equipped with latest computer engineering, and teachers of the

university work hard to create computer textbooks and other multimedia software. Established in TPU in 1996 the Center of distant learning coordinates this work, organizing exchange of ideas and distributing advanced experience at sessions of a constantly working seminar on problems of remote education. It is necessary to note that through the representation of TPU on Cyprus the import of educational programs of Cyprian marketing institute is being realized. About forty students of TPU are trained under two programs "Marketing study" and "Business English". The educational process is conducted by teachers of Tomsk polytechnic university in English using the methodical materials of Cyprian marketing institute. The first session has passed successfully. Graduates will receive diplomas recognized in the USA and Great Britain. The cooperation with Cyprian marketing institute will enlarge, as on TPU basis the Center of remote training of this high school is officially opened,

sphere of which interests is the market of educational services in Siberia and Far East of Russia. The realization of the long-term plans on export and import of educational services will enrich the educational process and, certainly, will have a positive effect on quality of the experts training in Tomsk polytechnic university. It will allow TPU really to come into the world educational space and to become a subject of the market relations in the international system of division of labour in the sphere of education. Ultimately it can bring essential material benefit to the university, that is very important in conditions of budget underfinancing on the part of the Russian State.

*Professor A. I. Chubchaln,
Vice-rector of TPU
in charge educational work.*

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Our
**university
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market of
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*International
Cooperation
between East
and West*