
The Internationalisation of Higher Education: a Challenge for Universities

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In this article, the authors deal with the internationalisation of higher education after the signing of the Bologna Declaration. Among other issues, they cover student and staff mobility within the new member states of the European Union (EU), international mobility at a technical university, the tools for implementing the Bologna process, key activities of Bologna promoters, the beneficiaries of the Bologna process, as well as the difficulties and obstacles that may hinder the implementation of the Bologna process. Also presented and discussed is the present state of the internationalisation of technical university higher education in the new European Union (EU) member country of Lithuania.

INTRODUCTION

Internationalisation is widely understood as being a university's response to the economic, social and cultural change known as globalisation. The internationalisation of higher education is a natural result of the internationalisation of the world's material and intellectual development, and is demanded by the economic development of society. Development and competition require joint efforts to achieve the cultivation of high-level professional personnel and cooperation in scientific research to tackle key problems beyond the limits of one country.

The internationalisation of economic activities calls for the internationalisation of higher education in particular. The internationalisation of higher education can be carried out through the internationalisation of students, teachers, curriculum and research. Despite its potential economic and political contributions, an overemphasis on the intake of foreign students may have a negative impact on host countries, both culturally and academically [1].

Internationalism can have significant benefits, but it can also have risks. Countries without well-developed higher education systems, and the citizens of those countries, can have access to higher education of the highest quality; this can help build domestic capacity. However, the risk is that international opportunities are likely to be unevenly distributed at

the national and individual levels, militating against poorer, smaller countries and poorer students [2]. Limited access to higher education sustains social inequality in the world. Therefore, the internationalisation of higher education can contribute to a more democratic, fair and equal world. Without adequate higher education and research institutions providing a critical mass of skilled and educated people, no country can ensure genuine endogenous and sustainable development [3].

The main aims of internationalisation are as follows:

- To promote multicultural and intercultural education;
- To contribute to the improvement of the learning experiences of exchange students at host institutions;
- To contribute to improving the teaching experiences of teachers who instruct exchange students in mixed groups with home students;
- To improve the level of intercultural competences of all those involved in university education;
- To raise awareness within universities regarding multiculturalism;
- To describe exchange students' specific needs in the classroom;
- To promote continuous staff training for multiculturalism and interculturalism.

Many universities have been engaged in competition within the context of the world market of education. To develop their competitiveness and, in some cases, for the university to survive, university education must be internationalised. In light of the increased mobility of more highly educated workers at the global level, educational institutions have to prepare their students for a future in which they will be compared not to their own country's institutions, but also to institutions in other nations [4].

In the current context of the free movement of the labour force, universities need to bring up more graduates who specialise in world trade and economics. These graduates should be adaptable to, and seek personal fulfilment in, their new environment. In order to achieve this goal, universities should offer internationalised courses and conduct international exchange and cooperation among universities. Two or more universities with different cultural backgrounds can unite and make use of the joint advantages in capital, teaching personnel and experimenting equipment to establish training programmes for undergraduates, graduates and even teachers, as well as to carry out scientific research. Education, in order to cultivate citizens who can fit into the world of the future, must be at once national and international. There is definite move from the university as the academic *ivory tower* towards it being a training space for students as future entrepreneurs or policy-makers [5][6].

As an inevitable result of the internationalisation (and globalisation) of higher education is the promotion of the development of education all over the world. For less developed countries, the internationalisation of higher education can help them import advanced concepts and technology, thereby broadening their citizen's horizons and thus promoting the development of education and speeding up modernisation.

The International Association of Universities, which is part of UNESCO, recently released the results of a 2005 survey of university leaders in 95 countries. It was found that 70% of respondents believed that there were some risks associated with the increasing internationalisation of higher education, including *commercialisation*, as well as *brain drain*. The report identified that national governments generally do not support international education at the policy and funding levels [7].

DRIVING FORCES OF INTERNATIONALISATION

The internationalisation of higher education in recent years has been growing rapidly. Over the years, countries in the European Union (EU) have increased

international cooperation in many fields, including higher education. It was only some years ago that Central and Eastern European countries were invited to participate in European-wide international activities and projects.

Some reasons that have retarded fast and well-balanced internationalisation processes in these countries are as follows:

- Unbalanced or single direction mobility;
- The wrong image of Central and Eastern European countries;
- Weak capabilities for informational networks;
- Poor experiences in new programmes that are devoted to the study of internationalisation (SOCRATES programme).

The Bologna Process

The Bologna Process seeks to construct a European Higher Education Area by 2010. This vision was gradually introduced in the Sorbonne Declaration (1998), elaborated in the Bologna Declaration (1999), and expanded further in Prague (2001), Berlin (2003) and Bergen (2005) Higher Education Ministries summits. At present, 45 European countries are working to meet the requirements of the European Higher Education Area. Considering the scale and far-reaching aims, this vast network will facilitate the creation and transmission of knowledge in Europe and the world, thereby increasing the worldwide competitiveness of European higher education.

The EC Bologna Follow-up Group (BFUG) agreed that national legislation contexts and increasing regional convergence on Bologna objectives must remain balanced through a rich diversity of national academic and cultural traditions. Diversification of institutional funding sources, the development of foreign language skills, *brain circulation* (or in many cases, *brain drain* from less developed countries), student and academic staff mobility, structure and duration of studies, etc, will determine the future development of the Bologna Process in all Bologna Process countries and participating higher education institutions.

The Bologna Process may have to balance the wishes of different groups, from academics who desire to uphold traditional methods of teaching and learning, to employers who seek university-trained staff to make immediate and concrete contributions to the firm.

Openness is the basic precondition of the internationalisation of higher education. Bologna Process countries voluntarily commit themselves to bringing some degree of uniformity to national higher education systems, while also maintaining a diversity of

approaches. The Bologna Agreement is essentially a voluntary agreement that is not regulated by any international treaty or convention. It is an effort to create a framework of comparable and compatible qualifications in terms of workload, learning outcomes, competences and profiles. The uniformity of higher education systems increases the scope of student mobility. The EU's mobility target of at least 20% of all students by 2010 is based on common language learning (usually English), plus the freedom of movement for students and teaching staff across EU national borders (see Figures 1 and 2) [8].

At present, the Lithuanian higher education system is undergoing two major changes. First, Lithuania has stepped on the road to popularise college education and has introduced a so-called *binary system* of higher education. Second, the objectives of Lithuanian universities and colleges are to produce creative students, and to strive to be top-level higher education institutions. Internationalisation is an important constituent factor for universities to target and maintain this level.

With the rapid rise of enrolments at higher education institutions, universities should consider how

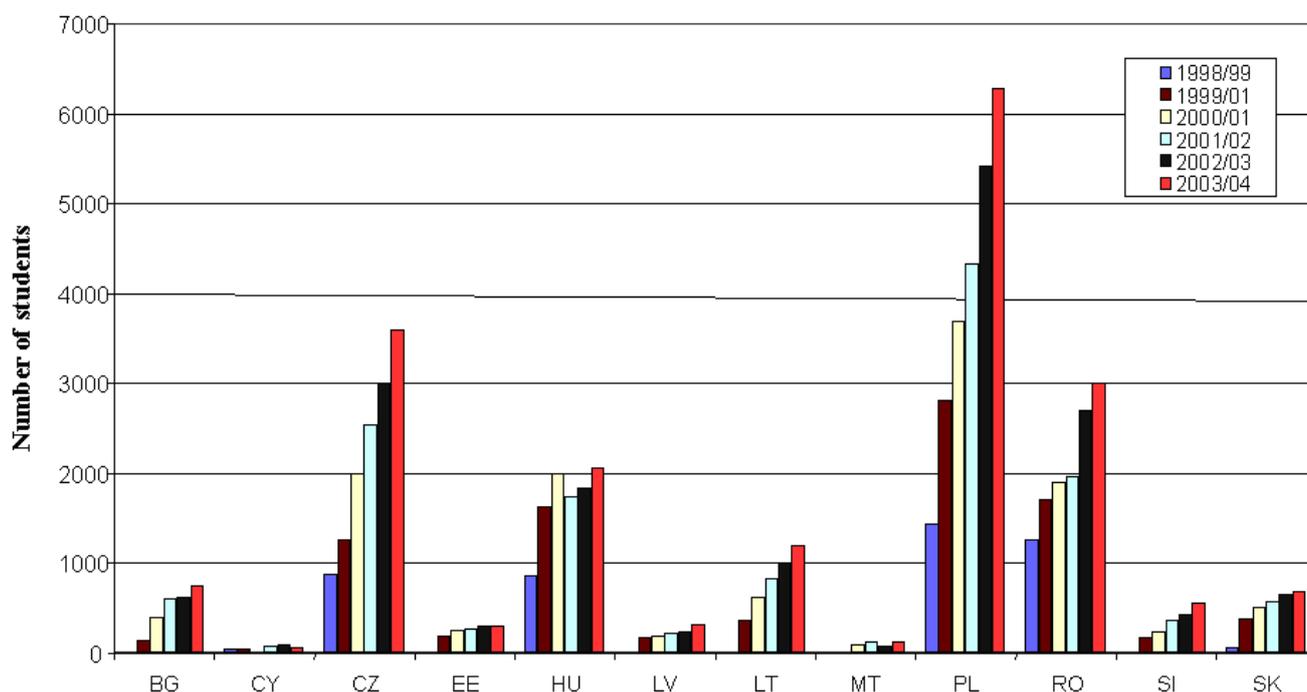


Figure 1: Outgoing Erasmus students from A/C countries from 1998/1999-2003/2004.

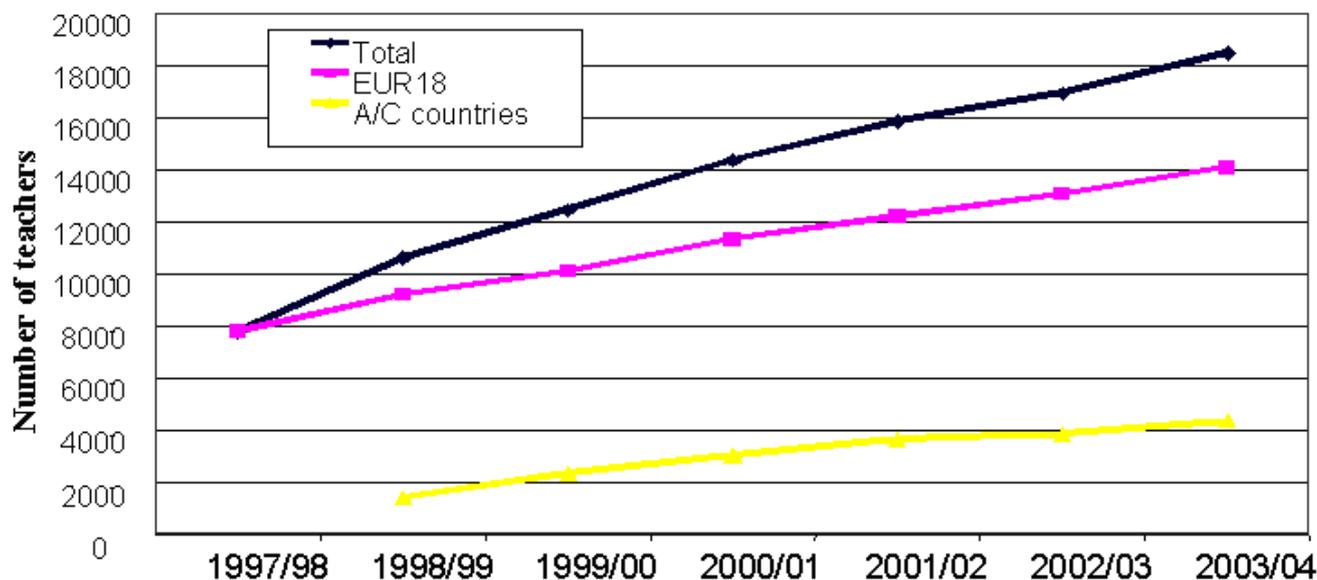


Figure 2: Erasmus teaching staff mobility from 1998/1999-2003/2004.

to resolve the new challenge regarding the conflict between quality and quantity. It is not so easy for new EU member countries with relatively few resources to do too much with too little.

In the Baltic countries of Lithuania, Latvia and Estonia, engineering education programmes are already accredited (or are engaged in the accreditation process) by competent bodies: national accreditation agencies. In many cases, peer-review teams include international members. Liaisons between Baltic countries' national quality agencies help in the adoption of common approaches and standards. An increasing number of graduates seek for the fair recognition of their qualifications abroad. Since the original credentials alone do not provide sufficient information, it is very difficult for employers or authorities of educational institutions to establish a level and function of a qualification without detailed and appropriate explanation. Aiming to improve international *transparency* and facilitating the academic and professional recognition of qualifications from all Baltic countries, higher education institutions have implemented the Diploma Supplement to a higher education diploma. This document in Lithuania is accorded to all graduates from 2006 on.

International exchange and cooperation, such as the exchange of experts and scholars, joint training programmes for postgraduates and doctoral students, cooperative academic research and the joint holding of academic conferences has been carried out at all levels and by all channels.

In Lithuania, the internationalisation of higher education was one of the most dominant features of higher education throughout the last decade of the last century. With the growth of governmental financial aid for studying abroad, the number of students studying in foreign countries increased from 400 in 1998 to 1,200 by the end of 2005. This latter figure accounts for less than 2% of the total current Lithuanian student population within higher education, and is still far from the figures reached in, for example, Scandinavian countries (around 15-20%).

Furthermore, the internationalisation of higher education is not restricted to promoting student mobility. Of equal importance is the effort to create better conditions to compete for *good* students and researchers.

It is also important to gain a reputation in the educational market by offering courses given in foreign languages (predominately in English) and establishing new courses with an international focus. It is likewise essential to transform curricula to correspond more closely with the educational content of dominant international education countries, such as the USA,

UK and Australia, and to make significant investments in the internationalisation of research, with grants to enable PhD candidates to enhance their studies, teaching and research in other countries. Engineering education, in particular, has achieved very little to promote global awareness, and engineering educators have yet to touch on the issue of global education [9].

TOOLS FOR THE IMPLEMENTATION OF THE BOLOGNA PROCESS

The European Commission initiative called the Bologna Promoters Corps, which is funded by the European Commission, has been implemented in all Socrates Erasmus countries. There are 200 Bologna Promoters who have been selected by their National Authorities to act as advisers to their colleagues in the implementation of the reforms carried out in the 40 countries participating in the Bologna process. The main tasks of Bologna Promoters is to assist higher education institutions with the following:

- The promotion and development of student and staff mobility;
- The implementation of the ECTS (European Credit Transfer System);
- Preparation for the ECTS label;
- The implementation of the Diploma Supplement;
- Preparation for the Diploma Supplement label;
- General information about the Bologna process.

The promoters are appointed by the national Socrates Erasmus Council following approval by the European Commission. Bologna Promoters will not replace the work undertaken by the Rectors Conference, Quality Assurance Agency, Socrates-Erasmus National Agency, etc, but they will be well embedded in the national higher education environment and will cooperate closely with these institutions. In Lithuania, six promoters are chosen that possess in-depth knowledge in quality assurance, qualifications frameworks and recognition issues in higher education.

The expected results of Bologna Promoters' activities are as follows:

- Raise awareness of the Bologna Process at the national, institutional and departmental levels;
- Raise awareness of the Bologna Process among students;
- Disseminate information about the Bologna process.

The European Commission and the Socrates Erasmus Council support this new action, provide training workshops for them and also inform Bologna

Promoters of recent EU and Bologna initiatives through its various publications and seminars.

The Promoters provide counselling to higher education institutions on the three Bologna priorities as defined by the Education Ministers at the Berlin meeting, namely:

- Quality assurance (internal and external);
- The three-cycle system (curricular reform, qualification frameworks, tuning);
- Recognition (ECTS, Diploma Supplement, EUROPASS, Lisbon Recognition Convention).

The European Credit Transfer and Accumulation System (ECTS) is a student-centred system that is based on the student workload required to achieve the objectives of a programme of study. These objectives should preferably be specified in terms of learning outcomes and the competences to be acquired.

Its principles are as follows: 60 credits feature the workload of a full-time student during one academic year. This amounts to around 1,500-1,800 hours per year, which corresponds to 25-30 student work hours per credit.

Credits can only be obtained after the successful completion of the work required and appropriate assessment of the learning outcomes achieved. Student workload consists of the time required to complete all planned learning activities. Credits are allocated to all educational components of a study programme and reflect the quantity of work that each component requires in order to achieve its specific objectives or learning outcomes in relation to the total quantity of work necessary to complete a full year of study successfully. Using the ECTS, the common structure will also promote student-centred education for life-long learning. The new credit system assigns credits to courses based on the student workload, while old systems weight every course equally. This is not simply a matter of allocating credit points to existing courses, but requires a radical overhaul of course structures, curricula and syllabi, and their relationship to a national qualifications framework [5].

The learning outcomes defined for a unit/programme should match the available workload required by a typical student. According to the Bologna process, new bachelor degrees should be relevant to the European labour market. These degrees should qualify graduates for jobs. However, in many countries (including Lithuania), both employers and graduates have doubts about the value of a shorter undergraduate degree. The question is: does the first cycle still offer a broad higher education or just training for the job?

Key documents of the ECTS include:

- Information package/course catalogue;
- ECTS student application form;
- ECTS Learning Agreement;
- ECTS recognition sheet;
- ECTS Transcript of Records;
- ERASMUS Student Charter;
- Diploma Supplement (EUROPASS).

Joint Degrees

After the Berlin summit in 2003, the third-tier doctoral studies was added to the former two. Joint degrees must receive legal recognition in all EU states. Joint degrees closely relates to international cooperation in quality assurance and the joint development of curricula between higher education institutions in different countries. Joint degrees should be higher education qualifications issued jointly by at least two education institutions on the basis of a study programme developed and/or provided jointly by the higher education institutions.

A joint degree may be a joint diploma issued by the institutions offering the study programme without being accompanied by any national diploma. The institutional context of a joint degree is a valued tool for encouraging Bologna developments in practice, strengthening inter-institutional cooperation and innovation in curriculum and research, as well as growing interest among institutional leaders.

Difficulties Associated with the Bologna Process

What difficulties and obstacles retard the implementation of Bologna process? The answers may be as follows:

- High operating costs and incompatible funding frameworks among partner institutions in different socio-economic contexts;
- Difficulties distributing resources across institutions;
- A lack of support for non-traditional students and possible geographical exclusion of students;
- QA institutional responsibility for transnational programmes;
- Unclear legal structures for awarding degrees;
- Difficulty with ensuring comparable standards (use of ECTS, etc);
- Overcoming differences of degree structures across Europe;
- Continuing recognition challenges;

- Ensuring participation of institutions and students from all Bologna countries;
- Sharing the benefits of privileged programmes in an increasingly mass higher education system;
- Agreeing upon standards and methodology for external QA;
- Attracting students and scholars from third world countries despite European visa regimes.

THE PRESENT STATE OF INTERNATIONALISATION AT VILNIUS GEDIMINAS TECHNICAL UNIVERSITY (VGTU)

Internationalisation at Vilnius Gediminas Technical University (VGTU) in Vilnius, Lithuania, is closely connected with the current trends of development in Lithuanian society. The Lithuanian emigration and immigration policy will inevitably have an effect on the activities of the University. The University seeks to play an important international role at both the national and regional levels, with international students at the University adding significantly to the internationalisation of the academic community.

Internationalisation can also be promoted at the University using other means, eg utilising a variety of programmes and agreements. The VGTU has signed some 60 international cooperation agreements with

foreign universities inside the Bologna agreement area and outside of it. In the last few years, the increase in the numbers of outgoing and incoming students has been quite rapid. However, on the other hand, the University has not yet reached the goals that it had set for itself. Increasing the volume of exchanges presupposes specific actions by the University's administration and requires additional resources.

Teacher exchanges are a relatively new activity at the University. The number of teacher exchanges has not yet reached an adequate level, considering the goals of its international activities (see Figure 3). By engaging in such exchanges, teachers can obtain information, contacts and know-how from the international academic community. Incoming teachers act as important channels for interaction and their know-how can be utilised at the departments and faculties that they are based in. Teacher exchanges can also assist in realising student exchanges.

The University aims at a further increase in student mobility (Figure 4). The majority of student exchanges fall within the exchange programmes, but some students also move outside these programmes. Student mobility helps to develop the students' skills. Every year, there is an improvement in the language and intercultural communication skills of those students who participate in the mobility programmes. There are considerable differences between the faculties and there are some faculties whose participation in

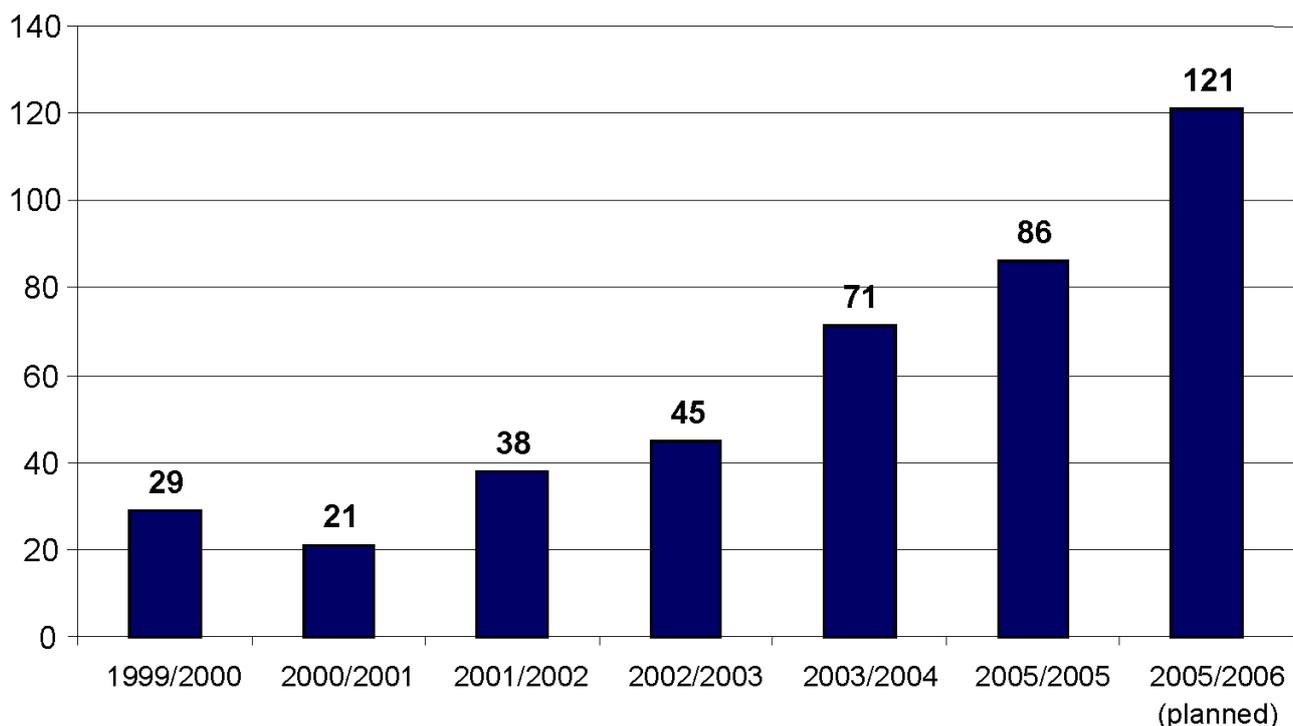


Figure 3: SOCRATES/ERASMUS programme: the number of outgoing teaching staff at Vilnius Gediminas Technical University (VGTU), Vilnius, Lithuania, by academic year.

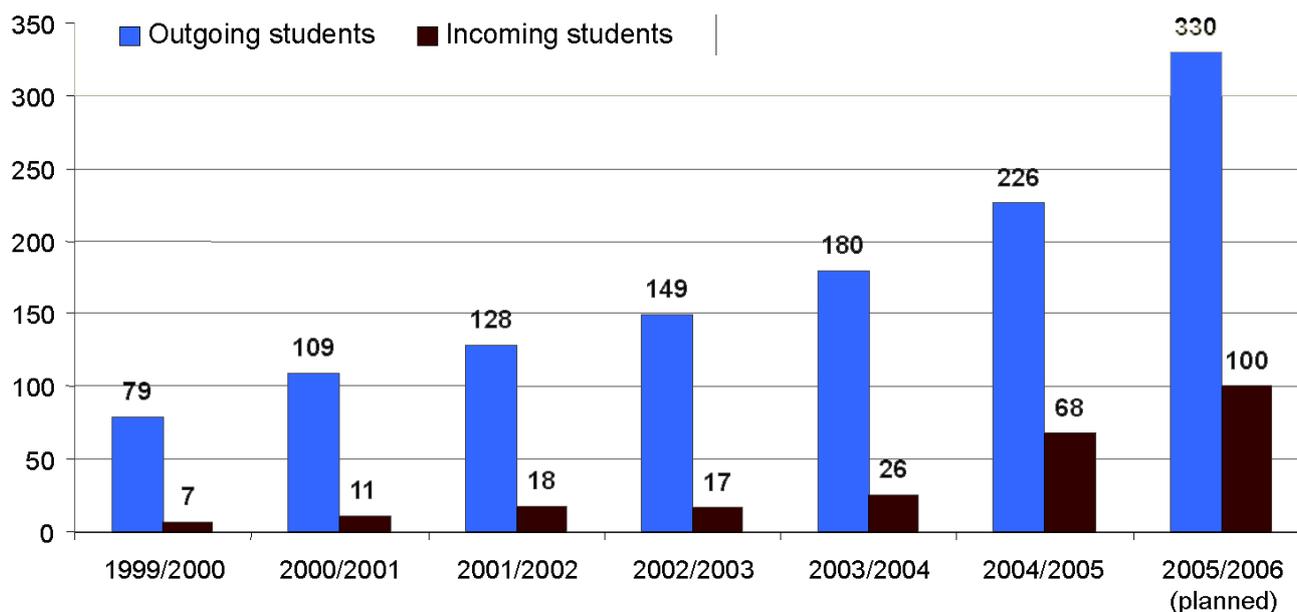


Figure 4: Socrates/Erasmus student mobility at Vilnius Gediminas Technical University by academic year.

exchange programmes is insufficient. All faculties organise courses given in a foreign language (English) while Socrates international exchange students are offered access to clear educational modules and fully study programmes.

The University has a certain number of international personnel – visiting researchers and teachers. However, this number is not large enough and there are still too few international staff members at the University. Departments do not have the personnel exclusively dedicated to the support of international activities. In faculty administration and departments, one or more staff members promote international activities in addition to their main duties.

All forms of international activities of the VGTU are a part of the quality assurance and development of studies, teaching and research.

In order to widen the University's level of internationalisation, the VGTU decided to change its status within the UNESCO International Centre for Engineering Education (UICEE) – from Supporter member to Partner – as of January 2007. The regional and global approach of the UICEE in all its initiatives is a good example for the VGTU on how international informational space can be created and how this space can be utilised to spread advanced ideas, internationalisation and a worldwide discussion of those professionals who are involved in engineering education.

REFERENCES

1. Tai, H-H., The internationalization of higher education: a comparative study of Asian-Pacific countries' foreign student policies. *Bulletin of Educational Research*, 50, 2, 53-84 (2004).
2. Hatakenaka, S. Internationalism in Higher Education: A Review. Higher Education Policy Institute (2004), <http://www.hepi.ac.uk/downloads/12InternationalismReport-ExdcutiveSummary.pdf>
3. Stier, J., Internationalisation in higher education: unexplored possibilities and unavoidable challenges. Paper presented at the European Conf. on Educational Research, Lisbon, Portugal (2002), <http://www.leeds.ac.uk/educol/documents/00002342.htm>
4. Jensen, H.P., Quality management: Danish engineering education; *Inter. J. of Engng. Educ.*, 16, 2, 127-135 (2000).
5. Farrington, D., Legislative Initiatives in the Context of the Bologna Process: a Comparative Perspective. Bucharest: UNESCO, Papers on Higher Education (2005), www.cepes.ro/publications/pdf/Farrington.pdf.
6. Knight, J., Internationalization of Higher Education Practices and Priorities. IAU survey report (2003), <http://www.unesco.org/iau/internationalization/pdf/Internationalisation-en.pdf>.
7. Knight, J., Internationalization of Higher Education: New Directions, New Challenges. IAU global survey report (2005), available upon request to iau2@unesco.org
8. Valiulis, A.V., The internationalisation of higher education: a new stage of individual growth and university development. *Global J. of Engng. Educ.*, 10, 1, 51-56 (2006).

9. Nguyen, D.Q. and Pudlowski, Z.J., Environmental engineering education in the era of globalisation. *Global J. of Engng. Educ.*, 9, 1, 59-68 (2005).

BIOGRAPHY



Prof. Dr Habil Algirdas Vaclovas Valiulis was born in Vilnius, Lithuania, in 1943. In 1967, he was awarded a Mechanical Engineer Diploma and, in 1974, he defended his PhD thesis. He was awarded his Doctor Habilitus degree in 1997. Since 1998, he is a professor and an

Expert Member of the Lithuanian Academy of Science.

Prof. Valiulis teaches fusion welding technology and equipment for ferrous and non-ferrous metals and polymers, materials science, soldering and brazing. His research interests are in arc, resistance, lasers, diffusion welding, and the heat treatment of ferrous metals, as well as the curriculum development of study programmes.

Since 1990, he has been the Head of the Materials Science and Welding Department. He has been the Vice-Rector for Infrastructure and International Relations at Vilnius Gediminas Technical University in Vilnius, Lithuania, from 2001-2006, and was appointed the Dean of the Faculty of Mechanical Engineering in 2006.

He is the author of over 250 research, methodological, scientific and study organisational publications, including several books and textbooks, many study guides and manuals. He has presented over 100 papers at international conferences. He is a member of the European Society for Engineering Education, the European Association for International Education, the European Higher Education Society, the Universities Consortium in Science and Technology BALTECH, a national representative for Lithuania in the European Society for Engineering Education and the European Commission Committee for Coal and Steel, as well as a member of the EC Bologna Promoters Team.

In 2000, he was awarded the UICEE Silver Badge of Honour for *distinguished contributions to engineering education, outstanding achievements in the globalisation of engineering education through the activities of the Centre and, in particular, for remarkable service to the UICEE.*



Donatas Valiulis was born in Vilnius, Lithuania in 1982. In 2004, he was awarded a bachelor degree diploma in transport management. In 2006, he defended his Master's degree thesis in finance management. He has taken an active part in Socrates mobility in Greece (2005) and has gained a

student practical placement in the USA (2003). He is also the author of two research papers.