Int. J. Engng Ed. Vol. 9, No. 5, pp. 349–352, 1993
Printed in Great Britain.

0742-0269/91 $3.00+0.00

Contributions are invited for this feature. News items on policies that concern the engineering education world, new courses and curricula either of a unique nature or of international interest, new innovative laboratories and concepts, funding news for engineering research projects involving international participation, special international continuing education courses and news, industry–university interaction, engineering faculty news, and developments in engineering education of international interest. Please send news items and conference information to the Editor-in-Chief. Public relations offices of universities and human resources divisions in industry are requested to contact the Editor with news items concerning engineering education and training.

Europe

Fourth Framework Programme

The research activities of the European Union are projected in the Fourth Framework Programme to cost over 13 bn ECU (over $15 bn). At the time of writing both German and British objections to the sum are delaying ratification. The main action of the programme, action I, will receive 87.3% of the budget, with the main objective of enhancing industrial competitiveness. Four per cent will be allocated to improve international co-operation, and 6.2% to increase research mobility and training. Dissemination of results will take up 2.5% of the budget. The distribution between disciplines is 28% on information technologies, 16% on industrial technologies, 9% on environment, 13% on life sciences, 18% on energy, 2% on transport and under 1% on socio-economic studies. An important aspect of all European programmes is establishment of networks for the diffusion of information, both inter-regionally and in the specific activity sectors.

European project applications: low success rate

Strategies and interest in participating in European programmes partly sponsored by the Commission vary between members of the Union. Whereas Spain and France have intimate contacts with the Commission regarding possible project support, other countries such as Germany shy away from lobbying activities. The success rate of applications for community support is relatively low—averaging 20%, and often much lower. For example, out of 170 applications for the environment LIFE programme from Germany in 1993, only 10 were approved. Applications are expensive if one has to calculate the time and effort spent on putting them together. It is understandable, though, that the requirements set up by the Commission are necessary. Spending the EU taxpayers' money on projects which may just end up with reports, and provide little else in return, need to be thoroughly scrutinized. Industry is often sceptical when it comes to applying for European funding. In addition to the difficult application procedure, funding is usually on a parallel financing basis, typically 50% of total costs. Increasingly the services of professional consulting operations are being recruited in finding suitable programmes, partners and applying for European programmes.

United Kingdom

Relationship between degrees and jobs

The large rise in the number of graduates in the coming years is mainly going to see an increase in unemployment in subjects which already have high joblessness. This is the result of a survey published by the **Central Statistics Union** for UK graduate job prospect projections. Librarianship and multidisciplinary studies, which already have high unemployment rates, will experience a large

increase in new graduates looking for work. On the other hand low unemployment is forecast for medical and medicine-related studies, which also have a low increase in graduate numbers. Computer-related studies will have a large number of new graduates but here unemployment is already running at 17%. The study, *CSU Trends and Predictions*, is available from Armstrong House, Oxford Rd, Manchester, UK.

Germany

Education minister resigns

The minister of education **Rainer Ortleb**, a mathematician and computer scientist, has resigned for health reasons. The resignation came immediately following the decision by the government to freeze student support, *Bafög*, at current levels until 1996. Student protest erupted against this and another measure to introduce mandatory examinations after the second semester of studies. The tendency to reduce or freeze support for higher education is not only a result of financial constraints, but also stems from the desire of the government party to redirect funding and support from higher education to professional and vocational education. This trend is similar to policies in the USA. Educational facilities, both public and private, for vocational professionals have suffered severe financial cutbacks recently, forcing institutions to rationalize and reduce their programmes. The new minister of education **Karl-Hans Laermann**, from the same Liberal Democratic Party (FDP) as his predecessors, has already made noises in the direction of reassessing the decisions for cuts and study reform. It is becoming increasingly difficult to pursue any policies which pare existing privileges or institute control mechanisms. Whenever large voting lobbying groups smell a wind of change which is against supporting or improving their conditions the resistance carousel starts, and the larger lobby tends to win.

Where is the market orientation?

A study by the University of Münster and the German Federation of Engineers (VDI) regarding the market orientation of electrical and mechanical engineering enterprises has revealed that although industry leaders claim that their companies develop products according to market needs, one-third of the enterprises fail to implement marketing orientation strategies. The responsibility for this deficit is accounted for by the proponderance of engineering graduates occupying higher management positions. These graduates are technology but not market oriented. There is evidence that a company's success is directly related to its market orientation. The example of Japan clearly shows that marketing is more essential than technology for obtaining successful results.

Warnings by an expert

Professor **Hans-Jürgen Warnecke**, former head of industrial manufacturing at the University of Stuttgart and currently president of the Fraunhofer Gesellschaft, has said in an interview with the German Engineers' Association (VDI) that the current economic recession may prove to be a healthy shock. The innovation gap is due to both political and industrial lethargy. A need for a stocking up of research funding by DM 1 bn is seen by Warnecke as essential. The reasons for the fallback are well known: excessive wages, expensive research, and economic structures that are out of date. It remains to be seen whether a change in attitudes by everyone concerned can be mustered to turn the tide.

Portugal

Private colleges against public controls

Private colleges comprising half of all Portuguese institutions of higher education are protesting over a tightening of control over their affairs by the government. They will be allowed to operate only if they have a specified number of full-time academics per student with university qualifications. Universities must have at least six degree courses in three different scientific subjects, two of which are technology or laboratory based. One Ph.D. lecturer per 200 students and one with a master's degree per 150 students is required. The colleges are being restricted due to allegations of poor quality and management standards, but feel that the requirements will prevent their expansion. Catholic universities are not included in the new regulations, as they are ruled under an agreement between Portugal and the Vatican.

Sweden—Scandinavia

Opening up student and staff mobilities in Scandinavia

The five Scandinavian countries have signed a treaty at the **University of Lund** to open up all northern European universities for student and staff exchanges. The treaty between Sweden, Norway, Denmark, Iceland and Finland will provide a freedom of choice in education across the borders of these countries. It is planned that 500,000 students in Scandinavia will be free to choose between 500 institutions of higher education. Currently 20,000 students from Scandinavia study abroad, mostly in Europe and the USA, only 4000 students choose another Scandinavian country. The mobility is facilitated by a negligible language barrier, and a basically similar pattern of the educational systems. Norway has consistently had to finance its students abroad due to lack of national educational capacity. The new scheme will enable a better equilibrium in the exploitation of educational resources.

USA

Is the Clinton administration retreating from higher education support?

After attending to some key higher education programmes in 1993, the Clinton administration is turning its attention towards school reform in 1994. The administration's Goals 2000: Educate American legislation is having little involvement with higher education. The emphasis will be on school reform. **Ernest L. Boyer**, director of the Carnegie Foundation for the Advancement of Teaching, sees the government initiatives as allocating a marginal position for higher education which is indicative of the current lack of faith in the ability of universities to solve everyday problems. The campus is seen as a place for faculty to get tenured and students to get credentials, but what goes on there is not seen as relevant to many of America's social problems. Similar tones may be heard from some sources in other countries (see **Germany**).

MIT offers new master's course

MIT has introduced a master's degree program aimed at practising engineers. It is a combined electrical engineering and computer science program. Students can earn the degree in five years and pocket the bachelor's degree as well. This degree is available without the usual reapplication for the master's degree after obtaining the bachelor. Student will not need to do research but will write a master's thesis as an expanded version of the bachelor thesis. Students will be admitted to the extended program after their junior year and may quit after the bachelor. Previously master degree students were expected to go on to a doctorate. Professor **Paul Penfield**, head of electrical engineering and computer science, claims that with the new degree a student demand has been answered. Students want to get a master and practise engineering, and not necessarily go for a Ph.D.

ASEE goes on Internet

The American Society for Engineering Education in Washington is to be connected to Internet this year. It is going to provide engineering education services, such as papers published in *PRISM* and the proceedings of the annual society conference. The service aims to provide engineering education materials such as courses published by the NSF Engineering Education Coalition.

Australia

Here too the vocational education is emphasized

Trends towards increased support of vocational training at the cost of support for higher education are also noticeable in Australia, similar to the reports above on the USA and Germany.

In ten years higher education has expanded by 60%. The government is now shifting its support to vocational training schools which will create 173,000 new places in the next three years. **Ross Free**, minister for vocational education, is alarmed by the prospects of joblessness for university graduates and at the 70% of school leavers who are aiming at university studies. Full-time employment for university graduates has fallen from 88 to 40% between 1987 and 1990. It remains to be seen whether an increase in vocationally trained professionals will relieve the job situation.

Oman

Higher and vocational education advances

Sultan Qaboos University is an example of the emerging higher education institutions in the Arabian peninsula. A modern university aiming at 80% science education has been established. Studies on educational requirements were made by the North East Wales Institute and by the Gesellellschaft für technische Zusammenarbeit (GTZ) in Germany. Fifteen per cent of the GDP of Oman is allocated to vocational and technical education, a huge proportion by any standards. Most education will parallel the British National Vocational Qualification schemes need by the country's enterprises. Companies such as the Petroleum Development of Oman are offering in-house education with outside help.

Conferences

Learning Organisations Innovations–Initiatives
16–18 May 1994
La Hulpe, Belgium
IBM International Education Centre
Chaussée de Bruxelles 135, 1310 La Hulpe
Belgium
Contact: Pierre de Potter
Tel: +32 2655 5803 Fax: +32 26555812

First Eurocad Forum: Inaugural Meeting of European Lecturers in CAD
16–18 June 1994
Bologna, Italy
Contact: Eurocad Leicester UK
Tel: +44 533522408 Fax: +44 533 522028

ASEE Annual Conference
26–29 June 1994
Edmonton, Alberta, Canada
Contact: American Society for Engineering Education, 1818 N St., NW, Washington DC 20036, USA
Tel: +1–202 3313500 Fax: +1 202 265 8504

Second International Conference on Education Business Partnership
Hotek Pullman St Jacques, Paris
Contact: International Partnership Conference 1994, University of Warwick, Coventry CV4 7AL, UK
Fax: +44 203 523617

IEEE First International Conference in Multi-Media Engineering Education
6–8 July 1994
Melbourne, Australia
Contact: Dr M. Aldeen, Department of Electrical and Electronic Engineering, The University of Melbourne, Parkville, Victoria 3032, Australia
Tel: +61 3 3447298 Fax: +61 3 3446678

AEMC '94: The Role of Mathematics in Modern Engineering
11–13 July 1994
Melbourne, Australia
Contact: Dr Joseph Steiner, Swinburne University of Technology, PO Box 218, Hawthorn, Victoria 3122, Australia
Tel: +6138198484 Fax: +6138190821
e-mail: aemc94@swin.edu.au

Calisce '94: Computer Aided Learning in Science and Engineering
31 August–2 September 1994
Telecom, 46 rue Barrault, 75634 Paris Cedex 13, France
Contact: Jean-Louis Dessalles
Tel: +33 145817870 Fax: +33 1 45813119
e-mail dessales@enst.fr

Visions and Strategies for Europe: Joint SEFI and IGIP Annual Conference
21–23 September 1994
Czech Technical University, Prague, Czech Republic
Contact: Jan Pozar, Department of International Relations, Zikova 4, 16635 Praha 6, Czech Republic
Tel: +42 2 332 3465 Fax: +42 2 311 9692
e-Mail seig@vc.cvut.cz

Product Development in Engineering Education: Engineering Education Integrating Engineering Design, Management and Marketing
28–31 October 1994
University of Limerick, Ireland
Contact: Gaye Moynihan, Department of Mechanical and Production Engineering, University of Limerick, Ireland
Tel: +353 61 333644 Fax: +353 61 330316

3rd European Forum for Continuing Engineering Education
9–11 November 1994
Vienna, Austria
Contact: Dr Franz Reichl, Vienna University of Technology, Gusshausstrasse 28, 1040, Vienna, Austria
Tel: +43 1 58801 Fax: +43 1 5054961
e-mail Internet. reichl@email.tuwien.ac.at

The Development and Role of Women in Technology
21–24 September 1994
Beijing Institute of Technology
Beijing, China
Contact: Professor Li Shizhi, Beijing Institute of Technology, PO Box 327, Beijing 100081, China
Tel: +861 8416688 Fax: +86 1 8412889

Fourth Triennial International Conference of the Association for Engineering Education of South East Asia and the Pacific
13–16 November 1994
Lae, Papua New Guinea
Contact: Dr Nimal Subasighe, Department of Mining Engineering, PNG University of Technology, Private Mail Bag, Lae, Papua New Guinea
Tel: +675 43671 Fax: +675 457534

Third UNESCO World Conference on Engineering Education
14–18 November 1994
Cairo, Egypt
Contact: Dr Saad M. El-Raghy, Faculty of Engineering, University of Cairo, Cairo, Egypt

Fourth World Conference on Engineering Education
15–20 October 1995
Minneapolis-St Paul, Minnesota, USA
Contact: Dr E. R. Krueger, William C. Norris Institute, 245 East Sixth St., St Paul, MN 55101, USA
Tel: +1 612–225 1433 Fax: +1 612 225 1241
e-mail:wcnrex@epx.cis.umn.edu