

**MINUTES of the
International workshop on
ROLE AND IMPACT OF QUALITY LABELS IN ENGINEERING EDUCATION –
THE EXAMPLE OF THE EUR-ACE LABEL**

13 February 2012, 14:00 – 18:00
CTI Headquarters, Neuilly-sur-Seine, France

About 150 participants attended the event, mostly from French engineering higher education institutions, but also from national authorities and professional organizations and foreign universities and programmes.

The workshop started with a welcome address by CTI President, Bernard REMAUD, who made an introductory presentation of the European Quality Label for engineering education EUR-ACE and the association that runs it: the European Network for Accreditation of Engineering Education (ENAE).

He was followed by ENAE President Giuliano AUGUSTI who presented the origins of EUR-ACE and the mission statement and members of the ENAE association. Originally, EUR-ACE was a European project funded by the European Commission (2004-2006) dealing with the recognition of combined academic and professional qualifications. ENAE was founded in 2006 with the main objective “to promote and coordinate National Accreditation Agencies and analogous bodies in order to set up and implement gradually a pan-European de-centralized system of accreditation of engineering education, that is a system leading to pan-European recognition of national accreditations, consistent with the objectives of quality, transparency, recognition and mobility pursued by the Bologna Process”.

ENAE defines accreditation of engineering educational programmes as the “result of a process to ensure suitability of that programme as entry route to the engineering profession”, with the active participation of “independent panels including academics and professionals”.

ENAE has developed its own “EUR-ACE Framework Standards for the Accreditation of Engineering Programmes” at 2 levels: bachelor and masters. ENAE registered the EUR-ACE® trademark and awards EUR-ACE labels since 2007.

After these general presentations, two round-tables were organized.

Round-table 1: Role and impact of quality labels – a stakeholder perspective.

Chairperson: Jean Claude Arditti (International adviser for CTI)

• **The perspective of the European Commission** (*EndikaBengoetxea - Policy Officer DG Education and Culture-European Commission*)

The European Commission defined 3 major aims in its Progress Report published in 2009: make Quality Assurance (QA) more efficient and transparent for users; make the European Standards and Guidelines coherent with the Bologna process (3 cycles, ECTS); stimulate cross-border QA (recognition, double & joint degrees, European quality seals, ...)

The conclusions of the 2009 report are still valid in 2012. The European Commission encourages EU countries to allow their Higher Education Institutions to be quality assured by international QA agencies that figure in the European Quality Assurance Register (EQAR). A greater focus should be put on end-users (students & teachers), not just QA agencies and institutional leaders. Student, teaching and administrative staff mobility and non traditional Higher Education should be developed. Links should be strengthened between HE expert communities on topics such as Bologna, ECTS, rankings, QA. In case of delocalized programs and campuses, EQAR registered agencies should be used as an important tool for QA.

The Progress Report that will be published in 2012 will deal with EU programmes; co-operation between communities & tools; the sectoral approach (practical training); knowledge alliances (HE institutions & business); EQAR as a strategic approach, not just a regulatory body.

- **The benefits of international recognition to the engineering profession in Ireland** (*Cyril Burkley – University of Limerick and Chair of Accreditation Board of Engineers Ireland*)

Cyril Burkley mentioned 3 landmarks for accreditation: the Washington Accord regarding the Chartered Engineer; the Sydney Accord regarding the Engineering Technologist; the Dublin Accord regarding the Engineering Technician. These accords present significant advantages for the signatories: mutual recognition; benchmarking; sharing information and exchanging on best practice.

After stressing the specific situation of Ireland as a very small country, he listed the benefits of these agreements for:

- Engineers Ireland (certification, benchmarking, best practice)
- Graduates (international recognition of their degree, facilitates & increases mobility)
- Educational System (increased focus on engineering)
- Irish Industry (increased attractiveness of the country for multinational companies thanks to the international “Quality Assured” graduates)

- **The perspective of a multinational corporation: EUR-ACE criteria versus industry needs - a critical comparison** (*Stefan Becker - Siemens AG and spokesman of the Working Group for Engineering Education of the German Electrical and Electronics Manufacturers Association - ZVEI*)

After a short presentation of the company SIEMENS as an example for industry needs, Stefan Becker showed several international surveys regarding differences between industry expectations and graduates’ profiles. For industry there is no unique model for a graduate engineer: many different skills and levels of qualifications are needed according to the positions offered. Employers look mostly for personality when hiring a graduate. The biggest gap between what is taught and what employers look for is often the lack of “soft skills” (communication, team-work, ...) of the graduates. In a company the entry qualification is important only for the 1st job; at universities the degree is important for the whole career; accreditation helps minimize discrepancies. According to Stefan Becker, the EUR-ACE criteria at 2 levels, bachelor and master, are meaningful and useful.

- **An experience from the aeronautical sector: the Pegasus Network** (*Pascal Bauer- ENSMA/Pegasus*)

Pegasus is a network of Higher Education Institutions in the sector of aeronautical engineering with 25 members from 10 European countries. Its aim is to improve quality, increase co-operation between partners and carry out joint research projects. The network set up its own quality label, PERSEUS: Pegasus European Recognition of Scientific Excellency of Universities. The first audits will start in 2012 and include self-assessment, peer review and site visits.

- The presentations were followed by a **discussion** with the audience. Following issues were raised during the exchanges:

- The European Commission insists on the impact on the end-users and strongly supports, including financially, QA initiatives and labels.
- Transferrable skills are very important. Engineering graduates should be trained for a whole career, not only for the 1st job.
- Soft-skills should be introduced in all subjects, even technical ones.
- Teaching and research may progress through contacts between professors and industry. Students, faculty and industry should co-operate; their joint feed-back is very important. Professionals should participate to QA evaluation procedures.
- A label represents a perfect match between a training programme and the need of industry. It does not only testify of an accreditation process but represents an additional quality tag.
- EUR-ACE being a QA label for all engineering programmes, would it not be preferable for PERSEUS to become a “sub-label” of EUR-ACE instead of a separate, yet similar, initiative?
- There are a lot of similarities between EUR-ACE and the Washington accord and it would be interesting for ENAEE and the Washington accord to work together on equivalences and discuss the qualifications at master’s level.

Round-table 2: Benefits and challenges of the EUR-ACE label – The perspective of the accredited institutions

Chairperson: Teresa Sánchez Chaparro (CTI Programmes director)

- **Comparisons of EUR-ACE, ABET and CTI standards: Useful for EPFL?** (*Michel Jaccard - École Polytechnique Fédérale de Lausanne, Lecturer, Quality Officer, Senior Scientific Advisor*)

EPFL is accredited by ABET and by CTI and is holder of the EUR-ACE label. Michel Jaccard gave a feedback on EPFL's experience with the ABET and CTI accreditation procedures and standards. Both systems are similar as regards programme assessment. ABET focuses exclusively on the programme whereas CTI looks also at the institution's strategy which seems very positive. On the other hand, ABET looks closer to the faculty (workload, development, hiring procedures, ...). CTI and EUR-ACE would gain by developing this aspect in their accreditation procedures. EUR-ACE seems especially useful in countries where there is no existing agency for QA. He expressed his regrets that there is an obvious lack of interest by the media for quality labels in Higher education and that the EUR-ACE label is not well known by industry and society.

- **Expected Impact of the EURACE Label** (*Mireille Ducasse - INSA Rennes, International and Europe Director*)

After a short presentation of the French engineering institution INSA de Rennes, Mireille Ducasse listed the benefits of the EUR-ACE label that the institution had been able to experience:

- The label reassures students as to the quality of institutions located in less "fashionable" regions, for instance in Eastern and Southern countries. Thus it contributes to increase the student mobility.
- The EUR-ACE correspondence table of 1st and 2nd cycle is very useful for an immediate understanding of the level of a given programme.
- French engineering institutions are of small size compared to foreign universities, but offer high quality programmes. The EUR-ACE label proves that size is independent from quality.

- **The accreditation of the Belgian Royal Military School (RMS) by CTI and NVAO - Lessons learned** (*Jean Marsia- Royal Military School Brussels, Former Academic Director*)

The Belgian Royal Military School is accredited by the Dutch and Flemish agency NVAO and by CTI. These external accreditations have brought following benefits:

- Improvement of the quality of the internal processes.
- Recognition of individual achievement for holders of a degree from an accredited programme.
- Consolidation of the institution's position in the European Higher Education Area.
- Reference for other European military schools.
- Transparency & mutual information with other civilian or military institutions.

- **EUR-ACE label: the importance for a Sino-French engineering programme** (*Jean Dorey – École Centrale de Pékin, former French-side director*)

The French Ecole Centrale founded with Chinese partner Beihang University an engineering degree programme in Beijing that was recently accredited by CTI. This accreditation was considered important for following reasons by both Ecole Centrale and its Chinese partner university:

- Credibility of the project.
- Evidence & guarantee of the quality of the programme.
- Enabled the institute that runs the programme to become one of the key institutes of the university.
- The Chinese colleagues were impressed by the quality of the evaluation procedure.
- The EUR-ACE label came as an unexpected plus and was very important as an European recognition.
- Major benefits for the French side: push the programme towards improvement; use CTI's recommendations as an argument to obtain changes.
- Major benefit for the Chinese partner: recognition of the quality of the programme.

- **The example of 2IE, an African perspective** (*Meriem KELLOU, 2IE*)

2IE is an engineering institution in Burkina Faso that has recently been accredited by CTI and awarded the EUR-ACE label.

First, Meriem Kellou listed 2IE's main motivations to apply for the CTI accreditation:

- Increase the attractiveness of the institution.

- Avoid the brain-drain: African students do not need to go to Europe or the USA to obtain an internationally recognized degree. After graduation they naturally stay in Africa.

Then she listed the outcomes of the accreditation:

- The number of individual student applications from other African countries rose in a significant way. The student number increased and the selection improved.
 - 2IE was admitted as a member of French union of engineering institutions “Conférence des Grandes Ecoles”.
 - The setting up of double degree programmes with French and Japanese institutions was facilitated.
 - Student mobility increased.
 - The institution became a model for other countries.
 - The programmes improved.
 - Co-operation between private and public sector was facilitated.
 - 97% of the graduates stay in Africa to work.
 - The institution decided to apply for accreditation by ABET.
- The presentations were followed by a **discussion** with the audience. Following issues were raised during the exchanges:
 - In international co-operations, EUR-ACE helps to further bilateral understanding of the partners involved and to fill the cultural gap between the partner institutions. In the Sino-French project presented, Chinese professors for example tended to have a knowledge based approach to teaching, whereas French professors are more focused on developing students’ capacities to evolve and be innovative during their whole career. CTI and EUR-ACE helped to develop common standards.
 - EPFL will continue to apply for accreditation by CTI even if the Swiss agency OAQ will be able to award the EUR-ACE label, because the institution wishes to continue to benefit from the long practice of CTI and the European experience. Accreditation by CTI enhances co-operation with French institutions and is positive for the many Swiss graduates who work in France.

Conclusion

Denis McGrath made a synthesis of the two round tables. Engineering being a global profession, transnational recognition is essential and EUR-ACE is an important tool to achieve this. Accreditation has significant benefits for both educational systems and industry. The dialogue between EUR-ACE and the Washington accord should be furthered.

CTI President Bernard Remaud made following concluding statements: Labels have two major impacts: on the institution’s communication and its quality process. International labels are important to show that the institution’s standards are in line with international requirements. EUR-ACE is an important communication tool for institutions which are less known. In Europe, industry is interested in the process; in Africa it is an important tool to fight brain-drain. In the future. EUR-ACE should work on both aspects: communication and quality assurance process.

Paris, 19th February 2012

Marie-Jo GOEDERT
International adviser for CTI