

***EUPEN* 's ongoing contribution to European physics education**

Hendrik Ferdinande

Ghent University/*Universiteit Gent*

Chair *European Physics Education Network*

BE - 9000 Gent, Belgium

Summary

- ***EUPEN* : what? when? why? who? which products?**
- **Harmonisation of HE in Europe:**
the paths; the commitments
- **Bologna Declaration & 'Process'**
- ***EUPEN* 's ongoing contribution**

EUPEN : what? when?

- *consortium* of ~ 130 Physics Departments in Universities/Technical Universities in almost 30 different European countries
 - + some 5 European/national professional org. associated
 - started in 1996 as spin-off from
 - Thematic Evaluation Conference* in Gent (1995)
 - ‘Physics Studies for Tomorrow’s Europe’/***
 - L’enseignement de la physique pour l’Europe de demain’***
- *Thematic Network Project* in ERASMUS of
SOCRATES from DG EAC of E.C. (support ~ 150 k€/a)

***EUPEN* : why? who? which products?**

- offers a ***forum*** for discussion of physics degrees
- **5 working groups** (each chair, secretary, 3 members); one on **ICT!**
 - + **executive committee**: determines *EUPEN* policy
 - + permanent **secretariat** at Ghent University
- series of **annual Gen. Fora**: Brugge (1997), Dublin (1998), London (1999), (regional) Lille, Poznan & Barcelona (2000), Köln (2001)

with **proc.** *'Inquiries into European Higher Education in Physics'* **6 vol.**

Harmonisation of HE in Europe (I): the paths (i)

- evolution last quarter of century: **massification & democratisation**
- EU no important competencies (2 articles in Amsterdam Treaty)
mobility & co-operation programmes
(ERASMUS, LEONARDO, TEMPUS, SOCRATES)
- **continental** universities -> internationalisation interest:
recruitment of **foreign** students
mainly by creation of **two-years MSc programmes in English(!)**
(e.g. in DE with support of *Heraeus Stiftung*)
- equivalence of diplomas: **NARIC**
<http://europa.eu.int/comm/education/socrates/agenar.html>

Harmonisation of HE in Europe (I): the paths (ii)

- tension: **unitary** system (UK, ES, & SE)
vs **binary** system (other EU) for HE
- change in degree system: FR '*mastère*' (5 yrs) (prereq. for doct.)
IT '*laurea*' (3 yrs) + '*laurea specialistica*' (2 yrs)
NL : in sciences & appl. sc.: 3 + 2 yrs (*β covenant*)
3 MSc options: research; communication & education; management
- debate on **globalisation** of HE at GATS of WTO:
 - > see: '*The global HE market: shifting roles, changing rules*'
<http://www.nuffic50years.com>
 - > see: EUA & ESIB on WTO:
<http://www.unige.ch/eua/En/Activities/WTO/welcome.html>
 - >> but research **independent** from industry !!!

Harmonisation of HE in Europe (II): commitments (i)

- **UK** (1998) Dearing Report
(*Higher Education for 21st Century*)
<http://www.lifelonglearning.co.uk/dearing>
- **FR** (1998) Rapport J. Attali
(*Pour un modèle européen d'enseignement supérieur*)
<http://www.education.gouv.fr/forum/attalia.htm>
- **Paris** (May1998) Sorbonne Declaration
(*Joint declaration on harmonisation of
the architecture of the European HE*)
<http://www.education.gouv.fr/actu/declarb.htm>

Harmonisation of HE in Europe (II): commitments (ii)

- **Bologna** (June 1999)
'Trends in Learning Structure in Higher Education'
(The European Higher Education Area:
Joint declaration of the European Ministers of Education)
<http://www.unige.ch/cre/activities/Bologna%20Forum/bologna-welcome.htm>
- **Praha** (May 2001) *Prague Summit on Higher Education*
<http://www.msmt.cz/Summit/Fcommunique.html>
- **Berlin** (18/19 September 2003) *Berlin Summit on HE*
<http://www.bologna-berlin2003.de/>

Bologna Declaration & 'Process'

- **a common (29 -> 40 countries)
action programme (not a political statement)
to create a European space for HE by 2010**
- **a set of five specified objectives and measures
with organised implementation via the 'Bologna process'**
 - common framework of qualification: readable degrees
 - undergraduate / postgraduate levels in all countries (Ba min. 3 yrs)
 - ECTS compatible credit system
 - European dimension in quality assurance
 - elimination of obstacles to free mobility of all students & teachers

EUPEN's ongoing contribution (I)

***‘Tuning educational structures in Europe’ project (½M€
Rijksuniversiteit Groningen (NL) and Universidad de Deusto (ES)***

- **aims:** enabling (~100) ‘EU’ universities in joint debate on
 - * professional profiles and needs for society
 - * how to measure student workload by ECTS as accumul.system
 - * adaptation to new labour market and learning outputs
- **focused on five core disciplines:**
mathematics, geology, business, history and educational sciences
in synergy with two TNPs: physics (*EUPEN*) & chemistry (*ECTN*)
- **anticipated outcome:** e.g. methodology in Europe-wide tuning of educational structures applicable to other areas
- **see** <http://www.relint.deusto.es/TUNINGProject/index.html>
- **Follow-up:** *‘Tuning 2’* with CE/E participation in 2003/4 (?)

EUPEN's ongoing contribution (II)

'Transnational European Evaluation Project' TEEP2002

- management by **ENQA**
- **Quality Evaluation** in **Physics, History and Veter. Sci.**
- **quality asses.** by ***'International Peer Review Committee'***
- in **5 volunteering** EUPEN universities from **5 countries**
- **self-evaluation reports** prepared by HEI in **Autumn 2002**
- **site visits** at departments in **Spring 2003**
- draft **Report** to be presented at 2003 **Berlin Summit**

info:

- * **Gender-fair** participation: **Woman in Physics** - Paris 2002

see: <http://www.if.ufrgs.br/%7barbosa:conference.html>

- * 'Attracting Young Scientists -**Strategies Against Brain Drain**'
Min. Edu. & Sci. BG + *DAAD* + *HRK*, Sofia (BG) 2002-10-18/20

Future of the *EUPEN* Consortium (i)

- **Consolidation open structure:** every Phys. Dept. welcome!
(*i.e.* more countries; better representation per country)

- **Renewal application TNP to DG EAC:**

Oct 2002/Sep 2003: accepted; in preparation : 2003/2006!

- **Next EGF2002 in Varna (BG) 2002-09-06/07:**

Convergence of Physics Studies in Europe?

- (i) the **quality** assessment and assurance in education
- (ii) **first and second degrees** in the context of the **B. D.**
- (iii) **networking** opportunities for **specialisation** in physics
- (iv) the **student enrolment and destination**
- (iv)** innovative **teaching and learning** mostly by **multimedia**

Future of the *EUPEN* Consortium (ii)

- **Search for co-operation** with
ICPE, GIREP, ASPEN, ARAPEN, etc
- **Search for co-operation** with similar national bodies:
Standing Conference of Physics Professors (UK)
Konferenz der Fachbereiche Physik (DE)
Conferenza dei Presidenti dei Consigli di Corso di Studio (IT)
Polish Association of Deans of Faculties of Physics (PL)
- **Co-operation with EPS** in the action **2005 ‘World Year of Physics’ (WYP)** for EPS-13 in Zürich or Bern (CH)

EUPEN Consortium

Chair: Hendrik Ferdinande

Secretariat: Ms Elke Valcke and /or Tamara Formesyn

Universiteit Gent

Proeftuinstraat 86

BE – 9000 Gent, België

T ++ 32 9 264 6539

F ++ 32 9 264 6697

E elke.valcke@rug.ac.be or tamara.formesyn@rug.ac.be