

UNESCO

**UNESCO-CEPES
EUROPEAN CENTRE
FOR HIGHER EDUCATION**

**Higher
Education
In Europe**

In this issue:

Comparing Doctoral Training in Europe and North America

Vol. XXXIII, No. 1, 2008

Higher Education in Europe

Volume XXXIII Number 1 2008

CONTENTS

Comparing Doctoral Training in Europe and North America

Introduction to the Issue

Margret Wintermantel 1

New Forms of International Cooperation in Doctoral Training: Internationalisation and the International Doctorate - One Goal, Two Distinct Models

Annamaria Silvana de Rosa 3

The International Max Planck Research Schools for Molecular Biology and Neurosciences in Göttingen (Germany) as Examples for Joint Doctoral Training by a German University and its Non-university Partners

Steffen Burkhardt and Erwin Neher 27

Doctoral Education in the United States of America

George Walker 35

The International Research Training Group on 'Brain-Behavior Relationship of Normal and Disturbed Emotions in Schizophrenia and Autism' as an Example of German-American Cooperation in Doctoral Training

Frank Schneider and Ruben C. Gur 45

Quality and Standards: The Challenge of the Professional Doctorate

John Taylor 65

Doctoral Studies in Romania: Admission Procedures, Social, and Legal Aspects of Doctoral Training

Mircea Miclea 89

Doctoral Education and the Workings of Canadian Graduate Schools: A Differentiated Tier within Canadian Universities Facing the Challenges of Tension-driven Functions

Louis Maheu 93

Social and Legal Aspects of Doctoral Training in Canada: Criteria and Consequences of Admission

David Leyton-Brown 111

Transformation of Doctoral Training in Poland <i>Andrzej Krasniewski</i>	125
The Graduate Training Programme 'Molecular Imaging for the Analysis of Gene and Protein Expression': A Case Study with an Insight into the Participation of Universities of Applied Sciences <i>Mathias Hafner</i>	139
Concluding Summary. Form Follows Function: Research, the Knowledge Economy, and the Features of Doctoral Education <i>Ulrich Schreiterer</i>	149
Radical Reform of the French University System <i>Gilbert Béréziat</i>	159
Book reviews	183
Notes on Contributors	193

Introduction to the Issue

Margret Wintermantel

UNESCO-CEPES, the European Centre for Higher Education of UNESCO, and the German Rectors' Conference (HRK), the voluntary association of German universities and higher education institutions, have collaborated successfully on many joint projects. Fine examples are the joint efforts to assist the development of South Eastern European universities after the Balkan wars as well as our common interest in 'entrepreneurship training' in higher education.

'Form Follows Function – Comparing Doctoral Training in Europe and North America', the joint International Workshop of November 2006 documented here, was organised in close cooperation between the two organisations and generously co-financed by the German Hertie Foundation. Based on the conference contributions, this issue will compare newly structured European models in doctoral training with the graduate school model of North America, which is globally considered to be the most successful. The workshop was a timely and fruitful contribution to the still heated European discussion about the future of the doctorate. The core issues of this debate are rooted in the different European cultures of doctoral training and research. Additionally, there is strong political pressure in Europe to link doctoral training to the first and second Bologna cycle, thus integrating it as a third cycle into the Bologna study structure. At the same time many European universities are adamant to preserve the qualities of the traditional doctorate, assuring the creative freedom for young talents to undertake research and to develop themselves by carrying out independent research. There is now a common understanding in Europe that these talents are desperately needed for the publicly and privately funded European research and innovation system, which we consider to be the backbone of the future European economy and society. Hence, what kind of Ph.D. graduates do we need in Europe?

From the point of view of German universities the core mission of the doctoral candidate remains 'to advance knowledge through original research', as was stated by the European universities in the '10 Salzburg principles' in 2005. Yet the organizational framework of the doctoral phase in universities has to be reformed and adapted to new challenges. More and more doctoral graduates are working outside academia and have to be fit for multiple labour markets where their proven skills in creative and innovative thinking is in demand. This has led to an understanding in Germany and Europe as a whole that certain skills should be trained in addition to the research-driven requirements for more interdisciplinary research and international cooperation. These skills naturally are subject to different interpretations and definitions, but can be reduced to basic sets which each university or each doctoral candidate can adapt to his or her individual profile. It seems obvious that a modern early stage researcher should have the skills to initiate and organise research projects and to build up and lead teams of researchers. He or she should be able to 'sell' the content and the results of the research work to the scientific community, as well as to the general public. Last but not least, he or she should also be capable of organising and transferring of the acquired knowledge into 'products' in a very broad sense of the word. It goes without saying that the concretisation of these goals is dependent on the subject culture.

The articles in this issue will demonstrate that there is general agreement among the contributors that certain organisational structures are more suited than others to creating a vibrant learning atmosphere and to facilitating implementation of the institutional research policy and quality control by the university. The summary clearly encourages universities "to establish graduate schools under the leadership of a dean as an organisational unit independent of departments, programs, centres, professional schools and other offices". For the time being this model has been put in place in only a very few German universities. It remains to be seen whether these first experiences will convince other universities – the discussion is still open. Yet there is overarching agreement in German higher education that the successful individual research experience of the doctoral student should remain at the centre of all reform attempts.

This issue gives a varied, yet comprehensive, overview of the most salient issues on this topic.