

L'avenir de la formation doctorale post-pandemie?

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Introducing **EUA-CDE**



- Membership service of the European University Association (EUA)
- The largest European Doctoral Education Network (doc & postdoc) bringing together 262 European universities from 36 European countries
- Drives doctoral education policies and promotes cooperation and exchange of good practices on issues of common interest
- Identifies and monitors the trends in doctoral education
- Organises regularly events, addressing fundamental and emerging topics of doctoral education and publishes surveys and policy paper

Recent themes

- Research integrity
- Research assessment
- Open science and the digital transformation
- Inter-institutional collaboration in doctoral education
- Career development and tracking
- Doctoral candidates' wellbeing/mental health
- Societal dimension of doctoral education (incl. SDG)



The beginning of doctoral education



The modern doctorate



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A LA FACULTÉ DES SCIENCES DE PARIS

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Research (



Citizen Science

Data analysis

Disciplinary knowledge/terminology

Ethics/integrity

Grant application writing

Interdisciplinarity

Literature use/management

Open Access publishing

Open Data management

Open Education

Open Evaluation

Open Licensing

Open Methodology

Open Source

Project/time management

Career Development

Career planning/assessment

CV writing

Interview techniques

Job searching/application

Skills documentation/verification

Skills gap identification/development



Digital

Information accessing/retrieval Information presentations/visualisation Information processing/exchange Software usage/development Programming



Communication

Academic writing Formal correspondence Oral presentation

Science for non-technical audiences

Science for policy making Social media/webinar usage

Mobility



Intercultural awareness/communication Intersectoral awareness/experience Foreign language skills



or

Early-Career

Researchers



Cognitive

Abstraction/creativity
Analysis/synthesis
Ortical thinking/problem solving
Organisation/optimisation

Enterprise



Commercialisation Entrepreneurship Innovation/knowledge transfer Intellectual Property Rights (IPR) Legal/business standardisation Patenting

Teaching & Supervision



Course development/assessment Exam preparation/assessment Mentoring/supervising students Teaching and learning theories/methods

Interpersonal

Conflict management Discipline/perseverance Diversity awareness

Leadership/team work

Negotiation

Independence/responsibility

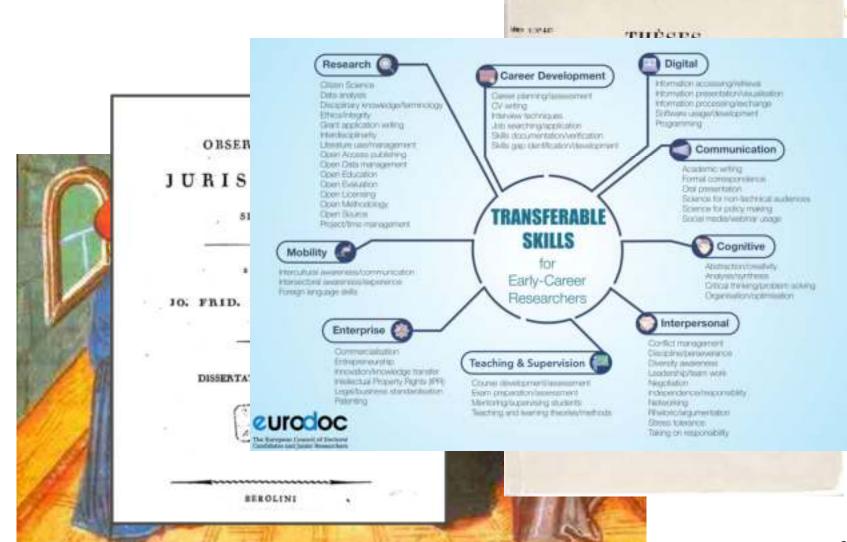
Networking

Phetoric/argumentation

Stress tolerance

Taking on responsibility







Conclusions and Recommendations from the Bologna Seminar on

"Doctoral Programmes for the European Knowledge Society"

Salzburg, 3-5 Feb 2005

Salzburg Principles

- 1. The core component of doctoral training is the advancement of knowledge through original research
- 2. Embedding in institutional strategies and policies
- 3. The importance of diversity
- 4. Doctoral candidates as early stage researchers
- 5. The crucial role of supervision and assessment
- 6. Achieving critical mass
- 7. Duration: 3 et 4 years full-time as a rule
- 8. The promotion of innovative structures
- 9. Increasing mobility
- 10. Ensuring appropriate funding.

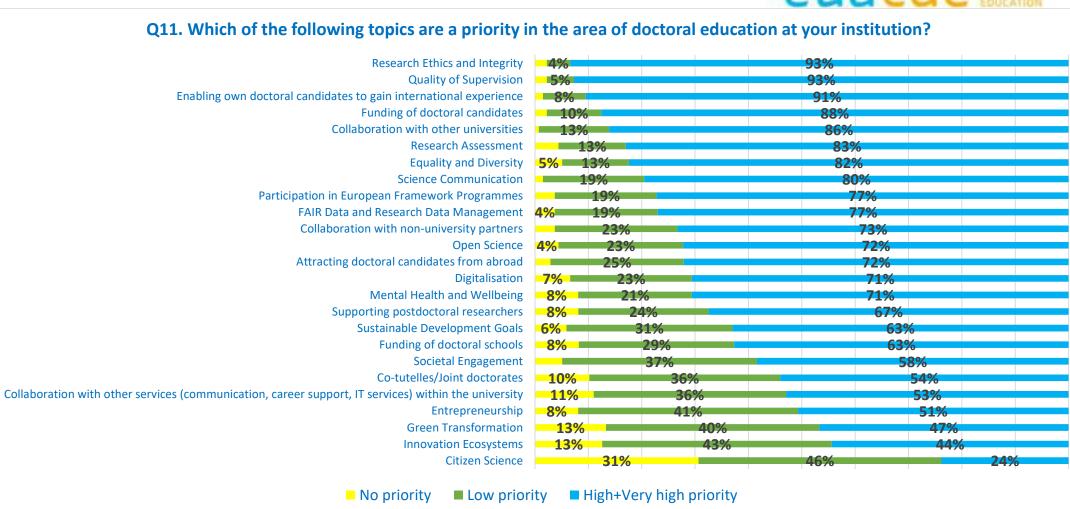


Doctoral Education today

- Around 95 pourcent of European Universities have some kind of structured doctoral education.
- There is a significant diversity of doctoral education in Europe. This
 includes the level of organisation (faculty/discipline level doctoral
 programme/school vs. Institutional structure), duration, credits
 (yes/no), level of flexibility, funding of doctoral school, funding of
 doctoral candidates, status of doctoral candidates, etc.)
- However, we can find also an agreement that «the core component of doctoral training is the advancement of knowledge through original research" and that there is need to prepare doctoral candidates also for employment beyond academia (Salzburg I)
- As a consequence and independently from questions of legal status of the doctoral candidates, doctoral education differ significantly from other fields of studies and is diverse between disciplines, institutions and countries.

EUA-CDE 2021 survey (forthcoming)



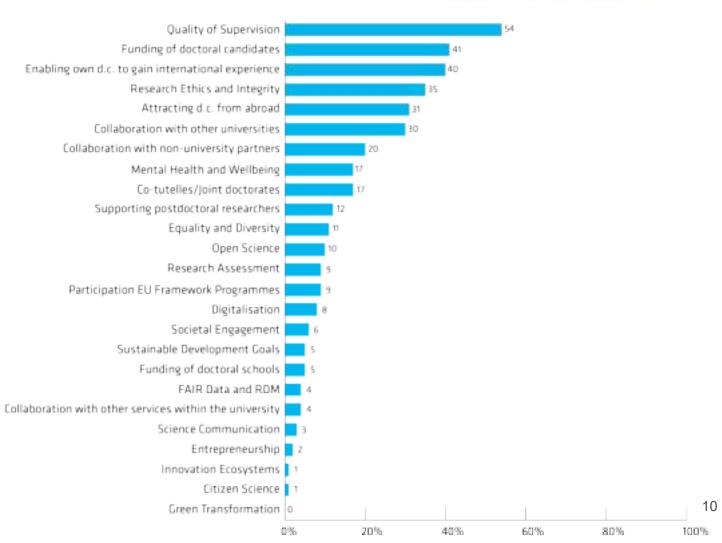


Number of responses: 134-137/138

2021 EUA-CDE SURVEY



Please identify which of the following topics you consider most important for doctoral education at your institution. Please indicate max.3-4.



The digital World of Doctoral Education

Wikicommons



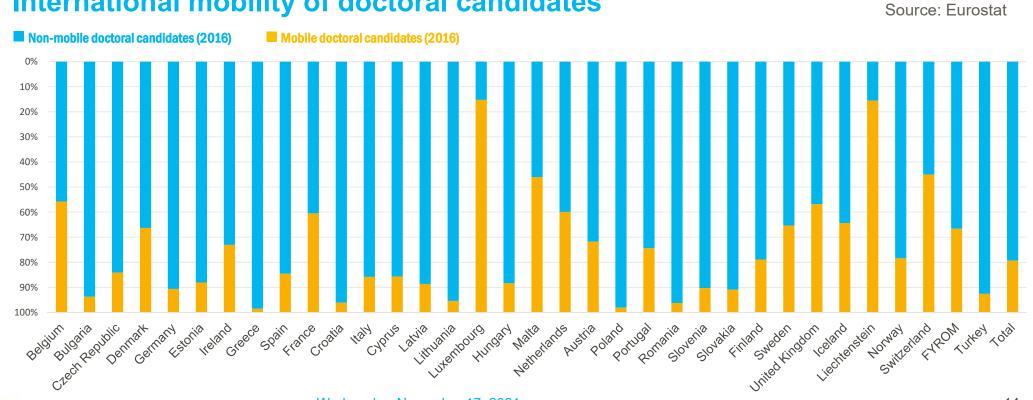


- The pandemic provided the opportunity to explore and collect practical experiences about the use of digital tools. 97 % increased online training, 93% digital/virtual mobility, 90% online supervision (EUA-Survey 2021, published end 2021)
- There is increased focus on data in research. As a consequence about half of the universities
 plan to include research data training in most and all doctoral schools/programmes and three
 quarter of universities consider FAIR data and research data management a high and very
 high priority (EUA-CDE 2021 Survey, to be published)
- Research follow closely L&T when it comes to implementing the digital transition (55% «large extend» 2021 EUA innovation survey)
- Raised focus on ethical challenges (particular in the question of AI). Research questions as ethical questions!





International mobility of doctoral candidates





- Research is becoming increasingly global
 - Global problems require global solutions not possible without international cooperation
- New technologies enable international exchange
 - "Zoomification" of doctoral training
 - Virtual mobility
- International mobility enriches research
 - International experience has become an integral part of the doctoral trajectory
 - Institutions have the responsibility towards doctoral candidates with an international background
- Internationalisation as part of the institutional strategies
 - Due to their high mobility and flexibility, doctoral candidates often find themselves the avantgarde of internationalisation of research at their institutions (co-tutelles)
 - Challenge to ensure brain-circulation

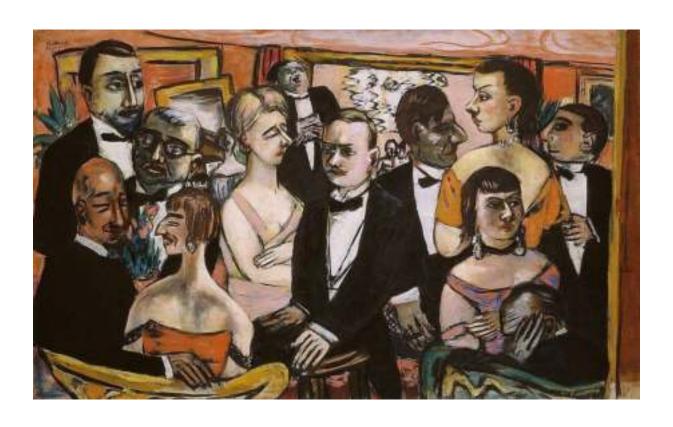


Digitalisation, Internationalisation and increased virtual mobility: Towards a global doctorate?





Societal dimension of doctoral education





- Majority of doctorate holders are not working in academia they bring experience and knowledge from academic resarch into other societal areas.
- Doctoral candidates as «bridges» between university and societies
- Communicating research: Doctoral candidates are increasingly involved in science communication:.F.i. «My thesis in 3 minutes», blogs, etc..
- There is an Increasing relevance of communication trainings as part of doctoral education. (2021 survey)
- Cultivation and sharing of critical thinking and the use of the academic freedom are active forms of civic engagement of researchers.
- How to incrase the understanding of employers concerning the added value doctoral graduates can bring to the table?
- Universities increasingly competing with the private sector for the «brigthest mind»
- Risk of losing independent and fundamental research as the key characteristic of the doctorate due to the «skillification» of the doctorate?



Promotion of Interdisciplinarity

- The pandemic has shown the importance for interdisciplinary collaboration
- Doctorates as academic degrees reflect the organisation of academia in disciplines – this is an opportunity, but also a challenge for interdisciplinarity (Will we introduce interdisciplinary doctoral programme)
- Interdisciplinarity is becoming increasingly important in many areas of research and there is a need to promote and support interdisciplinarity
- To seize the opportunities of interdisciplinarity, it is important that early stage researchers are exposed to interdisciplinary and to update career structures within universities.
- Valorisation of all areas of research



Challenges

- Decreasing number of doctoral candidates in some European countries incl. France.
- Job offers do not always match with the aim to increase the doctoral education capacity
- How to incrase the understanding of employers concerning the added value doctoral graduates can bring to the table?
- Universities increasingly competing with the private sector for the «brigthest mind»
- Risk of losing independent and fundamental research as the key characteristic of the doctorate due to the «skillification» of the doctorate?





The situation of postdoctoral resaerchers

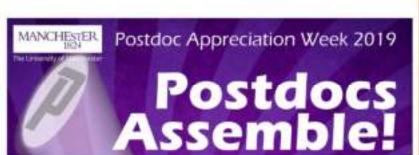
- Limited knowledge concerning the growing population of postdoctoral researchers
- Uncertainty of postdoc career prospects
- Lack of recognition as specific staff category
- Significant differences between employment contract, recruitment procedure, career path, tasks and responsibilities between countries (and institutions and disciplines)
- The pandemic increased the visibility of some of the issues (particularly dependence on short term funding)





Need to directly address postdoctoral researchers (researchers experience, age, etc.)



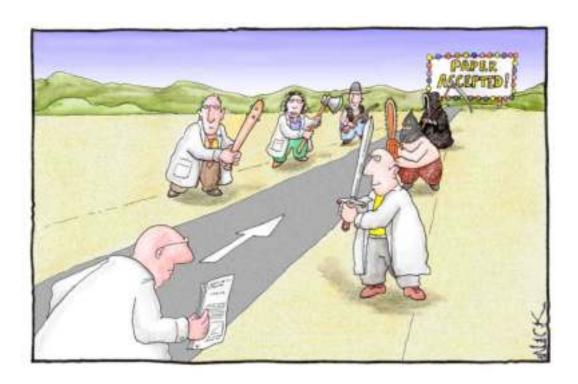








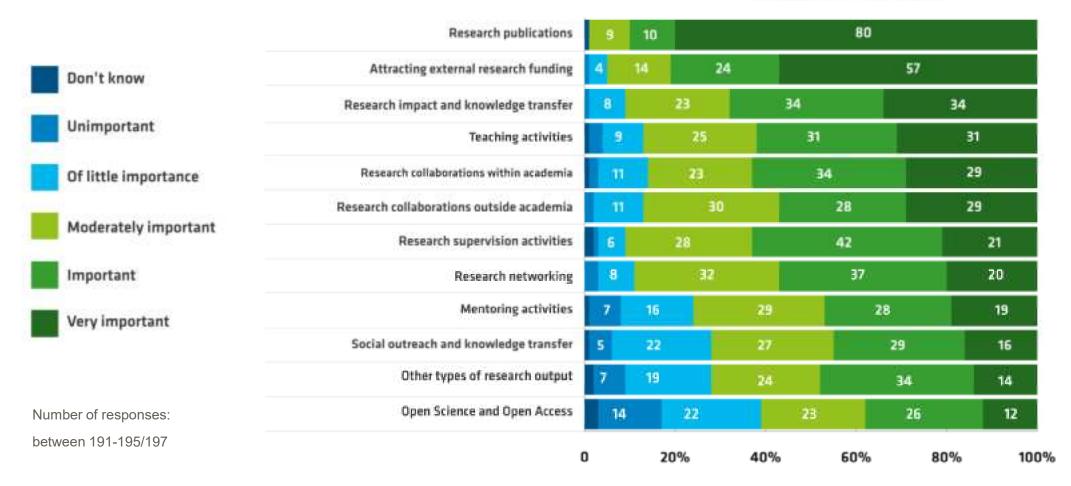
Reform of academic assessment



Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

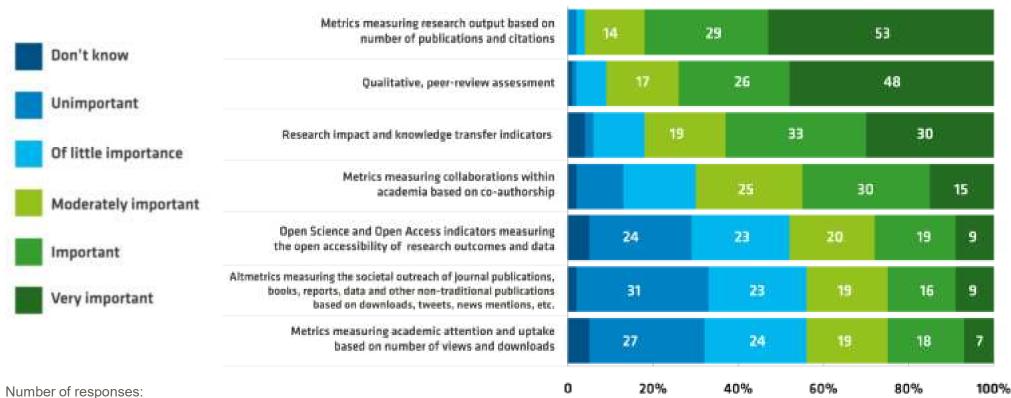






Evaluation of academic activities for research careers (2019)



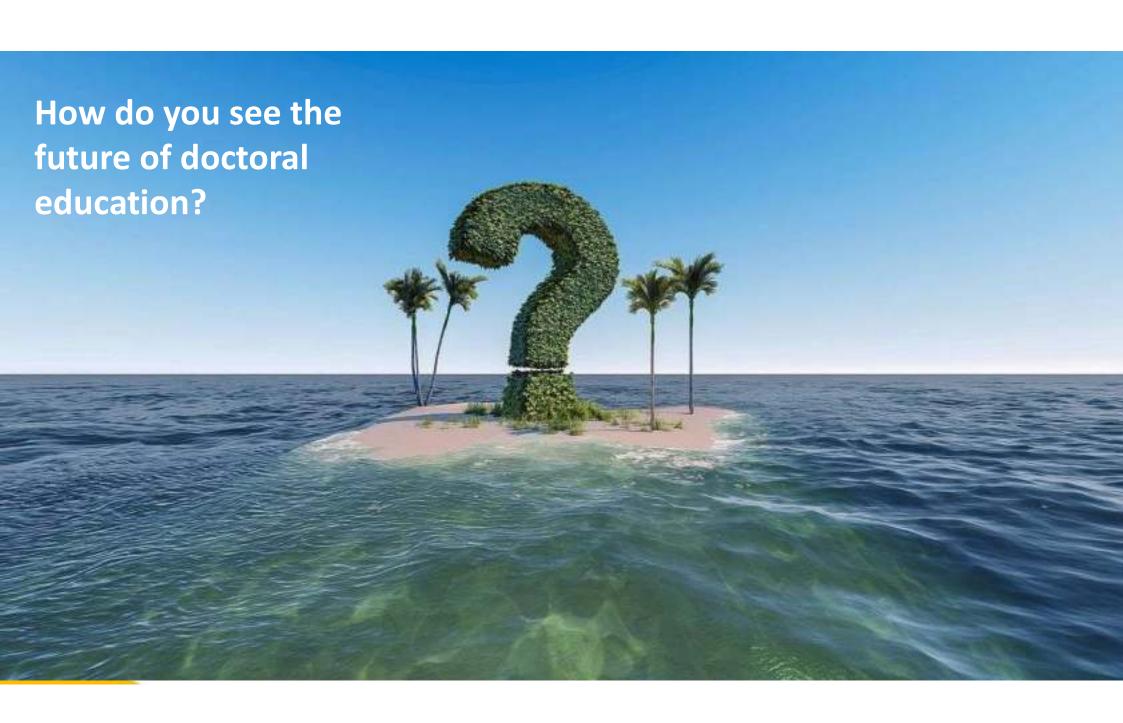


between 194-195/197



Mobilising the full potential of academia: Reform of academic careers and assessment

- The concentration of some quantitative indicators has several negative effect on researchers (publish or perish, limits of academic production, mental health issues, rankings etc.)
- Necesity to recognise the multiple roles of researchers.
 The is a need for parity of esteem of different career paths of academic profiles
- Abolish an unique focus on publication counting (However, things are changing.)
- Enable and valorise open science in career and research assessment
- Raise awareness among early stage researchers about the challenges and limits of the different kind of assessments and what it means for them.





EUA-CDE 2022 Annual Meeting:

«Time and Timing in doctoral education»







Thank you for your attention

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