DOCTORAL STUDIES ORGANISATION

TRENDS IN THE DEVELOPMENT OF DOCTORAL STUDIES IN THE EU AND ASSESSMENT OF DOCTORAL EDUCATION

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RESEARCH TRENDS

- Research trends affect doctoral education in several ways, foremost:

- ***Open Science*** describes the on-going transitions in the way research is performed, researchers collaborate, knowledge is shared, and science is organized.
- ***Research integrity*** is active adherence to the ethical principles and professional standards essential for responsible practice of research.
- ***Quality assurance*** systems as a mean for assessment and quality development.

RESEARCH TRENDS; OPEN SCIENCE

Aims to make scientific research results, research data and dissemination accessible to all levels of an inquiring society, whether amateur or professional.

Included as one of the three “Os” in the strategy of how the European Commission will take the European Research Area forward (“Open innovation” and “Open to the world” are the two others). Implementation of The European Charter for Researchers, a set of general principles and requirements which specifies the roles, responsibilities and entitlements of researchers as well as of employers and/or funders of researchers.

RESEARCH TRENDS; OPEN SCIENCE

First wave

Open access: Online research outputs that are free from all restrictions on *access* (such as costs) and free of many restrictions on *use* (such as copyright restrictions). Open access can be applied to all forms of published research output.

European Commission has already made open access an obligation for its Horizon 2020 grantees and investigates the possibility to fund a platform for Horizon 2020 beneficiaries to publish open access (2017/2018).

RESEARCH TRENDS; OPEN SCIENCE

First wave; Open access (continued)

This obligation spills over to the member states and open access strategies are implemented in several EU-countries.

The subscription business model is questioned and increasingly challenged by other open access alternatives as:

- BioMed Central
- Public Library of Science
- Sci-Hub - a guerilla website that provides access to pirated pay-walled academic papers

RESEARCH TRENDS; OPEN SCIENCE

Second wave

Open data means that *some* data should be freely available to everyone to use and republish as they wish, without restrictions from copyright, patents or other mechanisms of control.

A goal is to make research data open according to the FAIR-principle: ***Findable, Accessible, Interoperable*** *and* ***Reusable.***

Open data is today already a reality in some branches of science, but this movement will eventually affect researchers in all scientific fields.

RESEARCH TRENDS; OPEN SCIENCE

Second wave; Open data (continued)

The European Commission is forerunner by the new guidelines on research data generated from Horizon 2020 (the European Commission programme for financing European research and innovation) projects participating in the Open Research Data Pilot.

Several countries in Europe follow the road of implementation that the European Commission have mapped out.

RESEARCH TRENDS; OPEN SCIENCE

Second wave; Open data (continued)

Calls for supporting structures - (inter)nationally and at HEIs: systematic meta-data tagging, secure archiving and interface for data access + different mind-set among many researchers concerning “ownership” of research data.

The European Commission set-up the High Level Expert Group *European Open Science Cloud* in 2017 with mission to advise measures to implement this ambition (standardization, management, governance and funding of national and European research data infrastructures and e-infrastructures).

Increased digitization facilitates collaborations and enhances interdisciplinary research performed by groups of researchers.

Recommended Reading

Amsterdam Call for Action on Open Science

RESEARCH TRENDS; RESEARCH INTEGRITY

Research integrity

Rationale: to maintain the confidence of research in the society by combat research misconduct (preventive work and punishment).

Misconduct: fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.

The European Commission has updated the Code of conduct (2017) as a way to support research integrity.

Some EU-countries introduce a stricter legal control of research misconduct.

RESEARCH TRENDS; CONSEQUENCES FOR DOCTORAL EDUCATION

Open science

- Publications strategies that reflects on the concept of open access publications
- Introduction of plans for how research data is managed
- Investigate possibilities for interdisciplinary co-operation

Ethics

- Foster a culture with a sound approach to the ethical dimension in research work
- Forming the new generation as one with responsible research performance

RESEARCH TRENDS; CONSEQUENCES FOR DOCTORAL EDUCATION

Recent examples of bringing in open science, digitization and research integrity into doctoral education at European level:

- Taking Salzburg forward ; a key document with a set of recommendations and guidelines to take the strategic implementation of reforms in doctoral education forward
- Doctoral Education Bulletin: On the Cutting Edge of Research: The Open Access Challenge; pros and cons of OA, its future evolution and practical advice on different aspects of OA, including research data
- Workshop: Ethics and integrity in doctoral education and research training
- Conference: Digitalisation: A game changer for doctoral education?

QUALITY ASSESSMENT OF DOCTORAL EDUCATION

The principle of trust:

Trust = self-regulating and delegated quality systems

Distrust = detailed top-down regulations and inspections

The situation between the HEIs versus its Ministry of Education and Research in this matter guides how doctoral education is assessed in a country.

Trust ⟷ Distrust

QUALITY ASSESSMENT OF DOCTORAL EDUCATION

Doctoral education: neither fish nor fowl

Research is the core component in doctoral education. Yet, doctoral education comprises the third cycle in the Bologna system of higher education.

? Assessed within the research assessment framework, or not.

The EU-countries do not have a collective scheme for quality assessment of doctoral education.

ENQA
EUROPEAN ASSOCIATION FOR QUALITY ASSURANCE IN HIGHER EDUCATION

QUALITY ASSESSMENT OF DOCTORAL EDUCATION

The Swedish example

Swedish Higher Education Authority evaluates the quality of higher education, including doctoral education. Evaluation of research has just been added to their mission (2017).

The assessment guidelines is the result and compromise of a long political process.

About 1/3 of the 900 third-cycle subject areas (programmes) in Sweden will be centrally assessed by the Swedish Higher Education Authority between 2017 and 2022.

QUALITY ASSESSMENT OF DOCTORAL EDUCATION

The focus for the evaluation of third-cycle education is on the three **aspect** areas:

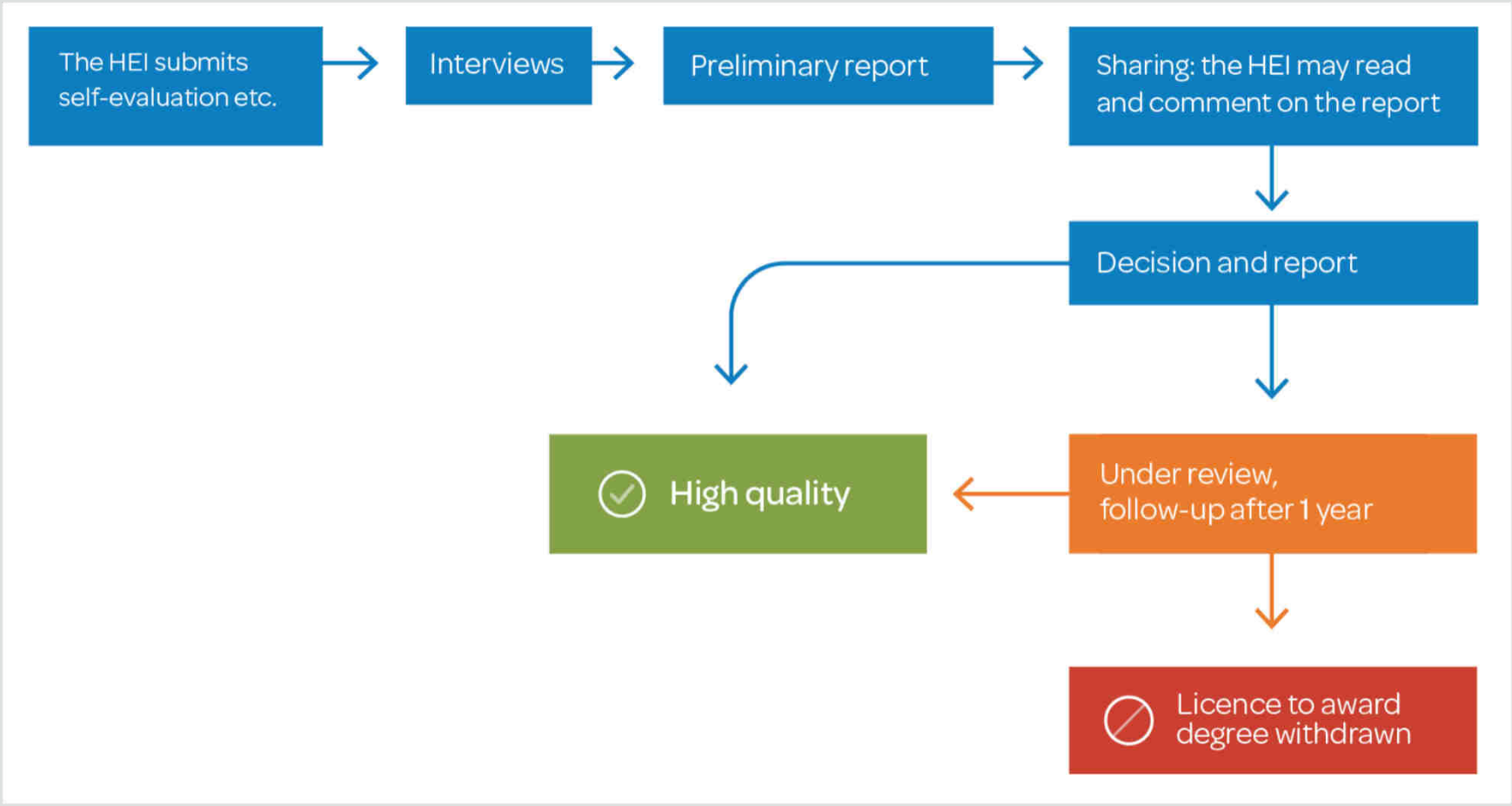
- environment, resources and area
- design, teaching/learning and outcomes
- follow-up, actions and feedback

and on the three **perspectives:**

- doctoral candidate perspective
- working life perspective
- gender equality perspective

QUALITY ASSESSMENT OF DOCTORAL EDUCATION

PROCESS CHART



QUALITY ASSESSMENT OF DOCTORAL EDUCATION

The assessment:

- monitor actual conditions and outcomes; if the programme meets the requirements in applicable laws and ordinances.
- focus on how well the HEI follow-up, actions and feedback processes contribute to ensuring and improving quality in the reviewed programmes in a systematic way.
- contribute to improve the HEIs' quality by the assessors' feedback in their reports on areas in need of improvement.

QUALITY ASSESSMENT OF DOCTORAL EDUCATION

HANDED IN MATERIAL

- The **self-evaluation** (< 25 pages) according to a prescribed template report structure.
- **General study plan** for the programme (HEI decision on local features of and rules for the programme)
- **Individual study plans** for each doctoral candidate (a contract between the doctoral candidate and the HEI that is revised at lest every year)

+ (from The Swedish Education Authority)

- national statistics showing the completion rate and establishment level (employability)

QUALITY ASSESSMENT OF DOCTORAL EDUCATION

The bottom line:

2/3 of the doctoral programmes will not be included in the national assessment + the quality system of each HEI will be evaluated in another assessment = that assessment of these programmes must be included in the quality system of each HEI.

The methodology that the Swedish Higher Education Authority has established in dialogue with the HEIs is a recipe of how an assessment of the doctoral education can be implemented at each HEI.