

# CHANGING DOCTORAL EDUCATION AT THE UNIVERSITY OF MARIBOR

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**Abstract** The paper gives an overview of changes in the European Higher Education Area regarding the Doctoral studies, and outlines the steps that the University of Maribor undertook to renovate the Doctoral studies in line with the Salzburg principles and Principles of Innovative Doctoral Education.

**Keywords:**

innovative  
doctoral  
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## 1 Introduction

The purpose of the Bologna process is the harmonisation of the Higher Education Area in Europe. The European Higher Education Area [1] (EHEA) is an international collaboration of 48 countries with different academic (as well as cultural and political) backgrounds, which are trying to implement a common set of commitments in Higher Education. The idea of the reformation of the Doctoral Studies originates from the Berlin Communiqué [2], where it was suggested to include the Doctoral level as the third cycle in the Bologna Process. The Conclusions and recommendations of the Bologna Seminar on “Doctoral Programmes for the European Knowledge Society” in 2005 gave the 10 basic principles of Doctoral studies, known as the Salzburg Principles I [3]:

1. The central component of Doctoral education is the advancement of knowledge through original research.
2. Integration into institutional strategies and policies (inter-sectorial cooperation).
3. The importance of diversity of Doctoral programmes in Europe.
4. Doctoral candidates are researchers in the early work period.
5. The key role of supervision and assessment (transparent contractual framework of shared responsibilities).
6. Achieving critical mass.
7. Duration of Doctoral study (usually 3-4 years).
8. The promotion of innovative structures (interdisciplinary).
9. Increasing mobility (intersectoral, interdisciplinary and international).
10. Ensuring adequate funding.

The Council for Doctoral Education [4] was established at The European University Association to support the changes in 2007. Based on the European universities’ achievements since 2005 in implementing the Salzburg principles I, a second set of recommendations was released, known as Salzburg Principles II [5]:

1. The Doctorate must be based on the candidate's original research.
2. Supervision of Doctoral candidates is pivotal to Doctoral education.
3. Doctoral education is an institutional responsibility and requires a joint effort.

4. Institutional autonomy in the selection of goals and strategies and the establishment of suitable structures for Doctoral education (95 % of EUA members have established one or more Doctoral Schools since 2010).
5. Individualised Doctoral education (flexibility).
6. The Institution is responsible for the professional education of Doctoral candidates (transferable skills).

We can observe that the supervision of Doctoral students is common to Salzburg Principles I and II:

1. Supervision must be a joint effort with clearly defined and resolved responsibilities of the main supervisor, supervision group, Doctoral candidate, Doctoral School, research group and Institution that enables the individual development of the Doctoral candidate.
2. Ensuring the professional development of supervisors is an institutional responsibility, and can be organised through formal training, or informally by exchanging experiences between supervisors.
3. The development of a common supervision culture shared by both supervisors, Heads of Doctoral Schools and Doctoral candidates must be a priority for Doctoral Schools.
4. Supervisors must be active researchers.

Finally, to wrap up the discussions, development and achievements over almost a decade, The European Commission, Directorate-general for research & innovation, released 7 principles of innovative Doctoral education [5] in 2011. These are:

1. Research excellence (critical mass).
2. Attractive institutional environment.
3. Interdisciplinary research opportunities.
4. Cooperation with industry and other relevant employment sectors.
5. International cooperation (double / joint degrees, mobility).
6. Transferable skills.
7. Quality Assurance ("process-oriented QA").

The University of Maribor (UM) decided to transform the Doctoral studies in 2012 following the Salzburg principles and principles of Innovative Doctoral Education, with the goal to increase the quality of the Doctoral Theses at the Doctoral Study Programmes. In this contribution we outline the basic steps and challenges encountered during the process, which culminated in the Rules and Regulations on Doctoral Studies at the University of Maribor [6] (the Rules and Regulations in the following text) being adopted by the Senate of the University of Maribor in April 2018.

## 2 Reformation of the doctoral studies at UM

One of the drawbacks of the Doctoral studies as a third Bologna cycle is the danger of “pedagogisation” of the Doctoral studies, and unfortunately, several Doctoral Study Programmes at UM were caught in this trap. A change of mindset from the Doctoral education being a need for university (reproduction) was also required towards the Doctoral education as a need of the knowledge society. A survey among Doctoral students was performed in 2015, and the results were rather surprising: (i) The majority of Doctoral students had no previous research experience, (ii) Several Doctoral students were not included in research projects during the Doctoral studies, (iii) Only a minority of Doctoral students had experience in international mobility during the Doctoral studies and (iv) Doctoral students would welcome additional training in transferable skills.

The results of this survey were a kind of a shock for the academic community, which, until then, in general, felt no need for any changes. The discussions on the reformation of Doctoral study thus became very active in 2015, based on a draft of a new Act on the Doctoral studies at the University of Maribor, prepared by a Committee that was formed in 2013 with the goal to set the guidelines for the renovation of the Doctoral studies.

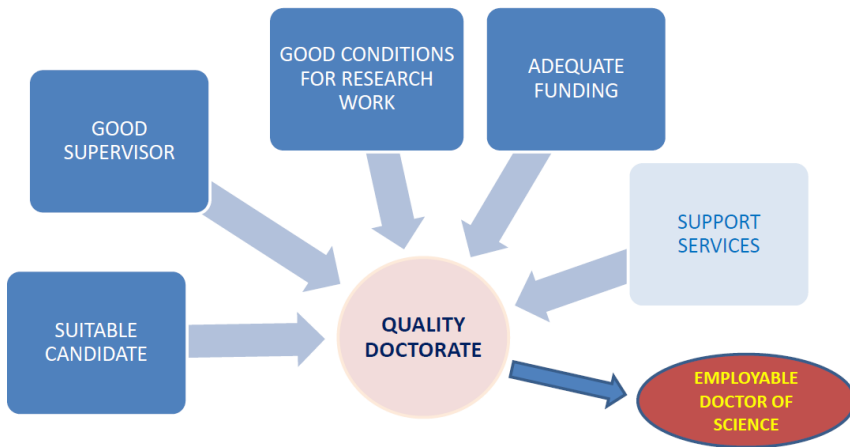
We decided on a step-wise approach. First, we set the starting points of the renovation of Doctoral studies by following the strategic goal for improvement of the quality of Doctoral study at UM (Figure 1), based on the **I<sup>4</sup>**-principle (Individualisation + Interdisciplinarity + Internationalisation + Intersectorial cooperation). The starting points were:

1. Ensuring the conditions that enable the highest and internationally comparable quality recognition of Doctorates awarded by UM.
2. Ensuring a critical mass of research activities in which Doctoral students can participate.
3. Ensuring internationally comparable quality of Doctoral Study Programmes, Doctoral candidates and their supervisors.
4. The rights and responsibilities of the Doctoral candidate, supervisor and Institution are defined clearly in advance.

Then, the discussion on specific topics followed, as described by the second author of this paper in the follow-on chapter. The process considered the views of all stakeholders, and aimed towards providing flexible solutions. We systemised unified support services and common content (transferable skills) for Doctoral education at UM. A common structure for all Doctoral Study Programmes was adopted, in order to enable interdisciplinary mobility, and to assure a research-based Doctoral education (as opposed to “pedagogical”-based study). The structure was adopted for both the 3 and 4-year Doctoral Study Programmes, and the following mandatory elements were set for all the Doctoral Study Programmes:

- Courses are designed with a number of credits (ECTS) divisible by 3 (6 ECTS are mostly preferable) to enable easier interdisciplinary mobility between Study Programmes;
- Individual research work is included in each semester from the first semester onwards, with a total of at least 120 or 180 ECTS credits for the 3-year and 4-year Doctoral studies, respectively;
- Organised forms of study, including parts of individual courses implemented as such, comprise exactly 60 ECTS, and from these
- Elective content comprises 18 ECTS at the minimum for the 3-year, and 24 ECTS for 4-year Doctoral Study Programmes;
- The first year of study includes a general course on different scientific research methods with at least 3 ECTS credits;
- The winter semester of one of the study years includes the “Transferable Knowledge” course (e.g. scientific writing, research ethics, negotiations, intellectual property, foreign scientific language, projects, communication, career development, and other transferable knowledge) with at least 3 ECTS credits.

Next, we aimed towards strengthening the internationalisation of Doctoral Study Programmes and the mobility of Doctoral candidates. A systematic transfer was developed of quality supervision practices to younger supervisors. A continuous monitoring of the quality indicators for Doctoral education was established, as well as mechanisms for appropriate adaptation. However, one crucial requirement for the high-quality Doctoral education, namely, stable funding at the national and institutional levels, has, unfortunately, not been realised yet, as reaching this goal requires systemic changes at the national level.



<sup>4</sup> = Individualisation + Interdisciplinarity + Internacionalisation + Intersectorial cooperation

**Figure 1: Components of a high-quality Doctoral education**

Source: own

### 3 Conclusions

In this contribution we focus on the changes in the European University Area that led to the formalisation of the Doctoral studies as the third Bologna cycle. We outlined the steps undertaken by the UM towards the reformation of Doctoral studies. The final results of the process are manifested in the Rules and Regulations on Doctoral Studies at the University of Maribor [7] and are presented in another contribution to this monograph entitled *Systematic Quality Assurance of Doctoral Studies at the University of Maribor*, which focuses on the requirements and procedures that UM found most important for the Quality Assurance of Doctoral studies.

## References

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<sup>1</sup> The English version of the Rules and Regulation on Doctoral Studies at the University of Maribor is being prepared, and will be available at the UM website. Until then, a draft version can be obtained on demand.

