

ORPHEUS Standards and The European Vision in PhD Education in Biomedicine and Health Sciences

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The concept of the PhD degree as a "research training under supervision", has been developed in the nineteenth century and since then has been propagated to the whole world. PhD training in Europe constitutes the main connection between European higher education and European research areas.

According to the Bologna system, doctorate programmes constitute the third cycle of higher education and are important as a tool in building the knowledge-based society. However, the main component of this third cycle is "developing learning through novel research" and, in this respect, is clearly different from the first two cycles, as learning through research is different from the common classical view that one must first learn and only then start with research. In simple words, undergraduate students are required what others have discovered and PhD students are required to do their own discoveries. The idea of third cycle of high education has an additional consequence: PhD is not any more responsibility of a mentor and mentee but also the responsibility of university. Consequently, so called structured PhD programmes are developed in most European countries. Besides research, such programmes consist of concentrated courses (usually no more than one semester) which should help PhD students (or alternative title PhD Candidate) to be more efficient in research as well as to attain different so called "transferable skills". Those skills should help PhD students to deal with creative problems outside research, as well. PhD students and graduates constitute, in many European countries, the basis of scientific research; they are resources for future researchers and research, and, with transferable skills, they are expected to be pillars for a knowledge-based society.

The situation in Turkey is similar, except some points:

Firstly, according to the results of research performed on the outcome of the PhD programmes in the health sciences in Turkey, the majority of the PhD candidates would like to see themselves as academicians (%71.9). This is mainly due to the insufficiency of innovative private sector for biomedical sciences in Turkey. With the strongly developing interest and action to promote innovative research and the relevant structures to translate the output to the industry, it is expected to change in the coming years in Turkey, and, more and more PhD graduates are expected to pursue their careers in the industry. Secondly, the PhD training programmes have an overemphasized focus on courses (two years out of four) and the duration of the PhD thesis is legally two years (out of four) in the majority of the Turkish Universities. A typical PhD study consists of a course period, qualifying exam and followed by the thesis work that lasts overall 4 years (8 semesters) with a possible extension of 2 years (4 semesters).

Thirdly, in the majority of the graduate schools of health sciences in Turkey, a published article on the thesis work is not a prerequisite, though this issue has been more and more on the discussion platforms presently.

ORPHEUS (Organisation for PhD Education in Biomedicine and Health Sciences in the European System) was inaugurated in 2004 and presently encompasses members from nearly 100 universities in over 40 different countries. Its aim is to develop the quality and the output of the PhD programmes, with a certain degree of harmonization throughout the western and eastern Europe.

ORPHEUS has successfully organised thematic European PhD Conferences in Europe since 2004:

The first European Conference on Harmonisation of PhD Programmes in Biomedicine and Health Sciences (later accepted as a first ORPHEUS conference) was held in Zagreb at which the 'Zagreb Declaration' was agreed. In 2005. Second European Conference held in Zagreb, included delegates from 33 universities, from 21 European countries, issued a document 'Guidelines for Organisation of PhD Programmes in Biomedicine and Health Sciences'. In 2007, the third ORPHEUS conference was held in Helsinki. Participants from 43 universities from 26 European countries issued a document: 'Helsinki Consensus Statement on PhD Training in Clinical Research' ('Helsinki Consensus Statement') emphasizing the importance of PhD research in clinical medicine. In 2009, the fourth ORPHEUS conference was held in Aarhus with the main topic: Setting Standards for PhD Education in Biomedicine and Health Sciences. In 2010, the fifth ORPHEUS 2010 Conference was held in Vienna is on the theme "The Advancement of European Biomedical and Health Science PhD Education by Cooperative Networking". In 2011, the sixth ORPHEUS 2011 Conference was held in Izmir with the main topic "PhD Quality Indicators for Biomedicine and Health Sciences", where 311 participants from 43 different European countries participated. In 2012, the seventh ORPHEUS conference was held in Bergen with the main topic: "Establishing evaluation of PhD training".

ORPHEUS is associate member of Council for Doctoral Education- European University association (EUA). The results of ORPHEUS conferences are in full agreement with those of the European Universities Association (EUA):

"The core component of the third cycle is the advancement of knowledge through original research, and this makes the third cycle unique and different from the first and second cycles. The doctoral training phase constitutes the main link between the European Higher Education and Research Areas, and high quality doctoral programmes are therefore crucial in achieving Europe's research goals."

The consensus documents prepared from these conferences have contributed to shaping the European doctorate vision. In addition, the organisation of the Orpheus Conference in Izmir in 2011 has helped the Turkish graduate schools of health sciences to reflect on the quality

of their research training, with the ultimate result of some innovative changes in their PhD training programmes: As an example, the PhD training is completely based on research in Dokuz Eylül University, where PhD students are admitted to an ongoing research project of the candidate supervisor and the credit-courses are intertwined with the research process. Credited Courses/Workshops on "transferable skills" (project writing, writing a scientific article, preparing a scientific presentation, biostatistics, bioethics, etc) are offered to all PhD students of the graduate school on an elective but credited basis (9). The harmonisation of all PhD training programmes with the Bologna system is an important initiative of the Turkish Higher Education Council. The Graduate Schools which are institutional members of ORPHEUS are Dokuz Eylül University (since 2008), Hacettepe University (since 2010) and Kocaeli University (since 2011). In addition, Marmara University is a strong candidate for ORPHEUS membership, of which the preparative steps have been successfully initiated. The Orpheus Workshop "Vision of ORPHEUS in PhD Education: Towards European Standards" was very well organised, in May 2012, by the Institute of Health Sciences of Marmara University, chaired by Prof. Feyza Arıcıoğlu, This Orpheus activity has been very productive and a clear interest of the Marmara University faculty members have been observed in the direction of promotion of PhD training and in the membership to Orpheus.

In addition to the significant ORPHEUS Conferences where delegates represented the highest level institutions in Europe which are stakeholders of the PhD concept, ORPHEUS has been the leader of a further important initiative to enhance PhD training in Europe and beyond: ORPHEUS, AMSE (Association of Medical Schools in Europe) and WFME (World Federation for Medical Education) have joined forces to reflect, on a wider platform, on the European Doctorate vision, with the ultimate result of a unique document: "Standards for PhD Education in Biomedicine and Health Sciences in Europe" (10).

In this document, standards for the PhD degree are discussed under eight titles:

"Research environment", "Outcomes", "Admission Policy and Criteria", "PhD training programme", "Supervision", "PhD Thesis", "Assessment" and "Infrastructure".

It is suggested that this document will be consulted by the European Institutions coordinating Doctorate programmes as a reference document wherever needed. It is also envisaged that these standards may potentially have universal value.

At Bergen conference 2012 it was concluded that Standards represent a good basis for evaluation of PhD programmes, institutionally, nationally and internationally which could be the basis of specific acknowledgement called ORPHEUS labelling. The first preliminary international

evaluation was done at Copenhagen University. Results will be reported at upcoming ORPHEUS conference in Prague in April this year. Several leading European Universities announced their interest to have ORPHEUS evaluation and labelling.

Finally, Turkey, with its recent overwhelming increase in the global share of scientific output in biomedical sciences and the growing number of institutional members of ORPHEUS, is expected to hold a significant impact on the promotion of PhD training in Europe.

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