

The ORPHEUS/AMSE/WFME PhD standard document: Are amendments needed?

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Report

Chairs: Roland Jonsson, Michael Mulvany.

Discussants included: André Nieoullon; Andrea Olschewski; Joey Barnett; David Bogle; Debora Grosskopf-Kroiher; Jadwiga Mirecka; Janet Metcalfe; Rune Nilsen; Johan Van de Voorde; Katrin Offe; Laki Buluwela; Miroslav Cervinka, Zdravko Lackovic.

The purpose of the workshop was to examine the ORPHEUS/AMSE/WFME PhD Standards Document¹ published last year in order to identify points that should be clarified, amended or deleted. This with a view to publishing a “First Amendment” for the document, probably in April 2014. The following points were discussed.

1. Admission policy and criteria. Section 3, basic standard 2.

Background

The document states that “*admission to a PhD programme should be on the basis of a master’s or a medical degree*”. In practice this is not followed in some countries, where a bachelor degree is accepted if the student has had other experience. The standards document tries to deal with this in the Annotations for this section (*work experience that brings the student to master’s level can be used in the admission criteria*). There are also some countries where, in special cases, just a bachelor degree is enough.

Although the technicalities of the admission requirements should probably remain flexible, it is important to clarify whether previous research experience (e.g. a 1-year research project) should remain part of the standards document.

Recommendation

Most discussants believed that it was important to maintain a research-based masters (or two years post-bachelor advanced training as in the US or honours bachelor degrees as in the UK) as the formal requirement for admission to doctoral training. This would correspond to achieved competences equivalent to the level 7 of EQF plus an experience in research. Flexibility was, however, also needed, and relevant professional degrees may also be accepted. Under all circumstances, there was consensus about the importance of successful research experience before admission to doctoral training, motivation to do research, and academic excellence as being key indicators of later successful doctoral theses.

2. Interdisciplinarity. Section 4, PhD training programme, basic standard 6.

Background

1 Standards for PhD education in biomedicine and health sciences in Europe. ISBN 9788779346000. Can be downloaded at www.orpheus-med.org.

It is suggested that programmes can, when relevant, include time at another department within the same institution (to encourage “interdisciplinarity”). At present the standards refer just to time in “*another institution, preferably abroad*”.

Recommendation

Inter-disciplinary activities were stressed as being of importance but also being a challenge. Such activities broaden the horizon of PhD trainees and will strengthen their employability. Also here a flexible approach was emphasized.

3. Coursework. Section 4, basic standard 5.

Background

The ORPHEUS document calls for course work totalling 30 ECTS. “*The programme must include formalized courses totalling about 6 months (~ 30 ECTS)*”. In many doctoral schools the term “courses” is used flexibly, where credit is given also for attendance at seminars, participation in congresses, time at another laboratory, etc. Thus perhaps “formalized” should be deleted, and it should be clarified that coursework can cover activities other than work in a classroom. Furthermore, the use of the term “ECTS” has caused some discussion, in that this term has in principle legal implication. Furthermore, the EUA-CDE does not believe that the ECTS system should be used for doctoral training. It is suggested that “30 ECTS” be dropped.

Recommendation

Many countries do not use ECTS or credits to verify the training component of the PhD, and prefer just to use “6 months” as defining the amount of time to be used on “professional development”. Institutions that use ECTS can express this as 30 ECTS. There was general agreement that providing a time of this order both protected research time and also ensured that PhD candidates did receive relevant training outside of the laboratory. Such training should be specifically project-related and/or be aimed at generic skills of relevance for employment both inside and outside of academia. There was general consensus that “formalized” could be deleted.

4. Number of supervisors. Section 5, Basic Standard 1.

Background

It is suggested that the standards should be tightened so that all PhD students should have at least two supervisors and that at least the principal supervisor should have training in supervision.

Recommendation

The consensus was that PhD candidates should have at least two supervisors to provide reasonable security for the candidates. A supervisory team is also used at certain places. The supervisors allocated should have a certain amount of experience for example starting up as co-supervisors. Training of supervisors is important either through compulsory or elective courses

5. Mentoring. Section 5.

Background

It is suggested that this section should include a requirement for mentoring (at least for Quality Development).

Recommendation

The workshop noted that there are differences in terminology. In the US a “mentor” is the same as a supervisor. In Europe, a “mentor” provides advice to PhD candidates independent of the supervisors. It was agreed that this issue is important and (European-type) mentors are needed for the trainees to discuss projects from another aspect than just the science topic, and also other issues e.g. future career, gender problems, supervision problems, etc. In some countries a PhD candidate ombudsman or counsellor is appointed.

6. Career development. Section 5, quality development 3.

Background

It is suggested that there should be institutional assistance with career development, and this should be ongoing, starting from the time of enrolment².

Recommendation

There was consensus that this was an important issue, and planning of future careers should take place as early as possible. It should be clarified early that only a minor proportion will find employment as academics, and that there rich alternative career possibilities for PhD graduates in Biomedical Sciences. Indeed, the future generation of leaders at many levels and professions will be PhD graduates. This underlines the need for PhD graduates to choose the courses in generic/transferrable skills that are appropriate for their career ambitions.

7. PhD thesis. Section 6, basic standard 2.

Background

The ORPHEUS requirement that the PhD thesis should include material “*equivalent to ... three ... papers published in internationally recognized, peer-reviewed journals*” is not agreed to in all countries. In any discussion of this section, it is important to take the whole of Section 6 into account, including the annotations, where flexibility is indicated. Also the fact that it is the independent assessment committee that makes the scientific judgement as to the acceptability of the thesis (Section 7). According to the document, the overall standard is that this “*benchmark for the PhD thesis must be the outcome to be expected from 3-4 years research at international level*”. We can discuss whether we agree with this, and if there is a better way of defining it.

Recommendation

It was generally agreed that this section should be clarified. The intention of the paragraph is to indicate that the scientific content of a PhD thesis has a level and amount that would allow publication of three first-authored manuscripts in medium impact journals. Thus publication in monograph format could be acceptable, and also publication of less than three papers if these are in high-ranking journals. Patents would also be acceptable Open access is a reality and should be used when appropriate. However, PhD candidates are best served by the most obvious and current way of communicating their results by publishing original scientific papers in peer-reviewed international journals. Further discussion of this point can be seen from the report of Workshop C (outcomes) at this conference.

8. PhD thesis. Section 6, basic standard 3.

² For US experience see:

http://sciencecareers.sciencemag.org/print/career_magazine/previous_issues/articles/2012_09_07/caredit.a1200100

Background

While it can be discussed whether the thesis should contain explicit articles/manuscripts, or whether the material should just be “publishable” (both possibilities are covered by the document), the standards also describes in some detail what else the thesis should contain. E.g. “*In addition to the papers presented, the PhD thesis must include a full review of the literature relevant to the themes in the papers, and a full account of the research aims, methodological considerations, results, discussion, conclusions and further perspectives of the PhD project.* We should discuss the degree to which this is adhered to in practice, and perhaps quantify the extent of this section.

Recommendation

There was agreement that the basis of the thesis must be the originality of the science. This has to be fully described, together with the other points mentioned above. Overall there was consensus that this phrasing was appropriate and enforced, and should form the basis of the assessment committee’s evaluation.

9. Section 7, assessment of the thesis, basic standard 1

Background

Internationally there is conflict between (a) the ORPHEUS recommendation of first a written evaluation of the thesis (possibly with a requirement for rewriting) with a subsequent public defence of the thesis, and (b) the traditional “viva” where the examiners and the candidate sit around a table and go through the thesis line-by-line. In the past year there has been considerable discussion on this point. Both approaches have their merits. We could discuss if ORPHEUS could recommend a procedure that combines these two approaches.

Recommendation

As a general rule it was discussed that the written evaluation should be followed by an intensive oral examination. This could be a separate closed examination followed by a subsequent public defence, which in some countries has more the form of a ceremony. Further considerations of this point may be found in the report from Workshop C (outcomes) at this conference.

10. Applicability of standards document to medical PhD programmes

Background

At present medical PhD programmes are mentioned at various points in the document:

- “PhD programmes that are performed in parallel with clinical or other professional training must have the same time for research and course work as any other PhD.” (Section 4, basic standard 7).
- “A PhD thesis in clinical medicine must meet the same standards as other PhD theses.”(Section 6, basic standard 5).
- “For PhDs performed by clinicians, leave-of-absence from clinical duties should be provided for the PhD part of such programmes unless these are coincident”. (Section 4, quality development 2).

There have been suggestions that the document should have a special section on medical PhD programmes.

Recommendation

The consensus was that no special case was needed for MD-PhD programmes, or for PhD programmes undertaken by MDs. As now indicated, these trainees should conform to the same standards and procedures as other PhD trainees. However, mention might be made of certain best practices. Other situations could also mentioned e.g. other health related professions, industrial PhD etc.