



7th European Quality Assurance Forum

22 – 24 November 2012

Tallinn University, Estonia

How does quality assurance make a difference?

Author(s)

Name: Roland Jonsson (responsible for presenting paper)

Position: Executive Committee Member

Organisation: ORPHEUS

Country: Norway

Title: ORPHEUS Consensus about Internal, External and International evaluation of PhD Programmes in Biomedicine and Health Sciences

Abstract: The ORPHEUS/AMSE¹/WFME² *PhD standards document*, published January 2012, is a practical tool for quality assurance of PhD programmes. Another document, the new *PhD principles document*: “Best practice based principles for innovative doctoral training”, approved by the EU Council of Ministers is fully compatible with the *PhD standards document*. For this reason, ORPHEUS has expressed a wish to work closely with the European Commission on implementing this in the field of biomedicine and health sciences. The *PhD standards document* could also provide a basis for global conversations concerning the quality and content of PhD programmes. To increase awareness of the *PhD standards document*, national workshops should be held. In addition, ORPHEUS will introduce a labelling project based on initial self-evaluation and external evaluation of web site, which may be followed up by some form of site visit, of academics with experience in PhD education.

Text of paper:

ORPHEUS Consensus about Internal, External and International evaluation of PhD Programmes in Biomedicine and Health Sciences

By

Roland Jonsson, Michael J. Mulvany and Zdravko Lackovic

¹ Association of Medical Schools in Europe

² World Federation of Medical Education



Addresses for correspondence:

RJ: Broegelmann Research Laboratory, The Gade Institute, Faculty of Medicine and Dentistry, University of Bergen, Laboratory Bldg, 5th floor, Room 5380, N-5021 Bergen, Norway. E-mail: roland.jonsson@gades.uib.no

MJM: Graduate School of Health Sciences, Aarhus University, Wilhelm Meyers Allé 4, DK-8000 Aarhus C, Denmark. E-mail: mm@farm.au.dk

ZL: University of Zagreb School of Medicine, Salata 11, Zagreb, Croatia. E-mail: zdravko.lackovic@mef.hr

Abstract

The ORPHEUS/AMSE³/WFME⁴ *PhD standards document*, published January 2012, is a practical tool for quality assurance of PhD programmes. Another document, the new *PhD principles document*: “Best practice based principles for innovative doctoral training”, approved by the EU Council of Ministers is fully compatible with the *PhD standards document*. For this reason, ORPHEUS has expressed a wish to work closely with the European Commission on implementing this in the field of biomedicine and health sciences. The *PhD standards document* could also provide a basis for global conversations concerning the quality and content of PhD programmes. To increase awareness of the *PhD standards document*, national workshops should be held. In addition, ORPHEUS will introduce a labelling project based on initial self-evaluation and external evaluation of web site, which may be followed up by some form of site visit, of academics with experience in PhD education.

³ Association of Medical Schools in Europe

⁴ World Federation of Medical Education



Introduction

At the 7th ORPHEUS Conference in Bergen, Norway, 19-21 April 2012, it was affirmed that the ORPHEUS/AMSE/WFME *PhD standards document* was a practical tool for quality assurance of PhD programmes. Furthermore, ORPHEUS warmly endorses the new *PhD principles document*: “Best practice based principles for innovative doctoral training”, approved by the EU Council of Ministers November 2011. The *PhD standards document* is fully compatible with the *PhD principles document*, and ORPHEUS has expressed a wish to cooperate closely with the European Commission on implementing this in the field of biomedicine and health sciences. ORPHEUS also looks forward to supporting the work of the EUA-CDE and the ESF in this field. Note that in this paper, the term ‘PhD programme’ encompasses both the concept of an organized programme involving institutional program providers,, as well as an individual PhD programme for one person.

The *PhD standards document*

It is recognized that the *PhD standards document* could provide a basis for global conversations concerning the quality and content of PhD programmes and ORPHEUS will work closely with WFME on this. To increase awareness of the *PhD standards document*, national workshops should be held, and all ORPHEUS members are encouraged to initiate these. For practical quality assurance, ORPHEUS members should consider establishing benchmarking exercises nationally and internationally.

ORPHEUS encourages that awards of PhD financing by funding bodies should be based on in-depth assessment of the quality of PhD training in addition to assessment of scientific quality. To support this possibility, ORPHEUS will introduce a labelling project based on initial self-evaluation that can be verified through information given via the institution website. This may be followed up by some form of site visit, from academics with experience in PhD education.

An additional use of the *PhD standards document* could be in connection with internal evaluation which must be an essential part of an institution’s quality assurance system for PhD education. The evaluation criteria have to be transparent and should be defined at the institutional level.

The PhD students should be represented in all committees and decision-making organs. To promote active involvement of students, their efforts must be acknowledged, the infrastructure provided and their influence reflected in decision-making. PhD students should have the opportunity to evaluate supervision and supervisors; this point should be added in any revision of the *PhD standards document*. Results of such evaluations should be communicated to the students.

In connection with the 7th ORPHEUS conference the following specific recommendations were made.



Internal evaluation of PhD programmes

In the ORPHEUS/AMSE/WFME PhD standards document, Chapter 8, Structure, it is stated: “There should be approved procedures for regular review and updating of the structure, function and quality of PhD programmes”. It is suggested that this should include both structural and ad-hoc feedback. Internal evaluation must be an essential part of the whole quality assurance system and regular analysis of internal evaluations is the optimal way to achieve quality improvement in PhD training. The following recommendations are made.

- Academic institutions should activate mechanisms to collect, analyse and respond to evaluations, as a part of quality assurance of PhD training.
- Each university should develop a formal framework for internal (intramural) evaluation by collecting and acting upon feedback from all involved in PhD education (students, supervisors, examiners, administrative staff, and others).
- Internal evaluation should include evaluation of the institution (university/faculty/programme faculty) and evaluation of performance indicators. The evaluation has to be carried out in different contexts (PhD programme / administration / supervision / training). The evaluation criteria have to be transparent.
- The workshop strongly recommends the evaluation of the supervisors and other academics responsible for each student’s PhD programme.
- Evaluation of the administration by the supervisors as well as by the PhD students (doctoral candidates) should also be performed
- Evaluation of all aspects of the PhD training programme (courses, time at other laboratory, etc.) has to be included in quality assurance system.
- Evaluation has to be carried out repeatedly over time. The workshop recommends evaluations at the time of the student’s admission to the PhD programme, midway, and at the end of the programme.

External evaluation of PhD programmes according to ORPHEUS standards

- External evaluation is necessary and should be provided by an external body of auditors. It is, however, difficult to come up with a good practical means of implementing this. Neither the Commission nor the EUA can act as accrediting bodies. Standards could serve as guidelines, not regulations. There could initially be internal evaluation by the institutions themselves, supplemented by institutional accreditation.
- Peer-review evaluation. Evaluation of applications by funding agencies for PhD stipends could be made not only in terms of scientific excellence (publications, received funding, etc.), but also on in-depth peer-review evaluation of PhD programmes. This approach might be of interest in assessing Marie Curie applications.
- Benchmarking can be a practical means of external evaluation that could encourage compliance with the ORPHEUS standards at grass-roots level.



- Industrial representatives are cautious as to the need for formal external evaluation., since industry is primarily concerned with outcomes. The outcomes of interest include academic excellence of the PhD thesis as well as “ability to work in a team”. Thus industry places great emphasis on collaboration with universities to ensure development of competences in transferable skills. Academically trained employees who do not have practical skills are unlikely to be attractive for industry. It was recognized that the institutions following ORPHEUS PhD standards would provide the outcomes that industry needs.

The *PhD standards document* is seen as a firm basis for quality assurance. However, it must be recognized that standards should be dynamic and organisations should always aim for further quality improvements of the PhD programmes. University autonomy must be respected. Any evaluation of PhD programmes should be performed by academics with experience of PhD training. PhD programmes should be transparent. There should also be transparency concerning the employability of the institution’s PhD graduates. Students are likely to form a driver to ensure the quality of PhD programmes.

These views can be supplemented by comparison with the US system of accreditation of PhD training. This is university-driven and there is reluctance to link evaluation of PhD programmes with funding. A representative from the US, Karen de Pauw, recommended that data should be collected to determine the extent to which graduate schools complied with ORPHEUS standards.

International evaluation and ORPHEUS labelling of PhD programmes

International evaluation is usually part of the evaluation of research. Accordingly, international evaluation of PhD programmes is especially important for smaller scientific communities to ensure independent and competent evaluation of PhD programmes (and PhD Theses). Even for large and competitive scientific communities, international evaluation can be significant added value. Besides it can be expected that international evaluation will facilitate international collaboration of PhD programme providers.

ORPHEUS-AMSE-WFME standards, have been developed over 7 years by ORPHEUS, with participation of hundreds of health science schools, international associations such as AMSE and WFME, and positive assessment of the European Commission EU , and EUA-CDE. This PhD standards document is the only existing comprehensive document on PhD in biomedicine and health sciences and is suitable for use in international evaluation.

ORPHEUS labelling could be a reward to those ORPHEUS members organizing PhD programmes in line with the PhD standards document. ORPHEUS labelling should be organised in a simple and not expensive way. Evaluation of compliance of PhD programmes with the PhD standards document should be the basis for evaluation and labelling. PhD programmes should be described on the website in English in sufficient detail to allow “virtual evaluation”of compliance of PhD programmes with the PhD



standards document as the main requirements for ORPHEUS labelling. Some form of site visit is needed, but these should be organised as short and not expensive procedures.

The role of students in PhD training evaluation

- Active and formal involvement in the PhD programme organisation: The PhD students should be represented in all committees and decision-making organs. Student involvement should be hierarchically constructed with different levels of influence, ensuring that all students have a student representative for reporting issues. Student representatives facilitate the communication between students and PhD organisations. Student representatives identify and communicate challenges and ideas to the programme organisation, and communicate the outcomes to the students. To promote active involvement of students, their efforts must be acknowledged, the infrastructure provided and their influence reflected in decision-making.
- Passive involvement: Mandatory evaluation of all courses taken, own project progress, supervision and the PhD programme should be completed every term (semester) by all PhD students. No approval of the term should be possible or accreditation of courses given before this is done.
- Supervisors should be evaluated both by the PhD programme and the PhD student. The standards for supervision are stated by ORPHEUS in Section 5 of the *PhD standards document*. These standards should form a basis for objective, non-personal criteria for use by students in anonymous evaluation of supervision. With basis in evaluation by the programme and the students, quality of supervision should be monitored continuously with regard to both individual supervisors and the general level of supervision in the programme. The results should be communicated back to the students, and should be publically available. It was noted that several of the PhD students had no opportunity to evaluate supervision and supervisors. This aspect is not part of the ORPHEUS standards.
- At the beginning of the PhD, students and supervisors shall make a detailed expected progress plan. The responsibility for supervision is shared between students asking for supervision and providing information on progress, and supervisors for monitoring progress and offering supervision where they see the necessity in following up the plan. The student is responsible for informing the institution in case of insufficient supervision.
- PhD students should have the opportunity for formal networking in settings outside the research programme. Association with a broad network increases student involvement and sense of belonging.

Discussion

The present paper has outlined the manner in which the ORPHEUS/AMSE/WFME PhD standards document can be implemented as part of quality control processes. The PhD standards document is the result of large scale consultation over many years at ORPHEUS conferences, workshops and individual contributions from almost all European countries, with



the resulting consensus striking a balance between specificity and flexibility. However, one thing is to have an agreed set of standards, another to have them implemented. The Bergen 2012 ORPHEUS conference sought to discuss how quality assurance processes could achieve this.

There was general agreement at the Bergen conference that quality assurance, should be performed by academics with experience in PhD training. Evaluators should have the background to appreciate that PhD programmes are complex, as described in the PhD standards document: On the one hand there is close interaction between supervisor and student, on the other hand there are institutional structures responsible for ensuring that the student receives all the training aspects that are not directly related with the research project. External accreditation may later be required by educational and research authorities, but even there it is believed that the quality assurance process should be performed by peer review, preferably international. When performing quality assurance, it needs to be clearly understood that PhD education is both research based, with an output corresponding to 3-4 years research activity at international level, and a training that will equip the student for employment either within or outside of academia.

The Bergen conference was agreed that it is important that quality assurance processes involve PhD students in the discussions. The PhD students have direct experience of the merits and otherwise of the PhD programmes they are following, and their views need to be taken into account. PhD students have participated in most ORPHEUS conferences, and their input has been of the greatest value.

It was recommended that both external evaluation and a possible ORPHEUS labelling process be based on initial self-evaluation of the extent to which the PhD programme concerned complies with the PhD standards document. These could be followed up by later site visits.

Implementation of quality assurance processes on the basis of the PhD standards document is likely to be of use both for larger and smaller scientific communities. Particularly as regards smaller communities, it is believed that quality assurance processes will assist development of PhD programmes that provide optimal research environment, at the same time ensuring that PhD graduates have competencies for innovative jobs outside academia. Furthermore such processes, leading to implementation of agreed PhD standards, should stimulate national and international collaboration, mobility and networking as an important goal for European development.

On a broader view, the standards that have been developed may also have application in other disciplines (e.g. natural sciences). This could stimulate interdisciplinary collaboration. Furthermore, inputs from countries outside Europe like Canada, US, China, Australia, India, Pakistan, Kazakhstan, etc. have already shown interest in the PhD standards document. Work has therefore commenced, together with the World Federation for Medical Education, to explore the possibility of producing global standards for PhD education that can have the same acceptance world-wide as the present standards have achieved in Europe.

Conclusions



The ORPHEUS/AMSE/WFME *PhD standards document* is a practical tool for quality assurance of PhD programmes. The *PhD standards document* could also provide a basis for global conversations concerning the quality and content of PhD programmes. To increase awareness of the *PhD standards document*, it is recommended that national workshops could be held. ORPHEUS will shortly introduce a labelling project based on initial self-evaluation, which could be followed up by some form of site visit of academics with experience in PhD education.

References:

Standards for PhD Education in Biomedicine and Health Sciences in Europe. A Publication from ORPHEUS-AMSE-WFME. ORPHEUS/AMSE/WFME Task Force. Pages 1-16. ISBN: 978-87-7934-600-0.

“Best practice based principles for innovative doctoral training”, approved by the EU Council of Ministers November 2011

Jonsson R, Mulvany MJ, Lackovic Z, eds. Establishing Evaluation of PhD Training. 7th Orpheus Conference 2012 Programme Book, Bergen, Norway. Pages 1-88. ISBN: 978-953-176-565-7

Questions for discussion:

- 1) Does the PhD standards document contribute to equating the need for research excellence with the need to ensure that PhD graduates are qualified for employment both inside and outside of academia?
- 2) Are there specific discrepancies between the PhD standards document and good practice procedures used elsewhere?
- 3) Is the PhD standards document suitable for PhD programmes other than biomedical and health related?
- 4) Could the PhD standards be used for accreditation/labelling processes?
- 5) What are the most important issues in connection with an evaluation?