

EXECUTIVE SUMMARY

The training of doctoral graduates is at the heart of the mission of research-intensive universities (RIUs). Doctoral programmes within LERU aim to train the next generation of researchers to the highest skill levels in order to launch creative, critical and autonomous intellectual risk takers who will push back the frontiers of research. In addition, the modern doctorate needs to provide excellent training for roles beyond research and higher education, preparing doctoral graduates for a variety of careers that require deep rigorous analysis in public, charitable and private sectors.

How can universities ensure that these objectives will be achieved? They do this by ensuring that they maintain doctoral training embedded in a strong research culture and through Quality Assurance (QA) processes which scrutinise and enhance this culture and the activities.

A high quality research culture encourages doctoral candidates and their supervisors to pursue challenging questions with creativity and rigour. The culture must support all to work with integrity - to discuss and explore the pressures on researchers, the standards that are expected, and the wider ramifications on society of the research work. There must be a clear sense that research work is valued and supported as well as properly resourced with appropriate facilities. This requires excellent researchers supported by appropriate resources, but most importantly by strong leadership signalling the importance of research to the mission of the university.

To be satisfied that this culture is present and being maintained we need robust quality assurance processes. Much of this paper focusses on how this is accomplished at LERU universities. Quality assurance involves the following elements:

1. Defining of expectations
2. Setting up scrutiny processes to explore whether expectations are met
3. Measuring key quality indicators
4. Providing feedback mechanisms to facilitate both correction and enhancement of the system

Within these elements QA in doctoral education can be considered at several different levels. At each level doctoral education should be considered together with the overall research environment.

A first level addresses QA of structural and administrative aspects of doctoral education as implemented within a programme, department, institute or faculty. There should be clear and easily navigated structures and administrative requirements (for recruitment, admission, examination, etc.) to ensure that suitable people are recruited and they are properly supported throughout their programme. Doctoral candidates must be able to find what they need efficiently to enable them to focus on the research and training programme. This is also particularly important in order to facilitate the mobility of doctoral candidates within Europe, both to capitalise on the complementarity of training opportunities and to strengthen the research ties among European partners. Procedural quality assurance is not specific to the doctorate, and is probably best managed at the university level.

The second level involves the quality of each doctoral research training programme, which may be either an individual or a structured programme within a cohort. It is important that doctoral trainees be integrated into challenging and stimulating research environments and mentored by suitably qualified supervisors who can devote an appropriate amount of time and investment to their training. It is useful that the expectations and general training plan be explicitly defined as early in the doctoral experience as possible, for example by establishing a written statement that outlines the research area together with training goals, activities and expectations. The plan should be subjected to regular scrutiny to assess progress, measure quality of the output, the satisfaction of the doctoral candidate and the supervisory team, and revised as necessary. Responsibility for this level of quality assurance can be engaged in smaller scale structures, for example departments or doctoral schools, with a degree of independent oversight at institutional level.

A third level of QA involves assessing and enhancing the quality of the output. For accountability to society and for potential future employers it is important that the doctorates fulfil particular standards and criteria appropriate for research training. A doctorate from a LERU university should prepare its graduates to be cutting-edge thinkers ready to confront future challenges in a broad set of contexts and roles. Each doctoral candidate must have developed critical

thinking and analysis and be working with integrity, either through formal training courses or through supervised research. This should be a natural part of a candidate's exposure to an excellent research environment in her or his disciplinary specialty, with an emphasis on adaptability. Furthermore, it is important to continually revise and upgrade training programmes to meet changing challenges and demands of the employment market and of society.

LERU universities have a diversity of approaches to confronting the challenge of maintaining a quality culture and of specific quality assessment and quality enhancement processes of their doctoral training. The report is structured to give examples of processes used to fulfil each of the four elements for Quality Assurance given above. We do not propose a single solution to this challenge, nor do we have an answer for all contingencies. We do provide some ideas and examples from LERU universities on how we develop and review our quality culture and where quality assessment procedures could be usefully implemented. Many individual examples are representative of similar practices at other LERU members and other research-intensive universities. Finally, on the basis of the insight gained from analysing quality culture processes at LERU universities, we propose a number of recommendations for universities, policymakers and funders, which are listed hereafter.