

Generic skills development in doctoral training

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The ultimate question regarding doctoral training deals with the aim and purpose of the doctorate. Traditionally, a doctorate was considered as an entrance qualification for an academic career, but this view has come under strain because of growing numbers and mobility of doctoral students, the (anticipated) rise of the knowledge economy and a change in career perspectives for PhD graduates. Nowadays, the defining characteristic of doctoral training is the intersection of two complementary processes: professional research experience and personal development. The expectation is that a doctorate trains young researchers to embark on a career in the 'knowledge economy'. This has been translated in the view that doctoral training should include generic/transferable skills development so that PhD graduates have the necessary competencies to work in complex and knowledge-intensive professional environments inside or outside academia.

Skills can be defined as competencies or attitudes that are required for the successful completion of the doctorate and for career development after the doctorate. They are said to be generic or transferable precisely because they are also of value outside the strict context of doctoral research. The critical skills that PhD graduates should have acquired in order to successfully enter the labour market, can be clustered in five domains: relational, intellectual, personal effectiveness, leadership & change management, academic & technical. The learning environment for skills development is in the first place the research group or laboratory of the doctoral student. Indeed, research-based training via (in)formal meetings with the supervisor is the core of doctoral education. In addition, there is a growing tendency to complement the research-based training with seminars, workshops, meetings and other courses. The latter form of doctoral training often takes place within doctoral schools (alternative names are graduate schools, research schools) that are defined as organizational units in the university responsible for (international) recruitment, doctoral training and supervision, and career guidance.

The embedment of skills development in doctoral schools is illustrated for the Leuven International Doctoral School Biomedical Sciences¹ in which the doctoral training is structured along three axes.

- Core research skills that include writing papers, attending meetings and invited lectures, giving presentations, submitting progress reports.
- Interdisciplinary research training for which doctoral researchers affiliate with one of the thematic training programs (e.g. Cancer; Genetics;...). These programs provide a multidisciplinary and integrated learning environment for expert knowledge.
- Personal skills development via a wide range of complementary modules (Communication; Information & Publication; Managing your PhD; Career development; Good scientific conduct; Valorisation of research findings; ...).

Help tools (e.g. self-assessment, electronic portfolio) are available to enable doctoral researchers to plan and manage their development so that at the time of graduation they are recognized as competent knowledge workers who have attained an attitude to achieve and a readiness to interact with colleague scientists and the broader society.

¹ <http://gbiomed.kuleuven.be/phd/>