

Synthesis of a workshop by EuroDoc'Agro

Gwladys Jean-Joseph

EuroDoc'Agro platform, French National Institute for Agricultural Research

Muriel Mambrini

Jouy-en-Josas Research Centre, French National Institute for Agricultural Research

Alice Francois

Scientific and Doctoral Education Department, AgroParisTech & ABIES Doctoral School

Nadia Haddad

Ecole Nationale Vétérinaire d'Alfort

Corresponding author: gwladys.jeanjoseph@jouy.inra.fr

The workshop brought together professionals from the field of research education, six from the UK, one from the US, one from Norway, and four from France. The objective was to carry out the collective sharing of international experience to identify actions to support professionalization in doctoral education. We agreed to consider doctoral students, whatever their origin (professional or academic), as new researchers. Four sets of actions were identified: I) empower the new researcher, II) provide success indicators connected with the market, III) connect supervisors with society as well as the job market, thus promoting the academia-industry connection, and IV) promote the new researcher's awareness and knowledge of his/her scientific accomplishments (or skills) while promoting interest in a wide variety of fields. The first two points were considered the most important, or those that could be addressed early on. Two actions were proposed: 1) let the new researcher be in charge of or involved in joint activities within the research team as early as possible, 2) lead the new researcher to carry out an introspective procedure to better understanding of the context/impact of the research project, its relevance to society, and its impact on the advance of knowledge.

Introduction

EuroDoc'Agro, a platform for helping researchers and teacher-researchers develop European projects that merge research, education, and industry in the field of agriculture (sensu lato), presented the results from brainstorming sessions organized to a) improve the quality of doctoral study and b) link academia and industry through training by and for research.

The following challenges and approaches were identified:

- Linking research and education: discrepancies in terms of status, objectives, career evolution, support, evaluation, time frame, etc. must be reduced.
- Linking academia with industry: in this context, the aforementioned discrepancies are more significant and include a cultural gap.
- Capitalizing on Europeanization/internationalization: education must address cooperation and competition, and issues related to the patrimonial status of doctoral degrees must also be addressed (university/institutional/national patrimony)

To overcome these challenges:

- Mentality, habits, and administrative organizations must be confronted.
- The European Union or an international perspective can be used as “tools” to overcome borders. Using an international perspective to link research, education, and industry may help in identifying adequate and original actions. This is the aim of the present workshop.

The international trend (and a strong objective of European policies) is to train doctoral candidates through innovative research of a high value to society, the labor market, and educational institutions. To achieve this goal, institutional policies emphasize the high value of multidisciplinary and access to high quality scientific communities, notably by encouraging mobility across different sectors and geographic areas. They promote the professionalization of doctoral candidates and their enrollment with working contracts that include clearly defined rights and obligations. The development of a best working “ecosystem” or working environment, in which doctoral candidates cultivate their own personal and professional projects along with career implementation plans, must be carried out under comfortable conditions and within a limited duration. Supporting or mastering the evolution of the doctoral training process becomes the aim of the doctoral schools, which organize or allow formal and non-formal training, the development of academic and transversal skills, and the promotion of local as well as distance training.

The key elements for high quality doctoral training identified by EuroDoc'Agro are to:

- Involve the new researcher at the core of the research project while supporting the acquisition of strong scientific and transferable skills within the timeframe of the doctorate, with a focus on innovative solutions;
- Develop the best working “ecosystem” or environment around the new researcher early in the process, also focusing on non-linear innovation processes ;

- Promote knowledge and exchange across disciplines or sectors, with a focus on “areas of sharing;”
- Reinforce synergies between academia and industry through the consideration of all aspects of intellectual property at the earliest stages, the evaluation of intellectual heritage, and valorization of the respective investments of the partners.

This is a goal, an ideal vision. There are large discrepancies between doctoral schools and universities, but it appears that this goal, at a minimum, attenuates the distinctions between academic and professional doctorates, and, at best, highlights that doctorate diversity can be a positive part of the progress.

Method

The workshop comprised four steps:

- Step 1, Knowledge sharing: each participant was invited to present him/herself and his/her connection with the organization or evaluation of doctoral studies, then to contribute answer to the following:
 - Based on your experience, choose one ingredient, significant practice, or example contributing to the professionalization of a young researcher.
 - The replies were mapped on the “young researcher’s landscape” prepared by EuroDoc'Agro (for details, see figure and preparatory documents), in which the researcher is at the core of the system.
- Step 2, Collective choice: participants were asked to create groups of actions based on the contributions and to choose the most important topics to be developed in focus groups.
- Step 3, “Flash focus groups:” each “flash focus group” was invited to propose one main action to be undertaken.
- Step 4, Full-group identification of two main actions.

Results

Comment: The attendants were different professionals in the field of research education: six from the UK, one from the US, one from Norway, and four from France.

Step 1: All of the participants decided to use "new researcher" instead of "young researcher."

The new researcher should:

- be considered a new professional
- be leader of his/her own project, meaning that training must include an appropriation step by which the new researcher becomes leader of the project
- attend conferences and present his/her own work
- be trained in intellectual property rights
- have the opportunity to look for correspondence between his/her own experience and the kind of research he/she wishes to undertake in his/her career
- be keen to change or propose new practices

The supervisor(s) (public and private) should:

- support the new researcher in obtaining wide-ranging experience
- share knowledge and experience, cultivate scientific self-reflection and self-examination
- consider that a new researcher is no longer a student and has begun his/her professional career
- empower the new researcher, get him/her involved in the lab/research life, and consider or validate his/her knowledge (or knowledge-based experience)

Success indicator

- Evaluation of the impact of the doctoral project on society or business

Individual training/career plans

- Must include evidence-based practice

Steps 2 and 3:

EuroDoc'Agro representatives summarized the previous results as four main sets of objectives, valid for all kinds of doctorates (professional or academic). The participants then voted for the most important set (each participant having two votes)

- New researchers are new professionals: how to empower them (6 votes)
- How to connect success indicators with market reality and societal needs (6 votes)
- How to bring supervisors to take market realities into account in their management approaches (2 votes)

- How to promote scientific self-reflection and self-examination and facilitate culture sharing (2 votes)

Step 4:

Two actions were proposed for addressing the first two objectives: 1) encourage the new researcher to be in charge of or involved in joint activities within the research team (with mentorship occurring as early on as possible), 2) as soon as the project begins, ask for the context/impact of the research project, for its importance to society and how it increases knowledge.