

# Recruiting Talents

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Gaining insight into transferable skills:  
Perspectives from doctorate holders and  
non-academic employers

## EXECUTIVE SUMMARY



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## Observatory of Research and Scientific Careers - F.R.S.-FNRS

Thanks to funding from the Federation Wallonia-Brussels (FWB), the Observatory of Research and Scientific Careers was created in September 2018. Integrated in the F.R.S.-FNRS, this structure aims, among other things, to track and analyse the careers of researchers in the FWB through surveys and data cross-referencing. In collaboration with the six FWB universities, the Observatory is responsible for developing knowledge on the doctoral and postdoctoral process. It makes recommendations to facilitate the professional transition of PhD holders and optimise the doctoral process in order to meet the expectations of researchers and society. Particular attention is paid to the various obstacles to a scientific career: stereotypes and discrimination related to gender, constraints related to the requirement of international mobility, impact of the pressure to publish early in one's career, etc. The results of surveys and analyses are systematically published on the site: <http://www.observatoire.frs-fnrs.be>

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## GAINING INSIGHT INTO TRANSFERABLE SKILLS: PERSPECTIVES FROM DOCTORATE HOLDERS AND NON-ACADEMIC EMPLOYERS

This document is an executive summary. The full report detailing the analyses can be found at <http://www.observatoire.frs-fnrs.be/media/report.employers.1.pdf>

### Executive Summary

Transferable skills include generic or basic skills, such as communication, which are transferable between contexts, situations, and tasks, as opposed to specialised skills that are discipline-based (Nägele & Stalder, 2017). For doctorate holders, acquiring transferable skills means becoming equipped with the skills one may need inside and outside of academia. In the current report, based on the perspectives of 2,055 doctorate holders (Study 1) and 614 non-academic employers (Study 2), our primary aim is to analyse whether or not the doctorate holders in our sample are equipped with the skills they need once they enter the labour market and to understand how they can be best supported to develop these skills.

#### 1. Which transferable skills do the doctorate holders perceive they have not acquired but must nevertheless use in their workplace? (Study 1)

We see that there is a mismatch between the skills that doctorate holders have acquired by the end of their doctoral training and those they must use in the workplace for certain skills, and interestingly, this mismatch is similar for those who work in university and those who work outside of university. Both groups seem to lack skills related to working with others (“collaboration and teamwork skills” and “social skills”), general management skills (“business skills” and “project management skills”) and “communication skills”. Specifically, in the university sector, we see a more pronounced mismatch in terms of “creativity and innovation” whereas outside the university sector, we see a more pronounced mismatch with regard to “project management”. In addition, the patterns of match and mismatch are similar regardless of the research domain of doctorate holders.

#### 2. Which transferable skills do non-academic employers think should be reinforced in job doctorate holders? (Study 2)

- **Expected skills.** The six most important skills employers look for in a candidate for a position that could be occupied by a person with a doctorate or a master's degree, in descending order, are “scientific and technical expertise”, “collaboration and teamwork”, “creativity and innovation”, “project management”, “research skills and methods” and “initiative and autonomy”.



➤ **Satisfaction with doctorate holders' skills.** Non-academic employers seem very satisfied with the technical skills of doctorate holders, including their "scientific and technical expertise" ( $M = 3.50/4$ ,  $SD = 0.6$  on a scale of 1 = "very dissatisfied" to 4 = "very satisfied"), their "research skills and methods", ( $M = 3.34/4$ ,  $SD = 0.6$ ), and their "critical and analytical thinking" ( $M = 3.31/4$ ,  $SD = 0.6$ ). However, they are, on average, less satisfied with their skills in "project management" and "collaboration and teamwork". Interestingly, lower levels of skills satisfaction pertain almost exclusively to the "general management skills" category, such as "business skills", "project management", "team management", etc., which may point to an important gap in the training of doctoral candidates and the acquisition and development of these skills.

### **3. What convergences and divergences exist between doctorate holders and non-academic employers in terms of skills acquisition? (Studies 1 & 2)**

The level of satisfaction of non-academic employers reflects the perceived level of acquisition of doctorate holders in terms of "scientific and technical expertise", ranked as high (approximately 3.5) by both groups; "creativity and innovation", ranked average by both groups; and "project management", ranked low ( $< 3$ ) by both groups. However, compared to employer satisfaction levels, doctorate holders rated themselves more positively in terms of "initiative and autonomy" and "research skills and methods", and more negatively in terms of "collaboration and teamwork".

### **4. Which transferable skills should be targeted to best prepare the job transition of early-career researchers? (Studies 1 & 2)**

In view of these results, at the crossroads of the points of view of doctorate holders and non-academic employers, it seems advisable for universities and doctoral schools to pay particular attention, within the framework of their doctoral training programmes, to the development of skills in "collaboration and teamwork" and "project management".

### **5. How should early-career researchers be supported in the development of transferable skills? (Studies 1 & 2)**

➤ **Strengthening collaborations** has received widespread support from non-academic employers and doctorate holders. Indeed, 74.4% of doctorate holders were in favour of universities collaborating more with non-academic sectors and 71.2% of non-academic employers favoured more doctoral theses involving collaboration with other sectors (outside the university sector). Given the importance that non-academic employers place on professional experience outside of academia to hire candidates, there is a need to offer this experience during doctoral or postgraduate training. This could be done in multiple ways:

- **Internships.** 72.9% of non-academic employers in our sample were in favour of hosting doctoral candidates as interns.
- **Collaborative doctoral programmes.** 54.6% of non-academic employers were in favour of hiring doctoral candidates in collaboration with a university. This rate was



even higher for sectors of professional, scientific, and technical services or information and communication services.

- **Reinforcing transferable-skills training** has received support from non-academic employers and doctorate holders alike. It is important to remember that each university in the Wallonia-Brussels Federation (FWB) already offers a diverse training catalogue (transferable and thematic) available to all their scientific and academic staff. Non-academic employers highlighted the importance of “learning by doing”. These types of experiences can make transferable skills less context- and task-specific (Beier, Kim, Saterbak, Leautaud, Bishnoi & Gilberto, 2019) and more “translatable” for doctorate holders. As a result, universities could consider, as part of their transferable skills training programmes, offering a learning approach of this type to familiarise doctoral candidates with what might be expected of them in their future work environment. It is also necessary to inform doctoral candidates about the skills that employers consider important and to encourage them to self-assess their own skills.
- **Giving time to early-career researchers for career development.** Lack of time seems to be a barrier and a concern for doctorate holders in our sample. Given the push at the international level to further shorten doctoral training (e.g., Shaller & Barbier, 2021), their concern that professional development activities may slow the progress of their research and lengthen the time it takes to obtain a degree is understandable. However, time spent on career development activities contributes to researchers' development. Therefore, institutions and doctoral supervisors must inform young researchers of existing training programmes, grant them the time necessary to pursue such training activities and guide/support them in building a career plan.

In short, doctoral training allows doctorate holders to develop a set of skills (disciplinary and transferable) while writing their thesis: from the development of the research project to its design and implementation, up to the communication of results. On the one hand, our results show that the mobilisation of these skills is not limited to the university sector but is transferable to other sectors (public, private, etc.). On the other hand, they emphasise the importance of integrating a set of supports dedicated to the development of transferable skills into the doctoral or postdoctoral programme. This could take the form of courses, project-based learning activities, internships, and collaborations to improve the job transition of doctorate holders in the academic and non-academic labour market.