ICED 2020 proceedings:

Career competencies amongst early career researchers: A response to contemporary uncertain work contexts?

Isabelle Skakni[1]

Lancaster University
University of Applied Sciences and Arts, Western Switzerland

Jonas Masdonati[2]

University of Lausanne

Christian Maggiori[3]

University of Applied Sciences and Arts, Western Switzerland

Abstract

In a context where the research career patterns are dramatically changing, it is increasingly difficult for early career researchers to anticipate and prepare for their future careers. In this paper, we examine this issue by drawing on data from three recent studies conducted with European early career researchers using qualitative and quantitative methods. Our findings highlight that beyond the research and generic skills these researchers have acquired throughout their academic paths, some of them also developed a contemporary type of meta-competency defined as *career competency.* The latter refers to reflexive communicative and behavioural skills, knowledge and abilities that help one to cope with uncertain professional contexts. The relevance of this type of competency for career development interventions is discussed, and further research perspectives are provided.

1   Introduction

Over the past decade, the growing number of PhD holders worldwide has significantly exacerbated competition for tenure-track academic positions (OECD, 2016). Simultaneously, postdoctoral positions have become precarious and are no longer merely a step towards an academic career (van der Weijden et al., 2015). Currently, a vast majority of PhD holders work in non-academic sectors, whether intentionally or not (Vitae, 2016). This era of "research precariat"[4] occurs in a conjuncture in which workers from all sectors are facing increasingly dynamic and changing work environments and more complex careers (Akkermans, Brenninkmeijer, Huibers & Blonk, 2013). Thus it is more and more difficult for early career researchers (ECRs)[5] to anticipate and prepare for their future careers. This situation has raised international concerns about how to adequately prepare them for both academic and non-academic careers (OECD, 2016). Consequently, many universities now include transferable skills development in doctoral programmes.

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[1] Isabelle.Skakni@hes-so.ch
[2] Jonas.Masdonati@unul.ch
[3] Christian.Maggiori@hets.ch
[4] Source: OECD (2019) http://www.oecd.org/sti/science-technology-innovation-outlook/research-precariat/
[5] Doctoral students, postdocs and junior PhD holders

However, previous studies show that ECRs generally have limited knowledge of fast-changing hiring trends and of the broad range of employment opportunities (Singh, 2015). If some skills developed during doctoral training are undoubtedly transferable to non-academic positions (Milos, 2019), PhD holders often struggle in promoting them to non-academic employers (Edge & Munro, 2015; Skakni, Inouye & McAlpine, in press). To explore these issues further, our recent work focuses on career competency, a contemporary type of meta-competency that can help ECRs to cope with current uncertain and often precarious professional contexts.

This paper first briefly describes the three studies from which it draws. Then we present the theoretical foundations of the career competencies notion and illustrate how they manifest amongst ECRs. Finally, we discuss our findings' practical implications and further research perspectives.

2   Research background

This paper draws on insights from three studies conducted with European ECRs. The first study—which drew our attention to career competencies—examined ECRs' training and work experiences in Switzerland (*N*=172) based on a mixed-methods design (online survey and semi-structured interviews) (Skakni, 2018; Skakni, Calatrava Moreno, Corcelles & McAlpine, 2019). Amongst insightful findings, beyond research competencies and generic skills[6] some respondents mentioned the importance of developing a sense of self-evaluation in professional contexts and a capacity to project themselves into the future professionally.

The second study was conducted with PhD holders from the UK and Switzerland (*N*=38) who pursue non-academic careers (Skakni et al., in press). Using semi-structured interviews, we examined their (1) educational and career trajectories; (2) job search strategies; (3) career development strategies; (4) job satisfaction and (5) their PhDs' usefulness in non-academic positions. Although our aim was not specifically to investigate their career competencies, they were particularly salient in the discourse of these participants who were not always aware that they possessed such competencies.

The third study specifically aimed at examining the extent to which career competencies appear amongst ECRs (Skakni, Maggiori & Masdonati, 2019; Skakni, Maggiori, Masdonati & Akkermans, in preparation). Drawing on the Career Competencies Questionnaire (CCQ, Akkermans et al., 2013a) intended for the general population, we created a questionnaire adapted for the specificities of the ECRs.[7] An online survey was sent to PhD students, postdocs and junior PhD holders in Europe, North America, South Africa and Oceania. Their answers (*N*=734) enabled us to define a range of career competencies that reflect how ECRs tend to anticipate and prepare for careers within and outside academia, which resulted in an intervention tool.

3   Career competencies: What do we mean?

Career competencies refer to "a person's self-management of his or her working and learning experiences in order to achieve desired career progress" (Kuijpers, Schyns & Scheerens, 2006, p. 169). They comprise a set of knowledge, skills and attitudes that positively influence professional opportunities (Akkermans et al., 2013a; Forrier, Sels & Stynen, 2009). They are meta-competencies, as they involve critical reflection on oneself and on one's professional life. Thus, they are part of a continuous process of learning through experience. Career competencies are distinct from generic skills, as they do not enable one to practice a profession or to perform specific tasks. Given the need to deal with the uncertainty of contemporary

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[6] Skills transferable to various positions in employment sectors other than academia (e.g. problem solving, critical thinking and communication skills).

[7] Those specificities include the doctoral training's length, which involves projecting oneself into an unpredictable long-term professional future and the current necessity of anticipating careers both within and outside academia.

careers, the fundamental function of career competencies is to foster career development and advancement. They are declined in three dimensions, each comprising two sub-dimensions (Akkermans et al., 2013a).

The **reflective dimension** refers to awareness and critical thinking about one's own work-related values, motivations, strengths and weaknesses. Its sub-dimensions are (1) *Reflection on motivations* (values, passions and intentions concerning one's career) and (2) *Reflection on qualities* (strengths, shortcomings and perceived skills concerning one's career).

The **communication dimension** relates to the ability to network professionally and to promote oneself in professional contexts. Its sub-dimensions are (1) *Networking* (an ability to create and expand personal and professional networks for career-related purposes) and (2) *Self-profiling* (an ability to promote one's own knowledge, abilities and skills in the workplace and in external labour markets).

The **behavioural dimension** refers to active exploration of career opportunities as well as an ability to steer one's career. Sub-dimensions are (1) *Work exploration* (ability to explore and search for further education, work and career-related opportunities) and (2) *Career control* (ability to influence learning and work processes related to one's career by setting goals and planning how to fulfil them).

Previous research reveals that career competencies relate to better perceived employability (Blokker, Akkermans, Jansen, & Khapova, 2019), work engagement (Akkermans et al., 2013b), job satisfaction (Kong, 2013) and work-life balance (Cappellen & Janssens, 2008). Employees reporting more career competencies are more likely to report better career support at work and in their private life compared with other employees (Kuijpers, & Scheerens, 2006). To our knowledge, our work contributes to the few studies addressing the subjective aspects of career competencies (e.g. Park, 2020) and is the first to investigate ECRs.

4   Career competencies amongst early career researchers: What do we know?

Our research enabled us to define how career competencies translate amongst ECRs. The interviews from the first and second studies allowed us to identify subjective ways in which career competencies are developed and displayed daily.

4.1   Reflective dimension

Some participants reported an ability to *reflect on their motivations, strengths and weaknesses* in professional contexts. This was the case of Marta[8], who recalled having come to certain conclusions about what she called her "human capacities":

> *I've learned to be aware of how I behave with people and how that could be problematic. I would like to perhaps work better with people. I'm kind of on the way to learning things differently.* (Marta, Postdoctoral Fellow)

4.2   Communication dimension

Networking and *self-profiling* skills also emerged from participants' discourse, especially for those pursuing non-academic careers. For instance, Edward, with a PhD in philosophy, convinced employers in non-academic sectors of the added value of his expertise:

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[8] All participants' names are pseudonyms.

> *During the interview, I presented myself as someone who has a relevant theoretical knowledge for the job, even though at first glance my expertise might appear incongruous [for the position].* (Edward, Scientific Adviser and English Teacher)

4.3   Behavioural dimension

In line with *work exploration* and *career control* skills, other participants discussed their ability to steer their careers, which implies projecting themselves into the future by evaluating their various options. Joelle eloquently expressed this:

> *Professionally, I've chosen to develop both academic and non-academic skills. It will be useful. I even have a certificate that attests my [non-academic] skills.*
> (Joelle, Postdoctoral Fellow)

Our third study (Skakni et al., in preparation) showed that career competencies *within* and *outside* academia are two very distinct dimensions. It also revealed that PhD students perceived having more career competencies in preparation for careers outside academia than postdocs did. As observed in other populations (e.g. Blokker et al. 2019), we found a strong link between ECRs' career competencies and their perceived employability. Moreover, those who perceived themselves as having strong career competencies also appeared more likely to consider their current work as meaningful. Interestingly, compared with their female counterparts, male respondents generally reported having stronger career competencies for preparing for careers both within and outside academia. Building on these results, we created the Career Competencies Questionnaire for Early Career Researchers (CCQ-ECR)[9].

5   Implication for practice and conclusions

While addressing researchers' job insecurity issues, we believe it is crucial to raise awareness among ECRs about the importance of developing career competencies. Indeed, this set of competencies represents a personal resource that facilitates both career advancement and work satisfaction in increasingly challenging professional contexts.

In that respect, the CCQ-ECR could be a relevant tool for career counsellors and developers in universities because it allows the assessing of competencies necessary in preparing for careers within and beyond academia. This tool could be used to identify which competencies have been mastered and those that the person could further develop. Discussing the CCQ-ECR profile as part of an individual counselling session might also help provide both a retrospective and prospective view of one's career path and goals.

However, further research is needed to examine the personal dispositions and institutional conditions that either help or hinder the development of career competencies in the early career researcher population.

Acknowledgements

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[9] For further information about the questionnaire items or to obtain a copy, please contact isabelle.skakni@hes-so.ch

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