Exploration of career planning activities and short-term retentions of junior scientists

- Doreen Forbrig & Harm Kuper -

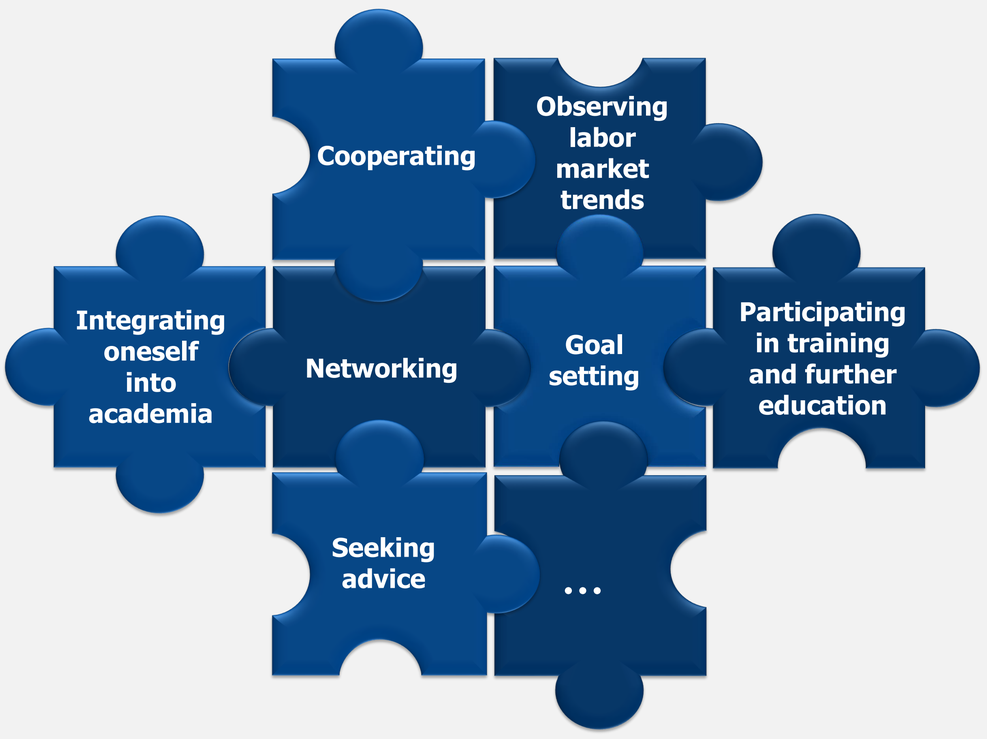
Key information

Going beyond prior research concerning working and qualification conditions of junior scientists in Germany, the recent longitudinal study focuses on active career planning and development of this special group of persons at Freie Universität Berlin. It is intended to gain **insights into the extent and practice of active career planning**. Additionally, the present research aims to analyze possible **personal and motivational factors influencing career planning**. Over a four-year period, the study includes online surveys at two times of measurement at Freie Universität Berlin. For further information concerning the short-term retentions of the respondents, there are two follow-up surveys planned.

Bottleneck situation in academia

The conditions, career paths and risks of scientific careers are increasingly in the spotlight of science policy and public attention. In particular, the development of the number of vacant professorships in relation to the number of junior scientists heightens the risks of scientific careers. In the period from 2005 to 2014, the number of German professorships raised from approx. 38.000 to approx. 45.000, i.e. by 18 percent. In the same period, the number of research assistants increased by 38 percent (up to approx. 178.000) (Statistisches Bundesamt 2015). It can be concluded that there is no structural enhancement of target positions in academia corresponding to the expansion of qualification trajectories and junior scientists. This leads to limited perspectives of long-term retentions in the academic system and a shift of career aspirations towards options outside of the scientific field (e.g. Briedis et al. 2014). Due to differences in qualification requirements in the diverse fields of work, there is a need of individual career planning.

The "puzzle pieces" of career planning



The consideration of career planning requires a prior definition of the term "career". Sullivan and Baruch (2009) provide a broad and including definition by phrasing career as "individual's work-related and other relevant experiences, both inside and outside of organizations, that form a unique pattern over the individual's life span" (ibid, p. 1543).

For creation of a "pattern", the **setting of (vocational) goals** appears to be particularly relevant. Although there is no uniform definition of "career planning", it may be thought of as **active and strategic efforts** to achieve individual vocational goals (Presbitero 2015).

Career planning of junior scientists can be composed of **various components**. Within the analogy of a puzzle, potentially career conducive actions (e.g. seeking advice) correspond to "puzzle pieces" that assemble the puzzle of career planning.

Considering career planning as pro-active actions of individuals, it shall be examined on the basis of the **Social Cognitive Career Theory (SCCT)** by Lent et al. (1994). SCCT focuses on psychological processes that influence individual actions in the context of career development. It mainly considers the constructs self-efficacy, outcome expectations and interests. So far, SCCT provided the theoretical foundation for examinations of career intentions, in particular. Research indicates that especially self-efficacy has a major role in the development of career intentions (Briedis et al. 2014; Berweger & Keller 2005). Relationships among psychological constructs and the approach of implementing career intentions has not been investigated so far.

In consideration of contextual structures of opportunity, it might be assumed that academic and career self-efficacy beliefs as well as outcome expectancies regarding career planning directly and indirectly (mediated by vocational interests and career aspirations) impact career planning.

Research questions

- To what extent are careers of junior scientists actively planned and which activities of career planning are practiced?
- Are there relationships between active career planning of junior scientists and their personal (academic records, academic and career self-efficacy beliefs) as well as motivational requirements (personal and vocational orientations, career aspirations)?

Study design & implementation

Population: Research assistants at the Freie Universität Berlin

Times of measurement:

- Measurement 1: First wave in June 2016, second wave in November 2016
- Measurement 2: Summer term of 2018

Sample (measurement 1, first wave):

- N = 668 persons (netto response rate = 32,4 %)
  - Gender ratio: 44,8 % male and 55,2 % female
  - Ratio of highest degree: 56,9 % doctoral candidates and 43,1 % postdocs
  - Proportion of permanent employment contracts: 6,1 %

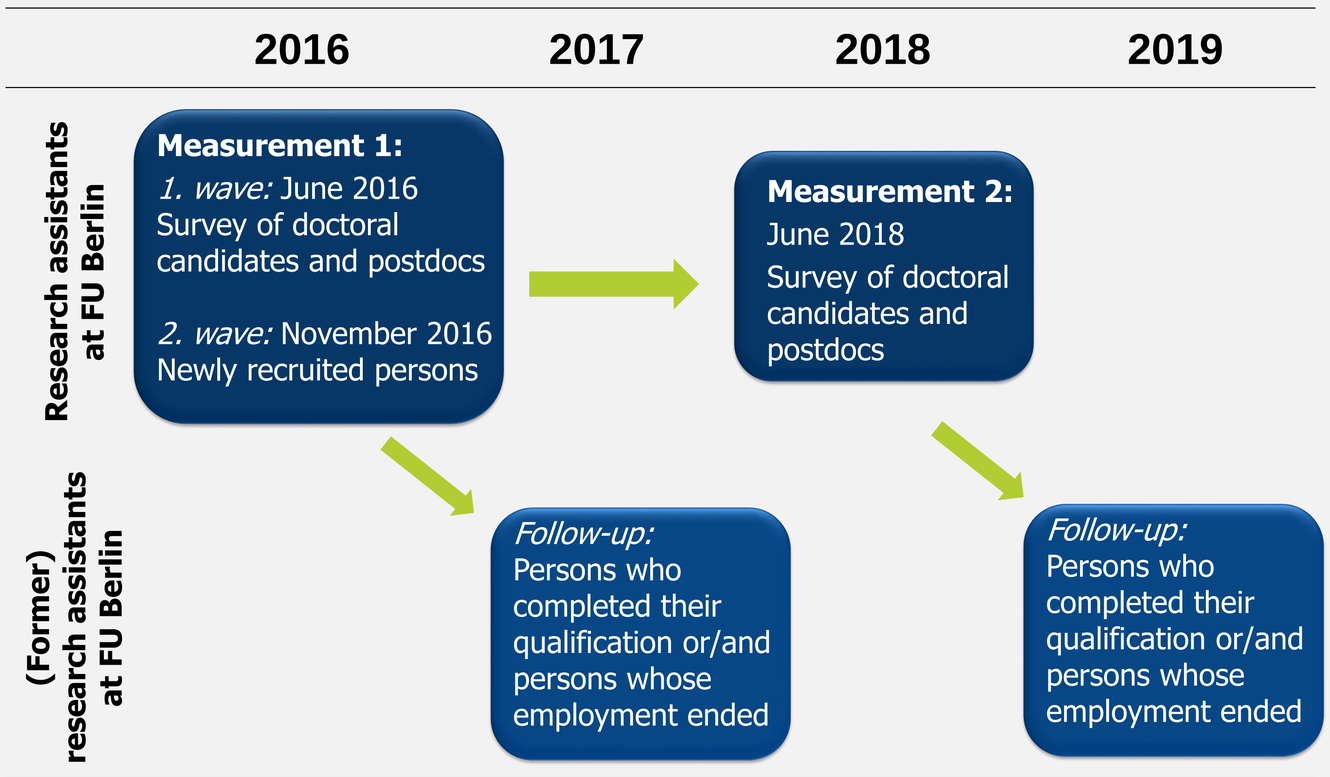
→ Overrepresentation of females and postdocs

Follow-up study:

- Planned surveys in November 2017 and summer term 2019

Planned analysis (depending on data quality):

- Structural equation modeling



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