How do PhD-students become academics through interdisciplinary research projects? (0167)

<u>Katrine Lindvig</u>, Lars Ulriksen University of Copenhagen, Denmark

Summary

The increased focus on interdisciplinary education during the past decades has so far generated a lot of attention to the policy level and strategies behind interdisciplinary programs, as well as on the assessment and evaluation of the latter; far less attention has been given to the actual process of creating interdisciplinary education and teaching.

In the past three years, through ethnographically inspired fieldwork, we have followed five interdisciplinary research groups. The aim of this case study has been to experience education in the actual making and to see how education and educational elements are created together with, or as a result of, interdisciplinary research.

In this paper we will report on the findings from a specific study of the PhD students involved in these projects, in order to understand how PhD-students become academics and create identities in, through - and sometimes in spite of - the interdisciplinary research projects.

Background and methods

University of Copenhagen (UCPH) has, as part of its strategy 2016, a vision of developing and strengthening research based education and interdisciplinary, cross-faculty research and education. As part of this strategy, UCPH in 2013 set aside 64 million Euros and created the Excellence Programme for Interdisciplinary Research, awarding grants to 18 projects spanning across faculties and disciplines. The projects run until the end of 2016 and are all required to create educational elements based on their research, thus creating a perfect opportunity to follow education in the making and to explore the processes and negotiations in developing interdisciplinary education up close. Out of these 18 projects, we selected five cases on the criteria of being most different from each other (Flyvbjerg, 2006; Seawright & Gerring, 2008).

In the case study we used ethnographically inspired methods, consisting of participatory observation, focus group interviews with PI's, PhD- and Master-students and educational planners connected to the projects, as well as analyses of documents and mail correspondences. Observations of teaching, meetings as well as email-correspondences were recorded in logs and the interviews were transcribed ad verbatim. Though all of the data informs our conclusions, the findings in the present paper are primarily based on the interviews with 25 PhD-students and the five PI's of the project.

Results

The findings point us in many directions; there is no one way these students make their way through their study. The research projects that the students are involved in span the Natural and Health sciences as well as the Social Sciences and Humanities, thus making the PhD projects very different.

There is, however, a common thread running through most of the interviews, which could be understood as a way of 'othering' interdisciplinarity. The term 'other' was originally used by geographers and anthropologists in the postcolonial field (Hall, 1997; Said, 1979) and is used as both a noun and a verb. As a noun, the 'other' is a person or group of people different from oneself. As a verb, 'other' means to distinguish, label, categorize, name, identify, place and exclude those who do not fit a societal norm (Gallaher et al. 2009). In this case, the 'other' is not so much a person or group of people, as it is a practice and a concept. In the discussions between the PhD-students in the interviews, and in the interviews with the Pl's, the notions and accounts of interdisciplinarity are often followed by reservations, a 'but', 'however', 'nonetheless' or 'still' e.g. "I think it has been exiting and interesting being part of an interdisciplinary project; however, I wouldn't recommend it to future PhD-students" or "even though I like working interdisciplinarily, I have to protect myself and stay within my own discipline".

What has become clear through the interviews is that the students and PI's do not have fixed and uniform ideas of mono- and interdisciplinarity; rather they regard it as divisions between the collaboration that happen in their mundane and close settings, and that which take place in the more distant and rare settings. Monodisciplinarity becomes associated with the comfort of the "home" department (though this department in itself may be a mixture of disciplines), of the supervisors they trust (though they may come from other disciplines), the lab work they know (be it taught from technicians with other backgrounds) as well as the presentation style that they are most familiar with (but not necessarily the most common within their field). Interdisciplinarity on the other hand is defined as the unclear demands from the PI's and supervisors, of the 'staged' presentations at the yearly summits and annual meetings, of the awkward meetings with the Scientific Advisory Boards and as the (most often failed) attempts of writing and publishing articles across disciplines. Interdisciplinarity is all that monodisciplinarity is not.

The fact that interdisciplinarity is seen as an opposition to monodisciplinarity is not strange, if we accept the notion that social groups impose meaning on their world by ordering and organizing things into classification systems (Douglas, 1966; Hall, 1997). However, for the students in these projects, the act of othering has great implications for the creation of academic identity, for their work and research and for the balance between their experienced highs and lows in the study. As an 'other', interdisciplinarity comes to signify the practices, demands, expectations and results that do not fit into the narrative of being a successful PhD-student. As a way to cope, the students end up dissociating themselves from the idea of interdisciplinarity and instead create narratives that are focusing only on their original discipline and their familiar, monodisciplinary practices. In other words - they learn interdisciplinarity but they become monodisciplinary, whatever that may entail.

Discussion

There are many ways of 'becoming an academic', which has also been studied by many others before us (Calatrava Moreno & Danowitz, 2016; Kobayashi, Grout, & Rump, 2013; McAlpine & Åkerlind, 2010) to name a few. Nonetheless, our study points towards more work needed in terms of creating manageable pathways for PhD-students involved in interdisciplinary research projects. The different ways of enrolment e.g. through departmental studentships, faculty scholarships or research grants influence the nature of collaboration between Pl's, Departments and PhD-schools and the potential clashes between expectations of outcome. Employability and the hiring structures within academia also greatly influence the ways of structuring PhD programmes within interdisciplinary research.

Furthermore our study raises the question of the nature and status of interdisciplinary research and education in academia: is interdisciplinarity by default the 'other' to our embedded monodisciplinary practices or should we investigate ways of creating counter-narratives and unsettling the binary classifications?

References

- Calatrava Moreno, M. del C., & Danowitz, M. A. (2016). Becoming an interdisciplinary scientist: an analysis of students' experiences in three computer science doctoral programmes. *Journal of Higher Education Policy and Management*, *38*(4), 448–464. http://doi.org/10.1080/1360080X.2016.1182670
- Douglas, M. (1966). *Purity and danger; an analysis of concepts of pollution and taboo*. New York: Praeger. Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquiry, 12*(2), 219–245. http://doi.org/10.1177/1077800405284363
- Hall, S. (1997). *Representation : cultural representations and signifying pratices*. London: SAGE Publications. Kobayashi, S., Grout, B., & Rump, C. Ø. (2013). Interaction and learning in PhD supervision a qualitative study of supervision with multiple supervisors. *Dansk Universitetspædagogisk Tidsskrift*, 8(14), 13–25.
- McAlpine, L., & Åkerlind, G. (2010). *Becoming an academic*. Houndmills, Basingstoke, Hampshire; New York: Palgrave Macmillan.
- Said, E. (1979). Orientalism (1st Vintage books ed.). New York: Vintage Books.
- Seawright, J., & Gerring, J. (2008). Case Selection Techniques in Case Study Research: A Menu of Qualitative and Quantitative Options. *Political Research Quarterly*, *61*(2), 294–308. http://doi.org/10.1177/1065912907313077