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Experiences of PhD graduates researching and learning for sustainable development in an inter- and transdisciplinary setting

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Abstract

This paper explores the reports of alumni of an international twelve-year project on what is needed to be well equipped to face current global challenges. As future-ready graduates they emphasized the importance of networks and multicultural and multidisciplinary learning settings that went beyond a disciplinary focus. I discuss this in light of diverse spatial understandings of knowledge and a transformative understanding of education for sustainable development.

1 Introduction

Today's global challenges require forms of research training that prepare students to become future leaders capable of addressing the complexity of these challenges, listening to stakeholders concerned, and developing future-oriented responses jointly. Disciplinary knowledge and skills are thus only one part of what they need to become "future-ready graduates". Designing training courses that are multicultural and multidisciplinary is key to achieving such learning outcomes. International student mobility, which has greatly increased (King & Raghuram, 2013; UNESCO, 2015), can be taken as an opportunity to arrange multi-perspectival and collaborative training settings.

The twelve year programme NCCR North-South, led by the Centre for Development and Environment at the University of Bern, included more than 150 PhD graduates from around the world. The programme aimed to conduct research for sustainable development in North-South partnerships, train early career researchers in inter- and transdisciplinary research, and implement jointly developed projects involving science and society. The alumni were traced in 2012 and 2017. The tracer study aimed to find out how PhD graduates perceived the opportunities they had to develop both their disciplinary skills during their PhD programmes, and their ability to engage in collaborative inter- and transdisciplinary approaches. The study explicitly gave PhD graduates a voice rather than only collecting data about their latest employment. This paper discusses the relevance of space and place in the globalized and increasingly monetized (Biberhofer, 2019) world of higher education institutions. Further, it provides selected insights into the PhDs' experiences and sketches how universities might face the growing demand for education for sustainable development that emerges from dealing with the challenges of sustainability.

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2 Spatiality of knowledge and involved actors

Education for sustainable development requires contextuality and implementation under real-world conditions. Trustable learning atmospheres are also needed to conduct value-conscious debates in a university context (Kläy, Zimmermann, & Schneider, 2015). A consciousness also needs to be fostered that we perceive and shape the world through the way we understand it. This can take place in multicultural and multidisciplinary encounters in real-world contexts.

International student mobility (ISM) studies focus implicitly on multicultural contexts but usually do not explore how knowledge is shaped by spatiality. While ISM tends to be driven by pursuit of knowledge to achieve better livelihoods, ISM studies tend only to reflect on formal knowledge acquisition, missing out on socially and culturally shaped knowledge, which differs greatly depending on the life courses of international students (Barth, Lang, & Michelsen, 2019; Findlay et al., 2012). This can be understood through a focus on the spatiality of knowledge and involved agents (Baláž, Williams, & Chrančoková, 2018; Jöns, 2009; Madge, Raghuram, & Noxolo, 2014; Raghuram, 2013).

Beech and Larsen (2014) argue for analysing contemporary education systems in terms of networks, interconnections and movements. Emerging from the context of sustainable development-oriented research partnerships, spatial understanding as proposed by Phelps (2016) explains education systems from this perspective, as she views universities as nationally grounded institutions with networks extending into the transnational space of international student activities and global research collaborations.

The NCCR North-South programme sought to give PhD students from the global South a chance to participate in an international research network – including innovative regional training events – while simultaneously studying at or through their home university (Upreti et al., 2012). In this way, the programme facilitated a “productive tension” between place and space (Phelps 2016) and foregrounded relationality (Lange, 2019) and spatiality in education; students from the global North who participated in the programme benefitted from a similar experience. The educational part of the programme was continued beyond the lifetime of the NCCR North-South programme. It was established as the International Graduate School North-South, an inter-university doctoral programme involving four Swiss universities (Basel, Bern, Lausanne, Zurich).

ISM studies focusing on doctoral students usually take the purpose of the corresponding doctoral programmes for granted and do not ask how students perceive the stated programme aims. Doctoral programmes are generally based on the assumption that acquisition of in-depth knowledge and methodological skills in a single discipline enables students to become highly qualified, sought-after experts and/or leaders in particular fields. However, this hardly reflects the real-world requirements many PhD students face today after completing their degrees (Phelps, 2016). In addition, the motivations of students may not be limited to what the programmes are explicitly designed to achieve.

3 Inter- and transdisciplinary experiences during a PhD Summer School

3.1 The IGS North-South Summer School

The International Graduate School (IGS) North-South holds an annual Summer School that takes place in different parts of the world. This event is more than a course: it works as an intercultural learning setting, where PhD candidates exchange ideas as interdisciplinary groups. On the basis of conceptual and methodological seminars the scholars implement their knowledge and skills in an exploratory survey and are expected to design a transdisciplinary research strategy focusing on specific development issues and global change in a local context of sustainable regional development. During intense fieldwork the scholars meet with non-academic stakeholders; they are guided through this transformative approach by coaches.

3.2 Experiences to share for future-ready graduates

PhD graduates who were part of the study emphasized the importance of the Summer School for their careers. The involvement of local stakeholders during fieldwork as well as the challenging setting for acting as an interdisciplinary team were highly valued. Students reported on disagreements in the team, which were challenging but brought them to a real-world learning setting. The international supervisory teams from the South and North created opportunities and space for curiosity, stimulating and opening the minds of students.

[during a Summer School] meeting for IGS [North- South] we also can talk about our friendship and our families, tell ourselves what we really want to do, what we feel, we are dreaming about for our future [...]. So it is kind of both ways. The friendship part of it and increasing networks, [to experience] also the other side of this academia. (Kenyan woman)

The students were in a safe space to try out different research approaches and to garner and discuss personal experiences in the field of sustainable development, rather than strictly adhering to disciplinary-focused processes. There was ample space to look at things differently and try new methods. Students were able to experience and discuss socially and culturally shaped knowledge, and reported on the networks they built with their peers during the course and the programme, with ties that still animate them to this day.

[A]t the end of the day, everything is transdisciplinary, I mean everything is so interconnected. Even if you think you teach one specific course, it's just sustainable development, [...]. [T]he NCCR [North-South] publications that I was lucky to get a hold of, I am using them currently in my teaching. (Kyrgyz woman)

Through peer-learning and a knowledge platform students had the opportunity to share information from different projects from around the world. The sharing approach made it necessary to radically extend access to knowledge sources through international set-ups to create an equal level of access. In addition, for the Summer School it was crucial that the students were physically in the same place and conducted fieldwork together. At the same time, they projected their own pools of experience from very different spatial contexts onto the tasks they were fulfilling, leading to a new understanding of their own epistemological premises. Furthermore, they remained very connected through their personal contacts across space (networks) and were at the same time attached to their own universities, where they were enrolled and physically present for specific courses. This shows that although science seems to be universal, it is eminently place-based.

4 Conclusions

What do future-ready PhD candidates need? Besides giving some insights into the PhD programme of the NCCR North-South, our study highlights that students need not only a home-base university which embodies a place where they are rooted during their PhD programmes. It is also important for them to be supported by international networks and offered inter- and transdisciplinary learning spaces that allow them to experience research and learning that goes beyond the disciplinary focus of their PhDs. The IGS North-South PhD programme affirms the need for universities worldwide to work closely together instead of competing with each other if they are to benefit from reciprocal trust, cooperate with loyalty and respect and use differences to learn from each other. Further, the study notes that to learn and experience sustainability issues, education for sustainable development also needs a local context.

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