



Lessons learnt on implementing an interdisciplinary doctoral programme in water sciences

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Using the Vienna Doctoral Programme on Water Resource Systems as a case study, this work describes how the characteristics of the programme can be evaluated to identify which process features are important for developing interdisciplinary research at the doctoral level. The Programme has been running since 2009, and to date has engaged 35 research students, three post-docs and ten faculty members from ten research fields (aquatic microbiology, hydrology, hydro-climatology, hydro-geology, mathematical economics, photogrammetry, remote sensing, resource management, structural mechanics, and water quality). Collaborative, multi-disciplinary research is encouraged and supported through various mechanisms - shared offices, study programme, research cluster groups that hold regular meetings, joint study sites, annual and six-month symposia that bring all members of the programme together, seminar series, joint supervision, and social events. Interviews were conducted with 12 students and recent graduates to explore individual experiences of doing interdisciplinary research within the Programme, and to identify which mechanisms are perceived to be of the greatest benefit for collaborative work. Analysis revealed four important process features. Firstly, students noted that joint supervision and supervisors who are motivated to collaborate are essential for multi-disciplinary collaborative work. Secondly, interviewees described that they work with the people they sit close to or see most regularly. Physical places for collaboration between different discipline researchers such as shared offices and shared study sites are therefore important. Thirdly, the costs and benefits to doing interdisciplinary work were highlighted. Students make a trade-off when deciding if their time investment to develop their understanding of a new research field will support them in addressing their research question. The personal characteristics of the researcher seem to be particularly relevant to this decision making process and need to be considered during student selection. Finally, communication skills are critical. Students noted that they need to be able to understand what each other are doing in order to work together and the symposia and research cluster meetings are good places for developing these skills.