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Title

Most important is that they figure out how to solve the problem : how do advisors conceptualize and develop research autonomy in chemistry doctoral students? / Rachel A. Barnard ; Ginger V. Shultz

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Abstract

While the paths after graduate school are increasingly varied, the central goal of doctoral programs remains to develop independent researchers. Given the important role of doctoral advisors in the socialization and progress-making of doctoral students, we conducted semi-structured interviews with faculty advisors who regularly advise chemistry doctoral students from three chemistry departments with rotation programs for their first-year students. In contrast to existing studies documenting advisee perspectives of research autonomy, this work focuses particularly on the advisor perspective. After open coding these interviews, we found a breadth of ideas and approaches to developing research autonomy. The faculty advisors conceptualized research autonomy in their first-year doctoral students as enthusiasm or curiosity for their research or research area. The advisor's approaches to developing and promoting autonomy in doctoral students varied widely, and some went so far as to not develop autonomy in new students but to "screen" for it. Finally, different subdisciplines in

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chemistry provide unique opportunities as well as constraints for advisors and students. We discuss the implications of these findings for doctoral students, advisors of doctoral students, administrators, and research advisors of undergraduate students. (HRK / Abstract übernommen)