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Disciplinary Scaffolding or Productive Failure? Two Approaches to Research Mentoring

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Muntlig presentation

Abstract

Autumn 2022 saw the start of a “pardoktorand” project between the departments of Teaching and Learning and Astronomy at SU. From an educational perspective, our aim was to investigate how university students develop expertise in Astronomy. The collaboration developed into an autoethnography of research supervision, where we assumed the roles of mentor and mentee, documenting the experiences of a disciplinary outsider participating in authentic research, under a mentor’s guidance. Our focus in this presentation is on a prominent question in the research supervision literature: how supervisors can best support students while giving them the necessary agency to become independent researchers (Jacobsen et al., 2025). Extant research focuses on ideas of scaffolding and fading (Collins & Kapur, 2014), however our findings suggest the value of a different approach. This approach entails giving students agency early in the research process, by letting them face ill-structured problems which inevitably lead to moments of impasse and failure (Kapur, 2008). Guidance is then provided as required. In our study, this approach led to the mentee rapidly developing a nuanced view of disciplinary practice, by forming hypotheses, exploring data and noticing the relevant aspects in disciplinary-specific representations. We suggest that this “productive failure” approach has much to offer in the field of graduate supervision.

References

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