

Foster independence, critical thinking and creativity

What

Creativity and independent critical thinking are core competences for academics and therefore important learning outcomes in PhD education; at the same time, these concepts might be discipline-based and realized in different ways. Anne Lee defines critical thinking as an “ability to understand critique and create the argument”, which also means a “substantive thinking processes free from emotion.” (Lee, 2012:70).

Evidence / background - Gender perspective

For many supervisors, independent critical thinking is the main objective of PhD supervision. Johnson, Lee and Green (2000) point out that the idea of scientific autonomy and rationality is gendered itself and historically rooted in 18th century. Thus, gender bias and gendered expectations concerning scientific independence and critical thinking may still influence students’ self-perception as well as supervisors’ perception of their students. Pedagogical literature emphasizes that critical thinking and connected qualities such as scientific creativity are skills that have to be trained and developed over time.

Lesley Johnson, Alison Lee & Bill Green (2000) *The PhD and the Autonomous Self: Gender, rationality and postgraduate pedagogy*, *Studies in Higher Education*, 25:2, 135-147, DOI:10.1080/713696141.

Lee Anne (2012). *Successful research supervision: advising students doing research*. 1. ed. New York, NY: Routledge.

From contexts and experiences in the FESTA-project

While discussing independence, supervisors at Uppsala University pointed out that independence includes a range of skills that have to be trained and developed over time rather than expected from the student from the very beginning. Furthermore, some supervisors had experiences with male students overestimating their own skills and independence. Based on that, supervisors discussed if gender stereotypes might influence students’ as well as supervisors’ perception of creativity and independence; there might be a gendered view on who is considered to be independent and creative and who is not.

Recommendations for good practice

Critical thinking and creativity:

Lee (2012) suggests different approaches towards “critical thinking” and points out that critical thinking is understood differently in different disciplines. According to Lee, students have to train their critical thinking skills by going through a “considerable amount of guided and independent study as well as a significant piece of research” (Lee, 2012 p. 84).

According to Lee, 2012, supervisors might foster student’s creativity and critical thinking by for example:

- Raising questions that helps students to develop their ability to approach scientific problems

- Examine their belief of knowledge and help students to move forward by questioning and challenging their belief
- Provide opportunities for self-reflection and self-evaluation
- Arrange opportunities for peer discussion, e.g. on scholarly literature, that support critical reflection by offering different perspectives
- Adapt different supervisory strategies over time towards increasing independence by shifting supervisory roles from being an expert and advisor towards a guide and critical friend