





# Can Students' Self-Efficacy Beliefs Explain Academic Motivation and Career Intentions?

Anna-Kathrin Wimmer Ludwig-Maximilians-Universität München (LMU Munich)

digiMINT "Digitalisierung als Chance für Frauen in MINT: Schule – Studium – Beruf" www.digimint.info

Funcing code: 01FP22M01

Anna-Kathrin Wimmer
Ludwig-Maximilans-Universität Munich
Department of Sociology
Lehrstuhl Soziologie und Gender Studies
Konradstr. 6
80801 München
anna.wimmer@soziologie.uni-muenchen.de

SPONSORED BY THE



51st Annual Conference of the European Society for Engineering Education (SEFI 2023) 11-14 September 2023, Dublin.





Duration

2023 - 2025

Germany

## Methodology



#### **Method & Participants**

5 Interview Cohorts of female students (total 50) + Survey: Companies Perspective (around 380)

Mechanical and plant engineering

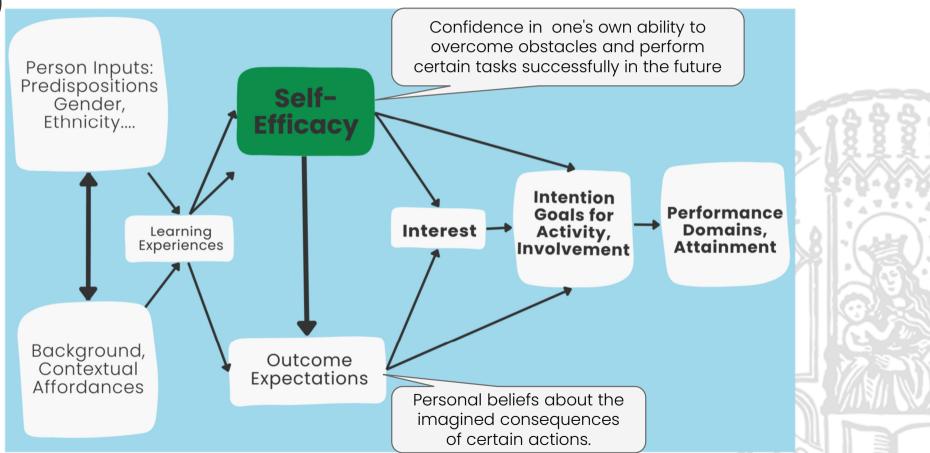
#### Research Aim

- Perception of self-efficacy among students and professionals
- Learning experiences and contextual factors influence selfefficacy
- How stereotypes, gender biases, societal expectations shape selfefficacy beliefs





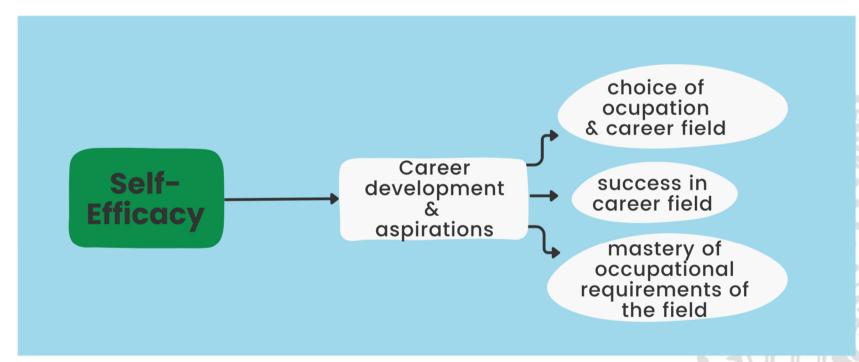
Social Cognitive Career Theory (Lent, Brown & Hackett; 1994)







## Self-efficacy plays a major role for career development and aspirations



- Abele-Brehm, Andrea E., and Mahena Stief. 2004. "Die Prognose Des Berufserfolgs Von Hochschulabsolventinnen Und -Absolventen." Zeitschrift für Arbeits- und Organisationspsychologie A&O 48 (1): 4-16
- Bandura, Albert, Claudio Barbaranelli, Gian Vittorio Caprara, and Concetta Pastorelli. 2001. "Self-Efficacy Beliefs as Shapers of Children's Aspirations and Career Trajectories." Child development 72 (1): 187–206
- Gore, Paul A. 2006. "Academic Self-Efficacy as a Predictor of College Outcomes: Two Incremental Validity Studies." Journal of Career Assessment 14 (1): 92-115.
- Epstein, Nurith, and Martin R. Fischer. 2017. "Academic Career Intentions in the Life Sciences: Can Research Self-Efficacy Beliefs Explain Low Numbers of Aspiring Physician and Female Scientists?" PLOS Journal.
- Lent, Robert W., Steven D. Brown, and Gail Hackett. 1994. "Toward a Unifying Social Cognitive Theory of Career and Academic Interest, Choice, and Performance." Journal of Vocational Behaviour 45. 79–122





#### **Expected Results**

#### Hypotheses expected to be validated by 2023:

Lower self-efficacy beliefs could explain lower interest of women to a certain extend

Self-efficacy-based interventions could help to promote interest and

motivation

Regular, constructive feedback could be one way

Impact on individuals' aspirations and career choice

Reduction of drop-outs and enhancing retainment







## Thank you!

Dipl.-Soz. Anna-Kathrin Wimmer Ludwigs-Maximilians-Universität Munich (LMU Munich) anna.wimmer@lmu.de

