Chair of Physics Education / Chair of Chemistry Education
TUM School of Social Sciences and Technology
Technische Universität München

**Technical University of Munich (TUM)** is one of Europe's leading research universities. Since its founding in 1868, it has been committed to excellence in research and teaching at the highest international standards.

The Chairs of Physics Education and Chemistry Education at **TUM** is looking for a

# Research Associate (m/f/x)

**in Munich (75%, TV-L E13, from 01.10.2025)**

## About us

The DFG-funded Collaborative Research Centre **SHARP** 'Simulation-based learning in higher education: Advancing research on process diagnostics and personalised interventions' contributes to theory-building on personalising learning using simulations in higher education. As a joint research context, SHARP focuses on diagnosing and intervening as two highly relevant professional practices in many academic professions.

In the subproject **C05** the topic of effects of personalized informational complexity on learning with video-based simulations of physics and chemistry lessons is investigated. The open position is located at the Chair of Physics Education (Prof. Andreas Vorholzer) and works in close cooperation with the Chair of Chemistry Education (Prof. Jenna Koenen).

## Your tasks and responsibilities

- You will develop a video-based simulation of inquiry-based science lessons and investigate its effectiveness in promoting diagnostic competencies of pre-service teachers.
- You will conduct empirical studies on simulation-based learning and the effects of specific design characteristics on learning processes and outcomes.
- You will supervise student qualification theses and contribute to scientific presentations and publications.

## Your qualification

- You have an excellent degree in chemistry or physics education (First State Exam, Master of Education, or equivalent).
- You are interested in interdisciplinary collaboration and working in research teams.
- You have initial experience with empirical research in education, preferably related to inquiry-based instruction and/or digital media (e.g., simulations)
- You have strong foundational knowledge of research methods and statistics.
- You have very good written and spoken English skills and good written and spoken German skills.

## Benefits

- We offer the opportunity to gain further academic qualifications, particularly to obtain a doctorate in science education.
- Contributing to SHARP, you will become part of an interdisciplinary group of experts working in an excellent research environment to significantly advance higher education theory and practice.
- SHARP provides all its members with tailored support and supervision measures, including special support for international researchers.
- You will be paid an attractive salary at the payscale 0.75 FTE of TV-L E13. Your contract will be initially limited to 3.75 years.
- Your workplace is centrally located in Munich and easily accessible by public transportation. Flexible and partial remote work is available.

We welcome applications from women and other groups that are currently underrepresented in the academic system.

People with disabilities who are equally as qualified as other applicants will receive preferential treatment.

## Contact

Your detailed application includes a cover letter, your CV, and copies of your transcripts and certificates as a single PDF.

We are looking forward to your application by **25.06.2025** to Prof. Andreas Vorholzer (andreas.vorholzer@tum.de).

If you have any questions, don't hesitate to contact us at andreas.vorholzer@tum.de