Prof. Annette Upmeier zu Belzen



Faculty of Life Sciences
Department of Biology
Research Biology Education

Expertise

The research-based didactics of biology – the science of teaching and learning of biological contents and methods – is essential for the education and training of biology teacher students. One focus area of Prof. Upmeier zu Belzen's work is the modelling and measuring of competencies in scientific methods for acquiring and consolidating knowledge of pupils, students and teachers. Her team applies qualitative and quantitative methods of empirical social research. Prof. Upmeier zu Belzen conducts experimental intervention studies to test the effectiveness of support frameworks regarding diagnostic capabilities and the ability to convey knowledge of (prospective) teachers as well as the effectiveness of different educational activities offered to pupils. The transfer of the results into academic practice is supported by relevant publications as well as by trainings for teachers and school administrations.

Scientific Services

- Substantial collection of didactical media for teaching and learning biology of the Department of Biology
- Hard- and software for video studies
- Eye tracker
- Assessment of teachers' (school and university) competencies to acquire knowledge

Testimonials

- Professional School of Education (PSE): as a central institute the PSE is a cross-faculty liaison of education, school and teaching research. The PSE is both a teaching and research unit. Its main focus lies on the education of teachers under the conditions of heterogeneity, and on issues relating to the promotion of the gifted and talented.
- Interdisciplinary Centre for Educational Research (Interdisziplinäres Zentrum für Bildungsforschung, IZBF): the centre's main function is to examine questions of research on education, theoretically and empirically, and to present and transfer the results to improve educational systems, processes and activities in Germany as well as internationally.
- Humboldt-ProMINT-Kolleg: structural unit comprising the so-called MINT subjects (mathematics, informatics, science and technology, comparable to STEM) in all German types of schools and the related transitions, established to develop new techniques of teaching and learning. The unit is sponsored by Deutsche Telekom Stiftung and collaborates with PSE and IZBF. Participating teachers and students complete an internship in companies or institutions in Adlershof in order to learn about value added chains from basic research to high-tech production.
- Humboldt Bayer Mobil: joint project with the Bayer Science & Education Foundation to promote academic education and to ignite curiosity and enthusiasm for science and research in pupils in grades 5 through 8. This project provides insights in research practices at universities and the private sector, which also supports career prospects in the areas of science and technology.

Topics / Trends

Continuing Education / Lifelong Learning

Industries

Education
Administration

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Innovation Management

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