



Scientific coordination:

Concetta Perdichizzi

concetta.perdichizzi@med.uni-muenchen.de

Tel: +49 (0)89 4400-57213

Project members:

Dr. Jan Kieseewetter

jan.kieseewetter@med.uni-muenchen.de

Tel: +49 (0)89 4400-57213

Dr. Christian M. Meyer

meyer@ukp.informatik.tu-darmstadt.de

Tel: +49 (0)6151 16-25293

Dr. Michael Sailer

michael.sailer@psy.lmu.de

Tel: +49 (0)89 2180-6887

Dr. Claudia Schulz

schulz@ukp.informatik.tu-darmstadt.de

Tel: +49 (0)6151 16-25293

SPONSORED BY THE



Förderung von Diagnosekompetenzen
durch adaptive Online-
Fallsimulationen
in Medizin- und Lehramtsstudium

Project leaders:



Prof. Dr. Iryna Gurevych

Ubiquitous Knowledge Processing (UKP)
Lab FB 20/ Computer Science Department
Technische Universität Darmstadt
gurevych@ukp.informatik.tu-darmstadt.de



Prof. Dr. Frank Fischer

Lehrstuhl für empirische Pädagogik und
pädagogische Psychologie
LMU München
frank.fischer@psy.lmu.de



Prof. Dr. Martin Fischer

Institut für Didaktik und
Ausbildungsforschung in der Medizin
Klinikum der Universität München
martin.fischer@med.uni-muenchen.de





Background Information

The ability to diagnose is a prerequisite for successfully dealing with problem-solving situations in a professional environment. For example, a suitable treatment can be identified for a patient, or even for a school student, who is not academically performing, or who displays behavioral issues.

What is meant by “Diagnosing”?

We define “diagnosing” as the specific collection and integration of information, for the purpose of uncertainty reduction, in order to make the best possible medical and pedagogical decisions.

Project Goal

We would like to determine conditions for the effective use of computer-based case simulations, to promote diagnostic skills in university education.

Our main idea is to generate knowledge about the design of case simulation environments for higher education, which would also be applicable beyond the fields of medicine and school teaching.

Main Questions

- What are the effects of different online case simulation formats on epistemic-diagnostic processes, and the diagnostic competences in medicine and teacher training, depending on the learners' previous knowledge?
- To what extent can students' diagnostic skills be automatically analyzed, when working with online case simulations?

- What are the effects of adaptive auto-generated feedback, in contrast to expert feedback?
- Do the effects of adaptive auto-generated feedback differ when working on online case simulations? Is there also a difference between students' diagnostic skills in individual, as opposed to cooperative learning?
- To what extent can the effects, found in the studies on automated feedback and the social form of learning while carrying out online case simulations, be replicated for students under field conditions?

These five main issues are dealt with during the three-year funding period, in the context of three research studies, which are each conducted in the subject areas of both medicine, and psychology in teacher training.

FAMULUS's aim is to contribute to the implementation of national educational standards for teacher training and medical education through digital university teaching.

The online case simulations convey the necessary complicated, and uncertain knowledge, appearing in complex situations.

For this purpose, we provide a teaching system which deals interactively with learning contents, and stimulates learning-friendly handling processes with a practical application perspective, which, with its adaptive feedback component, could also be found beyond the fields of medicine and teacher training.

More information can be found at:
www.famulus-project.de