



Motivated Studies: Learning - Research - Application

New Teaching Concept at KIT Combines Studies, Science, and Practice – State Provides Funding under the Program "Willkommen in der Wissenschaft" (Welcome to Science)



Managing business processes as an example: Students assume typical roles in their field of work – and analyze them scientifically. (Photo: Harry Marx)

"Lernen – Forschen – Anwenden: Studieren für Einsteiger" (Learning – Research – Application: Studies for Freshmen) is a teaching concept implemented by Karlsruhe Institute of Technology (KIT), which focuses on close vicinity to practice and extensive participation of students. In "living labs", students analyze and discuss current research issues and industry trends. One of the objectives of the program is to enhance the students' motivation and to reduce the dropout rate. The State of Baden-Württemberg will fund the concept with nearly EUR 300,000 in the next three years.

"The teaching concept combines the three areas of studies, science, and practice," says Professor Andreas Oberweis from the Institute of Applied Informatics and Formal Description Methods (AIFB) which

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Page 1 / 3



will be the first institute to implement the project. "In this way, we can motivate the students, they enhance their competences and can complete their studies successfully."

According to an analysis by the Hochschul-Informations-System GmbH (HIS, Higher Education System), one third of the dropouts is caused by performance problems. Many of the dropouts think that they failed in their studies due to the high performance requirements. Nearly 20% consider lacking or lost motivation, e.g. because the program selected has not fulfilled their expectations, the reason of their failure. "It is therefore very important to demonstrate how the students' theoretical knowledge can be applied in practice and to arouse their enthusiasm for the subject they study," says Oberweis. The teaching concept is aimed at demonstrating practical relevance of theoretical contents, at research-oriented learning, and at work on current issues in teams.

For the new course, AIFB will extend a concept that has proved to be successful in one-day living labs on business process management (BPM): First, the students assume typical roles in their field of work, generate complete business processes of a fictitious company, and improve its internal workflows. Then, the classical learning phase follows. In this phase, scientists convey theoretical background information and students familiarize with the topic such that they are able to identify relevant research problems and to develop approaches to their solutions. "We have gathered excellent experience with web 2.0 technologies like blogs, wikis, and social networks that are pooled in a cloud infrastructure," says Andreas Oberweis. "The participants network, share their knowledge with each other, and solve the problem in a collaborative and effective manner." Evaluations of the labs reveal that students consider this type of knowledge acquisition motivating, innovative, and close to practice.

Interviews prior to and after the course are to demonstrate how the teaching concept influences the motivation of students and their expectations regarding their studies. These results will then be applied to further develop the programs. In the first year of the project, a concept to implement such laboratories in other institutes of the Department of Economics is to be developed. Then, guidelines will be set up for discipline-independent use at KIT. In the long term, a platform will be established, via which institutes can exchange experience and jointly plan and offer courses. The platform may also provide pupils with insight into various courses



and research topics, e.g. via webcasts. Blogs and forums are to give pupils, students, and KIT supervisors and employees the opportunity to exchange information.

The Ministry of Science, Research, and the Arts of Baden-Württemberg will finance the project under the program "Willkommen in der Wissenschaft" (Welcome to Science) from the innovation and quality funds. The program is aimed at establishing innovative offers to enthuse students for their subject in the first phase of their studies already.

Karlsruhe Institute of Technology (KIT) is a public corporation according to the legislation of the state of Baden-Württemberg. It fulfills the mission of a university and the mission of a national research center of the Helmholtz Association. KIT focuses on a knowledge triangle that links the tasks of research, teaching, and innovation.

This press release is available on the internet at www.kit.edu.