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New App used for Teaching Mathematics and Geosciences at GUTech “Steering Student-Teacher Interaction to a New Level”



BARKA A team of internationally recognized professors and enthusiastic lecturers of the Faculty of Science at the German University of Technology in Oman (GUTech) have tested a classroom mobile phone app named ‘RWTH Aachen App’ with over 200 GUTech students at the start of the academic term recently. This app was developed by a team of Computer Scientists and Engineers at GUTech’s parent-university, RWTH Aachen University in Germany. These so-called blended learning activities are part of a project between GUTech and RWTH Aachen University, initiated by Prof. Dr. Modigell, Rector of GUTech and different professors from RWTH Aachen. The project is funded by the German Academic Exchange Service (DAAD). “The app allows us to receive immediate feedback from the students, which is extremely important in courses attended by hundreds of students. This new and very handy app steers the classroom interaction to a new level and allows, in its sphere of applicability, for tailored answers optimized to the very needs of the students to understand a topic,” explained Prof. Dr. Bernhard Heim, Dean of the Faculty of Science at GUTech.

The ‘RWTH Aachen App’ transforms the lecture hall into a quiz show without corrupting the academic integrity of the lecture. In such a way simple multiple choice questions can be addressed to the auditorium and the students, who can vote anonymously on their mobile devices. “We realized that this app increases the return rate as the students do not experience any fear if they give wrong answers. Moreover, it’s a lot of fun,” said Prof. Dr. Florian Rupp, who teaches two mathematics classes “Math I” and “Math III” along with Prof. Bernhard Heim. Furthermore, the course “Rocks & Minerals” given by Prof. Dr. Michaela Bernecker of the Department of Applied Geosciences applies this new App as an effective way of modern communication. “I think this is the first time we are not blamed when we use our smart phones during the lecture,” one of the students commented, while adding: “It is also great that we are now able to write short messages to the professor to tell him that we need more explanations without disturbing the others”.

Once the question is closed a histogram of the answers is displayed to the students and the correct answers can be discussed as well as the remaining choices. “The real charm of this student-teacher interaction is that we the professors and lecturers can exactly see the number of students who think that an answer is correct. Usually there is a huge mass of undecided students who are now more motivated to vouch for their opinion in the anonymity of the cloud. In particular we can explain in depth the misconception of many students and not the usual “please raise your hands” approach, having to balance the expositions,” said Prof. Dr. Bernhard

“The large classes we are facing in modern technical universities somehow alienate us from our students”, Prof. Bernhard starts to mention another benefit of the app: “the new app now enables us to focus on the individual student. Think of a short calculation you do as a student in a course of over 100 participants and you want to discuss your solution with the teacher or the class. Now, you take a photo with your smart phone which is immediately uploaded and if interesting for all can be spontaneously displayed via a projector and is discussed in a flash”.

