

10 Years of Agile Lab Courses for International Students

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Abstract: The Institute of Computer Science III of the University Bonn regularly offers Agile Lab Courses to students from Germany and all over the world as part of the International Program of Excellence at the Bonn-Aachen International Center of Information Technology. In the recent ten years we offered about 16 courses with a duration of four to six weeks. Typically around twelve students are introduced into Agile Software Development by one and a half to three colleagues. During this time the team of students develops software of realistic complexity that is of real value for a research project or an external customer.

1 Experiencing the Real Thing

In the article that is commonly seen as one of the founding documents of the waterfall approach to software development [Roy70] Winston W. Royce wrote: “The testing phase which occurs at the end of the development cycle is the first event for which timing, storage, input/output transfers, etc., are experienced as distinguished from analyzed. These phenomena are not precisely analyzable.” Although he recommends thorough analysis and careful design he was very aware of the dangers of late insight into unforeseen problems. In a way most of our students are in the same situation with respect to their software technology knowledge. They get an overview of traditional and Agile approaches and are able to reproduce their knowledge to pass an exam. Yet, they do not have the experience whether their understanding is strong enough to contribute to a real software product. This is what our courses¹ are out to offer them.

2 Early Substantial Feedback

Besides technical challenges, long development cycles lead to the problem of outdated business needs and customer expectations. This is why Extreme Programming and Scrum focus so much on the value of *early feedback*. In one of the first days we ask the students to implement some functionality that cuts through all technological layers so that they get some first feedback about the required technologies. The functionality of this

¹<http://sewiki.iai.uni-bonn.de/teaching/labs/archive>