AGILE PROJECT MANAGEMENT COURSE HELPS REUTLINGEN UNIVERSITY STUDENTS PREPARE FOR THEIR FUTURE CAREERS

HANDS-ON SCRUM SIMULATION AND PROFESSIONAL SCRUM MASTER™ I CERTIFICATION ARE PART OF CURRICULUM

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CASE STUDY

Hochschule Reutlingen
Reutlingen University

THE UNIVERSITY

The ESB Business School is among Germany's leading business schools with AACSB accreditation and a clear vision

Founded in 1855, Reutlingen University is one of Germany's leading universities, offering international academic programs with close ties to industry and commerce. They currently have an estimated 5,000 students from more than 80 countries and 155 professors spread across five different schools: ESB Business School, Informatics, Life Sciences, Engineering and TEXOVERSUM School of Textiles. The ESB Business School is among Germany´s leading business schools with AACSB accreditation and a clear vision: "Within an educational environment that is truly international, we develop leaders who shape global business practice and society responsibly."

Professor Dr.-Ing. Harald Augustin teaches a class within the Master of Science Operations Management major at the ESB Business School called Agile Project Management. This class focuses heavily on the application of Scrum. Before becoming a Professor, Augustin worked in various leading industry positions for eight years. In 2002, he founded the Steinbeis Transfer Center Process Management in Product Development, Production and Logistics, which specializes in large-scale product development and factory planning projects. Based on his extensive work experience, Augustin is passionate about using agile project management in combination with traditional project management and he chose to share this practical experience with his students.

The Challenge

Augustin had insight into German companies that have been using Scrum, but they were not using it in a consistent manner. He wanted to enable his students to be more professional and experienced in Scrum and develop

a leadership mindset so they could add more value to organizations after graduating.

"Scrum is becoming more widely used in different kinds of projects. I want to prepare students to this complex situation on a real-world based experience," said Augustin. "Due to the wide use of Scrum in many industry projects, we need graduates to have Scrum expertise. For me, it´s an important qualification in today's world."

Proving that students have learned, applied and are ready for the next step after graduation can be difficult, so Reutlingen University needed to find a way to validate the knowledge that had been transferred to their students by an outside, independent body. This would help differentiate their students to potential employers.

The Solution

Augustin decided to change the setting of his Agile Project Management class in the MSc Operations Management major to focus on Scrum in the context of complex projects. To do this, he reduced the theory focused content to provide more time for the practical experience-based learning and designed a case study learning environment with Professional Scrum™.

In the first two weeks of the semester, the students self-prepare and learn Scrum theory using the Scrum Guide, Nexus Guide, Kanban Guide for Scrum Teams and the Scrum.org Scrum Master Learning Path, alongside lectures given by Augustin. Next, students experience a concentrated two-day, full-time workload training scenario (in total 20 working hours). There is a theory focused portion as well as exercise focused training. During the theory portion, the students discuss with their professor the details of Scrum and clarify open questions and issues based on their self-preparation. After that, they spend 1.5 days in teams of five students to apply the Scrum and Kanban practices and tools in a generic case study format. Each team can select their favorite case study from a list including projects focused on product development, marketing or factory planning. In the case study they perform four complete Sprints. In this phase, Augustin supports as a coach and mentor to help the teams improve their performance each

Sprint. Every Sprint Retrospective includes a deep dive analysis of the team's performance and a review of how to improve their Scrum skills for the next Sprint. In each Sprint there are pre-defined focus points or challenges, e.g., change of product requirements from the customer, that are integrated to promote a real-world feel. Three weeks after this two-day immersion, the students take Scrum.org Professional Scrum Master™ I (PSM I) certification assessment as part of the class. Then, during the following two semesters of their study, projects together with industry experience must be performed as 50% of the total workload. This provides an environment to gain a lot of practical experience applying Scrum in real project situations.

When Augustin proposed the idea of making the PSM I certification a part of the class, the number of participating students increased due to the great enthusiasm surrounding this new teaching approach and the globally recognized certification.

"I chose the Scrum.org PSM I certification because I knew it would cover more than some of the other certifications out there," said Augustin. "From my perspective and experience, it is the most credible. I wanted to offer the certification because it is well-known and respected. The students can be proud of this achievement. With this certification they prove their knowledge and it will help them when they start their careers."

Results

The implementation of this hands-on Scrum approach in the Agile Project Management class began in October 2019 and certificates were earned in January 2020. During the Covid-19 pandemic, the class was suspended. The class resumed for the Spring 2023 class in March 2023.

The experience and the feedback of the students in 2019 and 2023 has been very positive. Several students, who are members of the ESB Reutlingen Alumni Club, gave feedback last year confirming that they could apply their Scrum knowledge at their new job directly after their studies.

Here are some quotes from students in this program:

"Through the practical application of the Scrum Values, it was possible to understand well how agile teamwork can succeed. The hands-on class also made it possible to penetrate the events and their functionality and to place them in the overall context. It was especially interesting to get to know the elements of the Sprint Review and the Sprint Retrospective in practice. The commitment to the Product Goal as well as the Sprint Goal and the Definition of Done welded the team together!" – Lukas Hörmann

"At the beginning, it was difficult for me to comprehend all of the Scrum elements in their entirety through the purely theoretical input. The extremely practical workshop with real projects helped enormously to understand the individual elements more profoundly and to apply Scrum as an agile project management tool in the long term!" – Leon Romankiewicz

"As part of the project management lecture, the theory of the Scrum Guide gave a deep dive in a two-day workshop on a generic project. Through the combination of theory and practice, I was able to acquire the Scrum.org PSM I certification. So, a good basis was created to apply Scrum in my professional life and to benefit from the many advantages." – Mark Zimmerman

Photo of Reutlingen University students

About Scrum.org

Scrum.org, the Home of Scrum, was founded by Scrum co-creator Ken Schwaber as a mission-based organization to help people and teams solve complex problems. We do this by enabling people to apply Professional Scrum through training courses, certifications and ongoing learning all based on a common competency model.

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