






Authors

Name SURNAME	Isabell GRUNDSCHÖBER		
Institution	Danube-University Krems	Country	Austria

Suitability of this case to the ApprEnt definition of HEA

Workplace/ training	Mentoring	Remuneration	Formal programme	Certification	Contract/ Agreement
					

Evaluation of how the programme/practice reaches the following goals Scale: 1 = not at all; 2 = very little; 3 = somewhat; 4 = well; 5 = very well

	1	2	3	4	5
i. Enhances relevant working life skills and qualifications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Promotes professional growth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. Develops learning environment practices as a whole	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Develops work-based learning practices and materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v. Improves work performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
vi. Improves tutoring and mentoring practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
vii. Enhances University-Business collaboration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
viii. Showcases potential aspects for programme standardisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Title

Smart Engineering of Production Technologies and Processes - Bachelor Study Programme at FH St. Pölten

Description

Model

a) In Austrian Higher Education, there are currently three ways in which practical experiences at the work-place are integrated into higher education study programmes:

- Dual-study programmes: dual-studies are study programmes which were developed in cooperation with enterprises (usually medium to large-sized), providing alternating phases of practice (at the workplace) and theory (at the higher education institution). At the moment, only universities of applied sciences provide dual-study programmes. A trend of emerging dual-study programmes in Austrian Higher Education started about 3 years ago. Since then, more and more dual-study programme have been developed.
- Work-study-programmes: work-study-programmes usually provide lectures on weekends and a blended learning system, so it is possible also for students in full-time jobs to study next to working. Usually, work-study-programmes are provided by universities of applied sciences and curricula are connected to the prior learning and practical experiences of students.
- Continuing education study programmes: these kind of study programmes allow validation of prior learning for admission in Austria. Danube University is one of the leading provider of continuing education study programmes in Austria and in Europe and basically every academic director is involved in integrating practical experiences of students into the study programme. This mostly happens through project work and reflections, but also via internships, through blended learning and lectures on the weekends. Danube University was established 20 years ago and has been providing continuing education study programmes since then.

b) A strength is, that there is a tradition of dual vocational training/education on lower levels of the NQF. A weakness can be identified in the fact that there is still a lack of implementation of learning-outcome-based as well as learner-centred didactical settings.

Best practice

The bachelor study programme "Smart Engineering" at the University of Applied Sciences St. Pölten (Lower Austria) addresses the interdisciplinary development of production systems and processes. After finishing their studies, students will have competences in the following fields:

- 1) Project and process management;
- 2) Business administration and law;
- 3) Human-computer interaction, usability, industrial security and safety;
- 4) Presentation-, moderations-, creativity- and communication- techniques as well as social skills.

There are alternating phases of theoretical input and practical working at the workplace. Students are usually working full- or part-time at companies and are receiving remuneration. There are mentors both at the workplace as well as at university. Each semester students are conducting a project at the workplace accompanied by two mentors. Students need to write an outline of the project with desired learning outcomes at the start of the semester, which needs to be approved by the university mentor as well as the company mentor. It could be described as an individual learning contract, which is part of the content area of the respective semester. During the practical work/conducting the project at the company, they have to report to the mentor at university and, at the end of the semester, students have to submit a final project report and to reflect if and how they reached the desired learning outcomes.

Usually, people who have been working a few years in a company and are seeking for continuing education or specialization, are the ones who start the dual-study programme. They have good practical problem-solving skills and usually have a lot of know-how. Around 60% of cooperating enterprises in the dual-study programme "Smart Engineering" are SMEs.

More and more people nowadays are looking for opportunities for continuing education/specialization in their field of expertise at work, also expecting better salaries and career perspectives through studying. Students usually already have working experience/know-how and good problem solving skills. Companies are appreciating the increase of know-how through employees in study-programmes, but there are also obstacles or challenges:

1. There can be problems among staff as situations of competition emerge. Especially people working at the middle management level feel sometimes threatened by colleagues in dual-study programmes, as they are qualifying for middle management through the dual-study programme.
2. Furthermore, there are also problems in conducting projects. At the workplace, superiors often prefer the student to use methods which are not in line with the suggested methods in the project outline and recommend the student to use methods which are faster but not up to university standards.

Feedback from users

Students appreciate the study programme as they have the chance to design their own learning pathway, based on their prior and current learning experiences. Through the academic qualification they have the chance to earn more money and widen their career perspectives. Furthermore, students are usually ambitious and driven by intrinsic motivations. All in all, it needs to be underlined, that studying and working at the same time is quite demanding for most students.

Relevance and Transferability

N/A

Comments

<https://www.fhstp.ac.at/de/studium-weiterbildung/medien-digitale-technologien/smart-engineering>