







Authors

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Suitability of this case to the ApprEnt definition of HEA

Workplace/ training 	Mentoring 	Remuneration 	Formal programme 	Certification 	Contract/ Agreement 
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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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Develops work-based learning practices and materials	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Title

Apprenticeship in Sciences of Engineer

Description

Model

a) Work-based-learning programmes in the framework of a legal apprenticeship-type scheme are based on specific arrangements: a legal status of employee, wages (depending on the age, and on the level of qualification), employment and training contracts, the division of the period covered by the contract between time spent in classroom-based education and training and work performed in an organisation (companies, administrations, ...), a legal basis at national level (legislation or regulations). The apprenticeship-type scheme in France stands out for two forms of contracts: the "apprenticeship contract" and the "professionalisation contract". Actually, there is a reform of the law on Vocational Training : it should reinforce the key role of apprenticeship in the global system but there may be changes in the "financing" and organisation of the main stakeholders in order to make it easier.

b) Our strategy to promote apprenticeship and to implement a global strategy of alternance between working period and learning period involves all the actors within the university: staff involved in pedagogical engineering, in the transformation and evolution of diplomas and qualification, in the implementation of methods such as forward-looking reports on jobs, and in the recognition of prior learning. It can be adapted whatever the legal basis of apprenticeship is, since it may concern all work-based learning system. Above all, these priorities have to be supported by national, regional and local authorities, in a territorial approach, and it has to be written in the main objectives of the agenda of the university in order to involve all the actors and to foster collaboration between academic staff and training engineers in a global strategy of promotion of apprenticeship in HE.

Best practice

Our Exploitation Engineers of Production Systems (IESP) degree is a work-integrated learning developed since 1992 as an answer to professional needs for chartered engineers dedicated to the production field; with operational skills and men management abilities. It is an accredited training leading to Master's degree in engineering (French Engineer level) with sandwich courses and work experience based on a professional profile developed with major industrial companies. It was designed primarily for employees of companies in the framework of Continuous Vocational Education and Training (CVT). Initial Vocational Education and Training (IVT) was developed in 2004 for younger graduates that search to increase their employability (apprenticeship). The educational project relies on a partnership with 7 international industrial groups and 2 professional unions (in the fields of chemistry and metallurgy).

The work experience is part of the curriculum and designed to achieve both ability acquisition and company results; it is therefore developed as part of a full job profile in the company. Training is a unique model based on a professional profile of competences for process Engineers (repository of capabilities) for both technicians seeking a promotion in their company and younger apprentices. The approach adopted gives priority to the development of the learner's skills. It is conducted as an academic program that focuses on inductive pedagogy, a work placement training period, with a shared responsibility by the university and the organization for tutoring and assessment of the learner's skills proficiency. The strong university-industry partnership arises from the decision to establish a board of management (with both industrial and university membership). Centered on the learner/apprentice, the success of the training process relies on four main key steps that are recruiting (upstream with prospects and strengthening of the original partnership and new business partners), the realization of the course and follow up of training (control and reaction to ensure growing competences) and finally cooperative assesment and feedback to actors to allow improvement, development and innovation. The training is also designed and managed respecting a sustainable strategy whose target remains a technical and human transfer of ability and of values

between actors. Mobility is also enhanced.

Overall, the training has been consistently successful for over 20 years. The average flow is maintained due to constant needs (adapted core of training, i.e. professional profile of competencies). The answers for facing the actual strategic issues are: consolidation of the best practices, development of joint and negotiated assessment of skills (quality), time and cost reduction of training pathway (reactivity), enhancement of partnership for learners flow, support, mobility, research and innovation, as well as communication.

Feedback from users

Extract from a contribution of Walter Nuninger, PhD Polytech

Concerning the integration of learners : each year 15 % of the 350 graduates from Polytech Lille are Work-Based Learners. More than 220 IESP Engineers work in the Industry (approximately 40 Apprentices). They generally improve their position when they are graduated or change company. More than 70 companies are linked to the promotions : metallurgy, energy, automotive, aeronautics, manufacturer, food industry, telecom, transport. Once graduated they can be efficient on any mission covering production needs.

Relevance and Transferability

What is interesting is that all the specialities of the diploma of engineers can be validated on the continuing education process and through apprenticeship.

Comments

The programmes are available on the Internet website :
<http://www.polytech-lille.fr/graduate-school-of-engineering-p4668.html#.WtnZFH8uDso>