# **Best Practices on Higher Education Apprenticeship (HEA)**



# **Authors**

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# Suitability of this case to the ApprEnt definition of HEA

Workplace/ training



Mentoring



Remuneration



Formal



Certification



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					$\boxtimes$
ii.	Promotes professional growth					$\boxtimes$
iii.	Develops learning environment practices as a whole					$\boxtimes$
iv.	Develops work-based learning practices and materials					$\boxtimes$
٧.	Improves work performance					$\boxtimes$
vi.	Improves tutoring and mentoring practices				$\boxtimes$	
vii.	Enhances University-Business collaboration					
viii.	Showcases potential aspects for programme standardisation				$\boxtimes$	





# **Title**

Mechatronics Apprenticeship system - Developed in 2014

### Description

#### Model

#### Apprenticeships in Portugal

Apprenticeship programmes in Portugal are structured as initial vocational training, in alternation, aimed at young people. They facilitate the apprentices' job placement in the labour market while also allowing for the continuation of studies. Such programmes involve young people in transition to active life, but also employee lacking the secondary level of school and vocational training. Overall, apprenticeships are intended to improve the levels of employability as well as social and professional inclusion.

#### Apprenticeship Programme Structure

Apprenticeship programmes consist of different training components - sociocultural, scientific, technological, and practical – engaging with the various dimensions of knowledge integrated in predominantly professional curricular structures appropriate to the level of qualification and the related professional opportunities.

This type of apprenticeship entails alternation, as a succession of training contexts promoting learning outcomes, which correspond to the acquisition of specific professional profile's competence.

# Financial Support for the students

The students receive a small scholarship supporting the acquisition of school material. Nevertheless, since these courses last 3 years, we believe that these students should receive a remuneration for their company work, perhaps not during the first year, but throughout the remaining two.

#### **Best practice**

The apprenticeship in enterprises usually takes place at the end of each of the three years of the course. It aims not only to develop new skills and consolidate the acquired ones in the context of training through the performance of activities inherent to the professional exercise, but also to facilitate the future job placement.

#### Target group

Young people between the ages of 18 and 24; 9th year of schooling or higher, without completion of the secondary- school level; the learning courses last 3700 hours, which are equivalent to about two and a half years of training.

#### Outcomes of the Programme

Practical training allows trainees to:

- come into contact with the technologies and techniques used in the companies;
- apply the knowledge and skills acquired in the context of training to concrete activities in a real work context:
- develop work habits, entrepreneurship, and a sense of professional responsibility;
- acquire knowledge and skills associated with a professional qualification.



#### Supervision and mentoring

It is incumbent upon the mentor to 1) participate in the preparation of the individual plan of activities to be carried out by the trainee; 2) ensure the necessary logistical and material conditions in order to provide the trainee with the acquisition and consolidation of skills in the work environment; 3) develop interpersonal relationships while facilitating the apprentice's integration and adaptation to professional contexts; 4) engage with the educational institutions throughout the training.

#### Objectives of the Programme

The Specialisation Course in Mechatronics Technology aims to develop skills in the areas of design, planning, manufacturing and maintenance, integrating mechanical, electrotechnical, automation and computer technologies, with a view to the development of improved products, systems and processes, leading to an increase quality and productivity.

#### **Challenges and Weaknesses**

The biggest challenge these learning programmes (i.e. practical training in a company context) face is ensuring their official recognition and implementation within Portugal's whole education system. The companies do recognise the importance of this type of education and must pay a scholarship to the respective student apprentices.

A major weakness is the possibility for the companies to exploit the free labour provided by these apprentices.

#### Feedback from users

The feedback from the trainees participating in the learning courses is very positive. All trainees with a positive attitude towards the training have been placed in companies, especially in technical areas such as Mechatronics. However, we also have trainees who are only attending to finish high school and not to invest in their education. In fact, Portugal faces the major problem of motivating young people's interest in the technical areas needed by industries in the digital age.

The added value of AIDA's learning courses is the ability to support companies in the process of selecting qualified personnel. There is, in fact, a general lack of skilled labour in technical areas and educational programmes ensuring practice within professional contexts allows the company to better integrate young people with training. The greatest difficulty is the recruitment of young people interested in finishing high school through vocational training. Especially, young people who have dropped out of normal school and cut off connections with the school. Working together with a whole pedagogical team to motivate these young people and to keep them in training has, in fact, become necessary.

#### Relevance and Transferability

We believe that training programmes must meet the needs of companies vis-à-vis the needs of qualified personnel. There must be prior knowledge of these needs while involving companies in the construction of their curriculum plans. Many curriculum plans are outdated; this is one of the weaknesses of many training programs. The tutors must receive specific training and prove available to welcome and integrate the trainees, while properly accompanied by the pedagogical responsible.

# Comments

N/A