Co-funded by the Erasmus+ Programme of the European Union

ALLVET
ERASMUS+ PROGRAMME

ENSURING EMPLOYABILITY AND FURTHER STUDIES

Hugo Sanjurjo-González, University of Deusto
25 November 2020, Bilbao

Deusto

OUTLINE

INTRODUCTION

- Recognition of employability as a measure of efficacy in education outcomes escalated in the late 1990s alongside the idea that employment and serving the economy should be a primary outcome of education (Fraser et al. 2019).

- Knowledge is power but knowledge without action is useless.

- Competence-based education refers to the integration of knowledge, skills, attitudes and interactivity as the intended outcomes of learning (Nissilä et al., 2015).

Source: [0]

ALLVET

Co-funded by the Erasmus+ Programme of the European Union
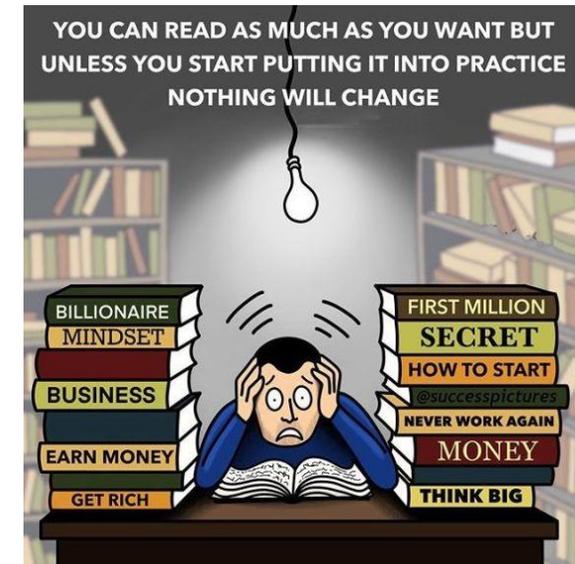
INTRODUCTION: Competences

- Competence is also connected to the certification of capability, to ensure that new professionals have the capability for appropriate performance in a complex reality.

- Purely occupation-specific skills are not enough for VET learners:
  - To adapt to new life situations and career shifts.
  - To manage change.
  - To take initiative and risk.
  - To innovate.
  - To engage in further learning.

INTRODUCTION: Key competences

1. Communication in the mother tongue.

2. Communication in foreign languages.

3. Competences in maths, science and technology.

4. Digital competence.

5. Learning to learn.

6. Interpersonal, intercultural and social competences, and civic competence.

7. Entrepreneurship.

8. Cultural expression.

INTRODUCTION: Skills identified by the World Economic Forum

Source: [1]

EMPLOYABILITY

EMPLOYABILITY SKILLS

- Employability skills can be summarised as follow (Fraser et al. 2019):
  - Positive attitude
  - Communication
  - Team work
  - Self-management
  - Willingness to learn
  - Thinking skills (problem solving and decision making)
  - Resilience
  - Innovation
  - Cultural competence
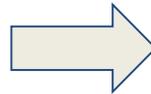
- Keeping competences up to date, ensures employability, and is concerned with transversal cognitive capacities needed for professional activities in rather unpredictable labour markets.

CURRENT SITUATION

Source: [2]

- Skill requirements are **changing** rapidly as a result of structural shifts.

- Workforce employability is essential to turn structural change into an opportunity for all.

- Education and training systems, labour markets, workers and workplaces will have to become more adaptable.

- Flexible profiles adaptable to new environments.

EMPLOYER'S POINT OF VIEW

- Chavan and Surve (2014) identify that the most lacking employability skills among newly recruited employees are:

    - Communication.

    - Management/prioritizing.

    - Self-confidence.

    - Decision-making.

- They also identify the most important employability skills

    - Integrity and honesty.

    - Problem-solving.

    - Teamwork.

    - Self-confidence.

    - Communication skills.

ALLVET

Co-funded by the
Erasmus+ Programme
of the European Union

WHAT CAN BE DONE?

- Anticipating emerging skill needs and adapting policies accordingly.

- Reinforcing the role of training and work-based learning.

- Adaptation of VET curricula.

- Cooperation mechanisms on-the-job training (e.g. dual system).

- Cooperation mechanisms to support transition to employment.

- Educators and employers actively engage in each others' worlds.

FURTHER STUDIES

FACILITATING ACCESS BETWEEN VET AND HIGHER EDUCATION

- Enable further study, or for personal interest and development.

- Promote employability.

- Promote mobility between industry and academia.

- Open up opportunities to non-traditional learners

  - Look over teaching and learning methods as many of these learners will have work experience).

- In the case of the Basque Country, regional government promotes access from VET students.

  - It depends on each case, but one year can be recognised (60 ECTS).

DISADVANTAGES

- They should familiarise with the higher education pedagogical approach, that is, academic focus.

- Higher education tends to be oriented to student reflection and critical thinking.
    - For this reason, higher education learners are usually more flexible.

- Some modules related to mathematics or physics are usually harder because the vocation nature of their former VET studies.

- There is not always a role or practical focus that leads to a specific job.

- More guidance that hands-on session.

ADVANTAGES

- VET learners are usually mature in comparison with other students.

- They have more experience at a work environment.
  - Not only at practical level, also regarding employability skills previously mentioned.

- They have more practical knowledge.

- VET expertise is an added value for many employers.

DIGITAL INDUSTRY DEGREE: UNIVERSITY OF DEUSTO

Deusto

Designed for

- People with an interest in...

  - The vision of smart factories capable of making decisions autonomously and facilitating optimised production processes in a coordinated manner with workers.

  - The merger between IT and industrial technologies to create smart and automated devices and tools, integrating robotics, data display and analysis in the cloud.

  - Being one of the pioneers in the application of Internet of Things to the industrial environment by achieving the aims of Industry 4.0.

ALLVET

DIGITAL INDUSTRY DEGREE: UNIVERSITY OF DEUSTO

Designed for

- Students...

  - Having completed Baccalaureate studies (Bachillerato)

  - With a Higher VET in the following fields:

    - Computing and Telecommunications

    - Electricity and Electronics

    - Mechanical Manufacturing

    - Installation and Maintenance

DIGITAL INDUSTRY DEGREE: UNIVERSITY OF DEUSTO

Features (1)

- High technological training in Industry 4.0 that will give you access to a sector with high demand of graduates.

- UD methodology is competency-based, with several competencies in the modules and general course.

- It is a dual higher education degree, that is, it is based on the alternation of learning between the academic and the professional environment in a coordinated way for the acquisition of skills.

DIGITAL INDUSTRY DEGREE: UNIVERSITY OF DEUSTO

Features (2)

- You will study at University and work in a company with real projects from your 2nd year of study.

- Finance your degree: 2nd, 3rd and 4th years thanks to your paid internships.

- One year recognition (60 ECTS for VET students.

ALLVET

DIGITAL INDUSTRY DEGREE: UNIVERSITY OF DEUSTO

Syllabus

Course	1st Semester	2nd Semester
1º	Programming I (6 ECTS) Physics (6 ECTS) Calculus (6 ECTS) Algebra and Logic (6 ECTS) Introduction to Computers (6 ECTS)	Programming II (6 ECTS) Digital Electronics (6 ECTS) Production & Manufacturing Systems Engineering (6 ECTS) Databases (6 ECTS) Business (6 ECTS)
2º	Industrial Automation Technologies I (6 ECTS) Statistics (6 ECTS) Communication Networks (6 ECTS) Industrial Company Organisation (dual) (12 ECTS)	Industrial Automation Technologies II (6 ECTS) Web Engineering (6 ECTS) FHV (6 ECTS) Industrial Systems and Equipment (dual) (12 ECTS)
3º	Industrial Computing (6 ECTS) Embedded Systems (6 ECTS) Smart Systems (6 ECTS) New Technologies for Industry (dual) (12 ECTS)	Advanced Software and Cloud Computation Platforms (6 ECTS) Software Engineering (6 ECTS) Information Systems (6 ECTS) Digital Strategy and Transformation (dual) (12 ECTS) or Mobility Programme (30 ECTS)
4º	Cybersecurity (6 ECTS) Project and People Management (6 ECTS) Electronic Systems Design (6 ECTS) Planning and Development of Industrial Digitisation Projects (dual) (12 ECTS) or International Mobility (30 ECTS)	Civic and Professional Ethics (6 ECTS) Advanced Data Analysis for the Industry (dual) (6 ECTS) Smart Factory (dual) (6 ECTS) Undergraduate Final Year Project (dual) (12 ECTS)

DIGITAL INDUSTRY DEGREE: UNIVERSITY OF DEUSTO

Results

- Digital Industry degree of the University of Deusto (UD) is composed of 40% VET students.

    - It depends on each case, but one year can be recognised (60 ECTS) to VET students.

- This academic course will be the graduation of the first promotion.

- Given the similarity of the competence-based model and the alternation of learning between the academic and the professional environment, VET students get a smooth transition to the higher education.

REFERENCES

REFERENCES (1)

Audu, R., Kamin, Y. B., & Saud, M. S. B. (2013). Acquisition of employability skills in technical vocational education: Necessity for the 21st century workforce. Australian Journal of Basic and Applied Sciences, 7(6), 9-14.

Chavan, R. R., & Surve, A. Y. (2014). Assessing parameters of employability skills: An employers' perspective. Asian Journal of Management Research, 5(2),254–260

Overtoom, C. (2000). Employability Skills: An Update. ERIC Digest. (220), 1–8

Esmond, B. (2019). 'Bridging' the gap between VET and higher education: permeability or perpetuation?.

REFERENCES (2)

Fraser, C. J., Duignan, G., Stewart, D., & Rodrigues, A. (2019). Overt and Covert: Strategies for Building Employability Skills of Vocational Education Graduates. Journal of Teaching and Learning for Graduate Employability, 10(1), 157-172.

Griffin, T. (2014). Disadvantaged Learners and VET to Higher Education Transitions. Occasional Paper. National Centre for Vocational Education Research Ltd.

Organisation for Economic Co-operation and Development (2016). Enhancing employability. Available at https://www.oecd.org/employment/emp/Enhancing-Employability-G20-Report-2016.pdf

Contacts:

Hugo Sanjurjo-González, University of Deusto

☎ **+34 945 01 01 09**

✉ **hugo.sanjurjo@deusto.es**

🌐 **www.deusto.es**

ALLVET

ERASMUS+ PROGRAMME