Session 6

Uses of ESCO skills for comparison of qualifications and matching

Webinar Make it Match, 10 December 2020
What is ESCO?
carpenter n a person who makes or repairs wooden structures.

carpentry n the skill or work of a carpenter.

carpenter Informal something under the carpet to conceal or keep silent about something that one does not want to be discovered. • vb -pete
Why ESCO?

**Problem:** National systems cannot "talk" to each other

**Result:** Jobs are not filled; education and labour market do not always understand each other

**Solution:** Common reference language
ESCO as a common reference language
ESCO in EURES
ESCO & EURES

- New EURES Regulation 2016/589/EU
- Exchange of job vacancies and CVs/job applications
- Art. 19 (3)
  "The Commission shall adopt and update, by means of implementing acts, the list of skills, competences and occupations of the European classification."
- Member States will adopt the European classification or map their national standards to it
ESCO
European Skills, Occupations and Qualifications

3,000 Occupations

13,500 Skills + Knowledge
The occupations pillar is one of the three pillars of ESCO. It organises the occupation concepts in ESCO. It uses hierarchical relationships between them, metadata as well as mappings to the International Standard Classification of Occupations (ISCO) in order to structure the occupations.

Each occupation concept contains one preferred term and any number of non-preferred terms and hidden terms in each of the ESCO languages.

Each occupation also comes with an occupational profile. The profiles contain an explanation of the occupation in the form of description, scope note and definition. Furthermore, they list the knowledge, skills and competences that experts considered relevant terminology for this occupation on a European scale.
The ESCO skills pillar distinguishes between i) skill/competence concepts and ii) knowledge concepts by indicating the skill type. There is however no distinction between skills and competences. Each of these concepts comes with one preferred term and a number of non-preferred terms in each of the 27 ESCO languages. Every concept also includes an explanation in the form of description.

The skills pillar of ESCO contains 13,485 concepts structured in a hierarchy which contains four sub-classifications. Each sub-classification targets different types of knowledge and skill/competence concepts:
- Knowledge
- Skills
- Attitudes and values
- Language skills and knowledge
ESCO
ESCO portal redesign
How can ESCO be used?
ESCO in digital applications: use cases

- Job-matching and searching
- Ontology management & machine learning
- Curricula development
- Statistical research
- Graduate tracking
- Career learning & development management
Use of ESCO by EU services

- **Job-matching & searching**
  - EURES

- **Job-matching; career learning & development management**
  - EUROPASS

- **Career learning & development management**
  - DG HR-EU Learn

- **Statistical research**
  - CEDEFOP - OVATE

- **Job-matching; Career learning & development management**
  - DG EAC – EIT Inno-energy

- **Skills assessment**
  - EU 3rd country nationals tool
ESCO supports start-ups & SMEs
The ESCO skill hierarchy
Why a skill hierarchy?

- Mapping of national skills classifications to ESCO
- Competence-based job matching
- Compiling CVs and job vacancies
- Drafting of job descriptions, assessment of candidates’ skills etc.
- Design of educational curricula and drafting of learning outcomes
- Suggestion of training and learning opportunities
- Annotating qualifications with ESCO skill and knowledge concepts
- Creating skill self-assessment tools
- Big data analysis of job vacancies
- Career guidance and other HR services
Development of the hierarchy and allocation of ESCO skills

2019

Experts

2019

ESCO team

End 2019

Beg 2020
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<td>Communication, collaboration and creativity</td>
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<td>Language skills and knowledge</td>
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Sources

Skills

• Canadian Job Bank
• O*NET

Knowledge

• ISCED-F
3-level skill hierarchy

Broader

Narrower

European Commission
Basic elements of the hierarchy

- Mono-hierarchical structure;

- Combination of both occupation-specific and transversal skill categories;

- Sector-independent
Why is a skill hierarchy important when matching learning outcomes to skills?

- Find skills easier

- Free to determine the level depending on the granularity of the curriculum. If not able to match learning outcomes to skills, the user can match to the higher level (skill group).
New list of transversal skills
Continuous improvement of ESCO
Why ESCO needs to be updated

Ensure ESCO is fit-for-purpose:

- Changes in the labour market;
- Changes in education/training;
- Changes in terminology;
- Changes in the requirements of IT applications;
- Correction of any identified issues.
Uses of ESCO skills for comparison of qualifications and matching
Increase transparency

Better understanding of the scope of qualifications and their relevance to the labour market.
Facilitate matching of CVs with job vacancies

Job matching providers, matching algorithms and career counselors can use information of skills associated to qualifications to **assess candidates’ profiles**

Individuals improve chances on labour market through **better matching**
Feedback loop

Strengthen the feedback loop between education/training institutions and labour market stakeholders
Provide suitable training, learning and job opportunities

Users can, on the basis of their own skills needs, identify and receive suggestions on relevant education and training offers and qualifications.

Indirect link between qualifications and occupations
Provide suitable training, learning and job opportunities
Learning outcomes linking to ESCO skills pilot

❖ Vision: create a tool for matching any type of text with skills

❖ Objective: how to link skills using technology

❖ Pilot: combined approach of tool and human intervention
Learning outcomes linking to ESCO skills pilot

1\textsuperscript{st} phase

Jun-Dec 2019
5 participants: PO, NL, SI, RO, LV
1st version of the algorithm (simple)

2\textsuperscript{nd} phase

• Sept 2020 – Dec 2020
• 10 participants: FR, IT, BE, CZ (observer) plus 5 before, ETF, IDB, ETUC (observer)
• Improved algorithm/tool
• Skills hierarchy incl.
• Jan 2021: webinar to present the improved version of the tool
Work Hard
Stay Humble