Putting Skills to Work in the Digital Labour Market
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Unit E2 – Skills and Qualifications
Mobilising skills in a digital labour market

People find jobs online

Employers manage HR and recruitment with IT

Skills are main tool of job matching instruments

Talent platforms are cornerstone of labour market
Difficulties finding staff

4 out of 10 employers have difficulties finding staff with the right skill set

Inefficient labour markets

Skill gaps of workforce

Digital technologies can increase efficiency and tackle skill gaps
Talent platforms

Potentially add 5.2 million jobs and increase GDP by EUR 360 billion
(2015 McKinsey Global)

Higher labour market participation

More, better and faster matches

Better informed career decisions
EU goals in digital labour market

Better link education-training to labour ➔ ensure access to the best opportunities

Ensure transparency of information on skills through systems’ interoperability

Allow open-fair access to information on skills, qualifications, jobs and training

➔ avoid monopolisation of data in digital labour market

➔ European open standards to counteract risks of proprietary standards
European Qualifications Framework

European open standards

Monitoring of labour market
European open standards for an open and inclusive digital labour market

Reduce mobility barriers by reducing barriers in the digital space

Communication of skills-qualifications across languages and national standards

Understanding and trust of information
European Qualifications Framework

8-Level reference framework, covering all types and all levels of qualifications

Defined in terms of learning outcomes (knowledge, skills, responsibility & autonomy)

Translation grid for qualifications across countries
EQF Objectives

- Transparency, comparability and portability of people's qualifications
- Employability, mobility and social integration of workers and learners
- Linking formal, non-formal and informal learning
- Supporting the validation of learning outcomes acquired in different settings
Main impacts of the EQF

Development of NQFs in Europe (from 3 to 43 in 10 years time)

Interconnected landscape of EQF and (diverse) European NQFs

Development of a comprehensive "map" of qualifications in Europe

Mutual learning between European NQFs (building trust)
Monitoring of labour market

Big data analysis of skills required by employers in online vacancies

Better understand changing nature of jobs and gain insights on future skills

Inform policy makers, education providers and jobseekers-learners

CEDEFOP is preparing a Europe-wide system on behalf of the Commission
Millions of online job vacancies used to map employer needs in European countries
CEDEFOP’s big data analysis from online job vacancies

Inform career and training decisions of individuals

Allow employment services to understand employers’ requirements

Enable guidance counsellors to assess individual training needs

Training providers to revise training programmes

Policy makers to obtain up-to-date info on skill needs and new jobs created
EU reference frameworks and open standards for the digital labour market:

ESCO

New Europass
ESCO, the European classification of Skills, Competences, Qualifications and Occupations
3 ESCO pillars

- 3,000 occupations
- 13,500 skills
- 8,200 qualifications
ESCO in a nutshell

Reference language for employment and education

Creates a shared understanding

Helps to cooperate across borders and languages
carpenter

n a person who makes or repairs wooden structures.

carpentry

n the skill or work of a carpenter.

carpentry

n 1 a heavy fabric for covering floors. 2 a covering like a carpet: a carpet of leaves. 3 on the carpet Informal being or about to be reprimanded. 4 sweep something under the carpet to conceal or keep silent about something that one does not want to be discovered.

carpet

vb to complain or find fault. carpentry
carpenter

Description
Carpenters cut, shape and assemble wooden elements for the construction of buildings and other structures. They also use materials such as plastic and metal in their creations. Carpenters create the wooden frames to support wood framed buildings.

Alternative label
craftsman carpenter
commercial carpenter
heritage carpentry
craft carpenter
joiner
woodworker
carpentry framer
Essential skills and competences
apply wood finishes
clean wood surface
create smooth wood surface
create wood joints
follow health and safety procedures in construction
identify wood warp
inspect construction supplies
install construction profiles
install wood elements in structures
install wood hardware
interpret 2D plans
interpret 3D plans
join wood elements
keep sawing equipment in good condition
keep track of wooden elements
snap chalk line
sort waste
transport construction supplies
use measurement instruments
use safety equipment in construction
work ergonomically

Essential Knowledge
types of wood
wood cuts
woodworking tools

Optional skills and competences
answer requests for quotation
apply restoration techniques
assess conservation needs
Occupations

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.
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Transversal Skills
Not all ESCO skills can be accessed through the existing hierarchy.

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 any number of non-preferred terms and hidden terms in each of the ESCO languages. It also includes an explanation of the concept in the form of description, scope note and definition. The skills pillar of ESCO does not contain a full hierarchical structure but is structured in four different manners:

- Through their relationship with occupations, i.e. by using occupational profiles as entry point
- Through their relationship with qualifications
- By means of competences
- By means of transversal skills

The ESCO skill/competence category also includes any types of skills that do not fit into any of the above categories.

The ESCO skills pillar contains 13485 skills/competences, which are maintained by the ESCO team in close consultation with experts from across Europe.
Skills

13485 skills / competences

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• Through their relationship with occupations, i.e. by using occupational profiles as entry
attitudes and values

Description
Individual work styles, preferences and work-related beliefs that underpin behaviour so that knowledge and skills are applied effectively.

Scope notes
Use for describing behaviour which can be learned, improved and assessed. Do not use for labelling people’s character.

Alternative label
values and attitudes
attitude and values
attitude and value

Broader skills/competences
Transversal skills/competences

Narrower skills/competences
values
attitudes

Concept URI
http://data.europa.eu/escoskill/81c66e05-0b64-4cc5-8707-432f59fb6528
social interaction

Description
Ability to engage effectively and in a goal-directed manner with other people encountered at work or study, e.g. with colleagues, peers, customers, clients and patients.

Alternative label
social interactions

Broader skills/competences
Transversal skills/competences

Narrower skills/competences
address an audience
demonstrate intercultural competence
support colleagues
give advice to others
use body language
use questioning techniques
report facts
motivate others
instruct others
lead others
negotiate compromise
interact with others
accept constructive criticism
work in teams
persuade others

Concept URI
lead others

Description
Guide and direct others towards a common goal, often in a group or team.

Scope notes
Excludes people performing management.

Alternative label
leading others
guide others
supervise others
direct others
show leadership attitude
lead
take on a leadership role

Skill type
skill

Skill reusability level
transversal skills and competences

Broader skills/competences
social interaction

Narrower skills/competences
lead healthcare services changes
supervise camera crew
manage secondary school department
manage aspects of airspace management
lead military troops
oversee animal management
supervise medical residents
manage multiple patients simultaneously
plan procedures for cargo operations
business management principles
oversee assembly operations
lead a team in forestry services
manage volunteers in second-hand shop
manage media services department
Digital Skills
13485 skills / competences

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- Through their relationship with occupations,
- By using occupational profiles as entry points,
- By means of a lookup table,
- Using separate knowledge concepts.
digital data processing

Description
Identify, locate, retrieve, store, organise and analyse digital information, judging its relevance and purpose.

Alternative label
- paperless data processing
- data processing
- electronic data processing
- processing of data digitally

Broader skills/competences
digital competencies
manage data, information and digital content

Description

Organise, store and retrieve data, information and content in digital environments. Organise and process them in a structured environment.

Skill type

skill

Skill reusability level

transversal skills and competences

Broader skills/competencies
digital data processing

Narrower skills/competences
store digital data and systems
use databases
manage digital documents
digital communication and collaboration

Description

Communicate in digital environments, share resources through online tools, link with others and collaborate through digital tools, interact with and participate in communities and networks, cross-cultural awareness.

Alternative label

digital communications
paperless communication
electronic communication

Broader skills/competences
digital competencies

Narrower skills/competences
use online conventions of netiquette
share through digital technologies
**interact through digital technologies**

### Description

Interact through a variety of digital technologies and understand appropriate digital communication means for a given context.

### Alternative label

- communicate in digital environments
- use e-mail software and services
- using online communication tools
- use online communication tools
- communicate on-line
- apply online communication tools
- interact through ICT
- make use of online communication tools
- utilise online communication tools
ESCO uptake

- Recruiting
- Matching people to jobs & trainings
- Advertising job vacancies
- Career planning
- Documenting & mapping skills & qualifications
- Analysing the labour market
Millions of online job vacancies used to map employer needs in European countries
Skills Mapping Technology that Delights Employees

HR leaders, solve your most critical HR challenges with our Skills Mapping Technology. You and your teams will love it.
OPENSKIMR - OPEN EUROPEAN SKILL MATCH MAKER

is a project funded by the European Union that aims to bring together talents, jobs and learnings to support people in creating their personal career routes.

SKILL MATCH MAKER

Openskimr is a life-long companion which guides talents through their career in the STEM area.

EXPERT AND TALENT COMMUNITY

Openskimr is a platform for an independent expert and talent community. People from the research consortium and the

MATCHING ALGORITHMS

The Openskimr team develops a set of algorithms which involve match-making and recommendations of jobs and

EUROPEAN CLASSIFICATION SYSTEM ESCO

Openskimr is built on the latest version of the European classification system ESCO (European Skills, Competences,
Pathways to employment through technology

Artificial Intelligence (AI) driven skill assessment to better integrate refugees into labour markets

LEARN MORE
Map your journey to a new career

GET STARTED

LEARN MORE
THE LEARNING MANAGEMENT SYSTEM
YOU’LL LOVE TO USE
Train employees, partners and customers worldwide

START YOUR FREE TRIAL  SCHEDULE A DEMO

Docebo is the only learning platform that combines formal, social and experiential learning with skills management to maximize learner performance
Machine Intelligence for Matching People and Jobs

Upgrade your business with Textkernel's multilingual CV parser and semantic search and matching technology, sourcing, lead generation tools and labour market statistics.

Schedule a demo | Watch our video

A selection of Textkernel's customers and partners

View more

Solutions for
Making the same list as Google, Rocket Internet and Tesla – that’s really something.

milch & zucker was recently listed as one of the most innovative companies in Germany by brand eins magazine.

Talent Acquisition
COMMUNICATION MEETS SYSTEM

Modern organizations need integrated strategies for attracting, hiring, and retaining top candidates. In other words, systematized sourcing concepts – from employer branding, ingenious marketing strategies and concepts, to the integration of active sourcing.

Talent Management
SYSTEM MEETS INDIVIDUALLY

In addition to the right strategy, technology is needed to reach and recruit the right candidates, and to accompany them into the organisation itself. Systematic, structured, effective, but still customised to the organisation and its needs.
Current main ESCO developments

Development of skills hierarchy

Improvement of transversal skills

Translation of skills and occupations descriptions

Preparation for ESCO version 1.1

Pilot for linking qualifications to ESCO skills
Main purposes of the skills hierarchy

Search for and retrieve systematically the 13,485 ESCO skill and knowledge concepts to facilitate

- Compilation of CVs and job vacancies
- Annotation of qualifications
- Mapping national classifications to ESCO
- Creation of skill (self-)assessment tools
- Provision of targeted career guidance
- Matching jobseekers with job vacancies based on skills
Transversal skills

Further develop ESCO transversal skills hierarchy

Need for comprehensive listing and structuring

Work to start in June 2019
Translation of descriptions of occupations and skills

Descriptions of occupations and skills only in English

Translation during 2019

Correction of mistakes
ESCO update cycle: 4 phases

1. Preparatory phase: collection and analysis of feedback
2. Scoping new ESCO version
3. Knowledge engineering and quality-assured translation in all ESCO languages
4. Release on ESCO portal
Objectives of scoping ESCO version 1.1

Changes in the labour market: new & obsolete occupations, changing nature

Changes in curricula: new knowledge and skills in education-training

Changes in terminology: changes in terms referring to occupations and skills

Changes in requirements by implementers and technological development

Opportunity to correct identified mistakes: misspellings or wrong metadata
Pilot for linking qualifications to ESCO skills

Test with candidate Member States

Examine limited number of diverse qualifications in different national databases

Different description styles

VET and Higher Education qualifications
The potential of linking qualifications to skills

Enrich information on qualifications by linking their learning outcomes to skills

Employers grasp qualifications’ labour market value in a cross-border context

Individuals improve chances in labour market through better matching
New Europass
### Current Europass (2004)

<table>
<thead>
<tr>
<th>Citizens communicate skills and qualifications</th>
<th>Employers understand workers' skills and qualifications</th>
<th>Education and training authorities communicate learning achievements</th>
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New Europass

Open to current digital evolutions and media

Dynamic in order to move from documentation to provision of wider services

Interoperable with any system through open standards

Show opportunities no matter the choice of system
New Europass Decision

Adopted by the European Parliament on 15 March 2018 and by the Council of the European Union on 12 April 2018
1 A digital e-portfolio for all skills & qualifications

- Manage your skills and qualifications online
- Include documents and media, such as open badges, digital qualifications or video CVs
- Create CVs and applications
- Transfer your e-portfolio to/from other services, e.g. Social Media or job boards
Find the best learning opportunities for you on the Europass portal

Find the best job for you on EURES

Find jobs and learning offers by other providers, such as job boards, Social Media, online learning platforms

Apply with 1 click at partner websites

2 Access more job & learning opportunities in Europe
3 Digital qualifications

- A technical framework to issue digital qualifications to people
- Fraud-proof with digital signature. Can include information on the qualification, the organisation awarding the qualification and the qualification system
- Machine-readable for online applications, job matching, etc.
4 One EU portal on career, skills & qualifications

- Bring together the various European websites related to skills and qualification
- Easy access to everything you need in order to plan your skills development and your career in Europe
High quality information on skills demand & supply

- Information on skills demand, skills supply and skills gaps help people to plan their training and career

- High quality results from the big data analysis of job vacancies
#ESCO_EU

#EUROPASS

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THANK YOU