INDTECH2018
Innovative industries for smart growth

29-31 October, 2018

Vienna, Austria

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PILLAR # 2

Session # 2.4 Skills needs

Skills needs anticipation for emerging technologies

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Date: 30th October, 2018

The European Centre for the Development of Vocational Training (Cedefop)

- decentralised EU agency

- supports development of European vocational education and training (VET) policies and contributes to their implementation

- Pillar of work on Identifying skill needs

  - Analysing skill mismatch

  - Cedefop skill forecast on demand and supply

  - Skills Panorama

  - European Skills Index

  - European Skills and Jobs Survey

The value of skills anticipation in a changing world

- Impact factors affecting the labour market: as old as human history
  - It is the pace of change and penetration to all economic sectors, forms of work => everyday life, society
- Technological change reforming supply/value chains
- Change in tasks => qualification levels
- Up-skilling and re-skilling needs across sectors
- New occupations
- New forms of work; new forms of organisational structure
- Forward-looking lifelong skills development, not only meeting current skill needs

$\Rightarrow$ **Skills anticipation**: produce and build on available labour market and skills intelligence to balance supply and demand for skills to provide *an informed basis* for targeted skills investments

- Skills anticipation: use of labour market and skills information to predict and develop policy responses to future skills needs

Which methods can better support decision making?

- 'Traditional' methods: econometric skills forecasting, employer and employee surveys

  - valuable but not sufficient

  - periodicity doesn't allow for up-to-date information

- Skills foresight built on stakeholder consensus can offer a more comprehensive overview

- Automated approaches (big data analysis, text mining, deep learning)

- Need for **skills intelligence,** not just data:

  - quantitative and qualitative skills-relevant information

  - multiple sources, outcomes meaningfully synthesised

  - engagement of all relevant stakeholders; geographical dimension (national , regional/local); sectoral skills strategies; social partners, other sectors in the value chain, academia, VET providers, parents/public

  - skills intelligence on all types/levels of education and training, qualifications, occupations

Using skills anticipation to meet different policy goals

- Skills anticipation is a decision-making tool to:

    - alleviate short-term challenges, but also for developing *strategic vision*

    - foster dialogue among key actors => increase understanding and transparency => consensus

- Different approaches for different policy goals: future skill needs, training needs for unemployed/students/pupils, career development within organisations/HRM

- Use of multiple methods, but in coordination to reap complementarities

- All methods bear limitations

- Focus not only on technical/job-specific skills

    - technological change demands for 'soft' skills for new forms of collaboration, team working, adaptability, problem solving

Forward-looking Cedefop work on understanding skills

- ETF/CEDEFOP/ILO Guides to Anticipating and Matching Skills and Jobs series

  - Guide to anticipating and matching skills and jobs: Working at sectoral level

- Assisting EU countries in skills matching: country reviews of MT, IS, EL, BG, SK, EE

- Big data analysis from online vacancies:

  - collection/analysis of big data and use of machine learning;

  - fully -fledged EU-wide system to collect and analyse data on skill demand using online job postings;

  - First data expected 2019 on the Skills Panorama; fully operational EU system end 2020

- Development of **methodological guide on anticipating skill needs using automated techniques and skills / technology foresight** (forthcoming)

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