Skills Needs Anticipation and Matching – Main Approaches and Methods

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Presentation by Alessandra Molz, Skills and Employability Specialist
ILO Office for Central and Eastern Europe
Why is it so important?

Drivers of change:
- Technology, innovation
- Demographic
- Work organisation
- Globalisation of markets, health
- Climate change
- Educational attainment

Strategic reasons: Planning, Financing (RoI), development

Economic reasons: Competitiveness, productivity

Social reasons: employment, social cohesion

Skills needs anticipation & dual VET:
- Dual VET as a means of matching (bringing supply and demand together)

We are preparing students for jobs that do not exist yet, using technologies that have not been invented yet …
Definitions

Skills needs anticipation:
- Quantitative and qualitative methods to assess labour market developments and related needs for skills and qualified workforce in the future.
- Short-, medium-, longer-term
- Macro, meso / sectoral, micro (local)
- Consistent and systematic

Skills Matching:
- Measures to reduce the gap between skills demand and supply
- Curriculum and training programme development, career guidance, referral and placement, TVET and HRD policies

Occupation:
- Group of jobs which have a repeating set of main tasks and duties across industries
- Classification: ISCO, national classifications

Job:
- A paid position of (usually regular) employment

Qualification:
- A certified outcome of training / education
- Classification: ISCED

Skill:
- Ability to carry out a mental or manual activity, acquired through learning and practice. Includes knowledge, competence and experience.
Horizontal and vertical skills mismatches

- Overqualified
- Overskilled
- Underqualified
- Underskilled

Education field / skill type

Quantity

Education level

Quality
Finding the right methodological mix

- Big data
- Forecasting, macro-modelling
- Tracer studies
- Employers’ surveys
- Focus groups
- Delphi
- Foresight (qualitative)
- LMI* / vacancy monitoring
- Sectoral approaches

What information is available?
- Trends and tendencies
- No one method by itself: mix

What do you need to know? Main research question:
- Skills? Occupations? Mismatch?
- What level? Macro, meso, micro?

What information is available?
- What are the gaps?
- Lack of quantitative data / statistics: qualitative methods, consultation
- What is your budget?

* Labour Market Information
Methodologies (1)

**Tracer studies**

*Graduates / TVET schools*
- Labour market status
- Job search history
- Skills utilisation
- Satisfaction with education
- Skills relevance
- Working conditions

➔ Curriculum development, education / VET planning, attracting students, career guidance, school-to-work-transitions

**Employers’ surveys**

*Companies*
- Skills needed by companies
- Recruitment plans and difficulties by qualification / occupation
- Type, level and skills needed
- Skills gaps per occupation
- Labour shortages
- Satisfaction with quality of graduate training

➔ Education / VET policy and planning and, curriculum review and development, occupational standard development, career guidance

**Focus groups**

Perceptions and opinions of stakeholders and experts (small groups)
- Facilitated brainstorming on future trends
- Improving existing ideas
- Receiving feedback on different analysis
- Interpretation of data

➔ Validation of quantitative forecasts, of final results of studies, development of occupational standards, programmes and curricula
Methodologies (2)

**Delphi-method**

Broad array of experts, different structured consultation rounds, feedback of results

- Breakdown of complex issues
- “Wisdom of the crowd” assessment of upcoming new trends, disruptive effects
- Assessment of developments without data
- Consensus building
- Development of alternatives

⇒ **Long term policy development (various areas) and education / VET planning, validation of results**

**Foresight and scenarios**

Experts, stakeholders, guided panels and discussions, consultation (also quantit. projections)

- Main drivers of change and systemic linkeages
- Assess future conditions and Disruptive factors
- Scenarios for plausible evolution
- Strategic choices, action-oriented

⇒ **Long term policy development (various areas) and education / VET planning**

**Sectoral focus / STED**

Economic / industry sectors; (clusters of) companies, sector skills councils, quantitative and qualitative information

- Skills / workforce needs for increased sector productivity, growth and competitiveness
- Skills gaps, lack of qualified workforce
- Capacity gaps of companies

⇒ **Occupational standards development; curricula & training programmes; Career guidance, incentives, budgets**

*STED: Skills for Trade and Economic Diversification*
Methodologies (3)

**Vacancy monitoring / labour market inform.**

Employment Services, Labour force surveys, unemployment data, vacancy announcements
- Occupations in demand
- Occupations in decline
- Qualifications / skills demanded by employers
- Qualifications / skills of workforce

➔ Referral, placement, career guidance, active labour market policies, curriculum development

**Big data**

Large amounts of real time data, online vacancy announcements, job ads, digital analytic programmes (e.g. Burning Glass), machine-learning / AI
- Trends and tendencies in skills and occupations in demand by employers,
- Emerging skills gaps
- Wages, work conditions.
- Careful: biases, imperfections

➔ Career guidance, curriculum development, recruitment and talent management, labour market programmes, matching

**Forecasting / quantitative modelling**

Large sets of reliable, long-term, disaggregated quantitative occupational & economic data
- Longer-term horizon projections
- Formal, model-based forecasts
- Model: simplified reality to understand complexity
- Trends, interactions with economic indicators.
- Assumptions: unchanged patterns

➔ Major reforms and policies with long term impact (e.g. education, employment, econ. dev., social policies)
What methods to use when?

- **Time horizon**: Short-term (0-1 year), Mid-term (1-5 years), Long-term (>5 years)

- **Levels**:
  - **Micro-level**: (VET schools (students), enterprises)
  - **Meso-level**: (sectors, regions)
  - **Macro-level**: (macro economic, national level)

- **Short-term (0-1 year)**:
  - Tracer studies
  - Vacancy monitoring
  - LMI

- **Mid-term (1-5 years)**:
  - Employers’ surveys
  - Focus groups
  - Sectoral approaches
  - Qualitative foresight
  - Big data

- **Long-term (>5 years)**:
  - Quantitative modelling and forecasting
  - Delphi

- **Other methods**:
  - Tracer studies
  - Sectoral approaches
  - Big data
  - Employers’ surveys
  - Focus groups
  - Delphi
  - LMI
Challenges to data generation and policy use

<table>
<thead>
<tr>
<th>Limited data, barriers to data exchange</th>
<th>Insufficient resources</th>
<th>Ad-hoc / project based</th>
<th>Too short term LM outlooks</th>
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<tbody>
<tr>
<td>Lack of partnerships / agreed roles and responsibilities</td>
<td>(Centralised) Skills anticipation practices and policy responses</td>
<td>Weak / no career guidance</td>
<td>Insufficient /inefficient dissemination</td>
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<tr>
<td>Results too qualitative / too quantitative</td>
<td>Results not sufficiently disaggregated / inaccurate</td>
<td>Lack of stakeholder consultation</td>
<td>Lack of consideration of labour market dynamics</td>
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**Policy coherence + Social Dialogue** (Employers’ & Workers’ Organisations) + **Coordination**
Guides and training

Skills needs anticipation and matching

STED: Skills for Trade and Economic Diversification

ITC-ILO Training Courses

- Skills needs anticipation and matching
- Sectoral approaches to skills development

Link to publications on STED

Skillsdevelopment@itcilo.org

Alessandra Molz, Skills and Employability Specialist, ILO office for Central and Eastern Europe, molz@ilo.org
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