Enhancing Skills Identification in IES:

Harnessing the Potential of ESCO for Advanced Strategies and Effective Unemployment Assistance

September 6th 2023
The new era of skills (A renew paradigm)

Adopting ESCO Framework at the IES as a two-way path:
1. Job matching and the use of AI
2. Skills as a basis for strategic policies and practices

Implementing the Skills Framework in practice

Generative ai and the future of work and skills
The Changing Labour Market & the Role of Skills

20th Century (Direct Work Trajectory)

- Education
- Work
- Leisure

21st Century (Rotational Work Trajectory)

Age

“The Future of Work” (e.g., OECD, World Bank, ILO, IMF)
Occupation Trends: Short-Term Outlook

Largest job decline (ILO 2022)
- Data entry clerks
- Accounting, bookkeeping and payroll clerks
- Building caretakers and housekeepers
- Administrative and executive secretaries
- Security guards

Fastest growing job postings (LinkedIn 2023)
- Talent Acquisition Associate
- Sustainability Analyst
- Sales Development
- Representative Customer
- Success Analyst

* ILO Occupation Employment statistics and growth
** Partial list; Fastest growing job postings on LinkedIn 2018-2022
Processes Accelerated by Coronavirus

82% Remote work (PwC)
84% Digitization (WEF)
85% Automation (McKinsey)
Main Trends and the Difficulty in Forecasting

The demand for these professions is expected to grow 10%↑ 20%↓ of those professions are expected to disappear.

It is unknown what will become of the 70%?

The Japanese MITI and the challenges of predictive missteps (industries)

(Bakhshi et al. Pearson, 2020)
Key Skills for the Upcoming Years

- Technological literacy
- Leadership and social influence
- Dependability and attention to detail
- Empathy and active listening
- Quality control

- Analytical thinking
- Creative thinking
- Dependability and attention to detail
- Empathy and active listening
- Leadership and social influence

- Resilience, flexibility, and agility
- Motivation and self-awareness
- Curiosity, and life long-learning
- Creative thinking
Adopting ESCO Framework into the IES

IES professions → ISCO08 → CBS, DOL

ESCO Occupations (3008) → ESCO Skills (13,890)

From theory to practice

European Skills, Competences, Qualifications and Occupations’ framework
Since 2020, 2.4 million job seekers have been identified with a specific set of skills.
Dual Strategy with Skills

1. Using AI and ESCO for improved job matching and proactive outreach

2. Utilizing ESCO for strategic decision-making across multiple levels
2. Skills for Research, Strategy, & Practical Implementation

Proportion of the 72 skill types within the 8 major categories

- **S1** - Communication, Collaboration, & Creativity
- **S2** - Information Skills
- **S3** - Assistance and Caring
- **S4** - Management
- **S5** - Working with Computers
- **S6** - Handling and Moving
- **S7** - Design and Construction Skills
- **S8** - Special Machinery & Equipment

Age Groups

Religion Groups

Years

2019
2020
2021
2022
2023

- Haredi
- Jews (exc. Haredi)
- Arabs
The Strength of High-Frequency Resolutions Data

Nationwide (+international comparisons)

Regions

Sub-regions (Napot)

Localities clusters (Eshkolot)

IES Chambers (72)

Localities (1,400-255)

Neighborhoods (~local statistical areas)

Based on administrative data and the work of the IES

ESCO Skills framework
Identification of Skills at a Sub-Regions Levels

Number of possible skill sets
14,000, 300, 72, 8
Skills-Sets in Localities

Digital Skills

Handling and Moving

8 skill sets
Utilizing IES’s Data for Strategic Decision-Making Processes

Communication, collaboration, and creativity skills

Ashkelon sub-region heatmap

Probability of individuals working as professionals (ISCO08)

The distribution of working with computers skills (ESCO)

Data-driven research, policy, and practices
Relative Advantages in Skills

Relative and absolute advantages in 31 main skills
Integration of Occupations and Skills to Tackle Supply-Demand Gaps

JSK with Hi-tech Occupations around Yokneam city

<table>
<thead>
<tr>
<th>Distance (KM)</th>
<th>JSK Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>6,390</td>
<td>4%</td>
</tr>
<tr>
<td>35</td>
<td>10,173</td>
<td>4%</td>
</tr>
<tr>
<td>20</td>
<td>1,960</td>
<td>4%</td>
</tr>
<tr>
<td>10</td>
<td>780</td>
<td>8%</td>
</tr>
</tbody>
</table>

Identifying the Hi-tech industry and ESCO digital skills

Relative advantages

Lack of proper skills
The Impact of Generative AI on the Labour Market

1. Automation of Creative Tasks
2. Skill Evolution
3. Emphasis on Skills

Generative AI heralds a paradigm shift, reshaping the future landscape of work and skills
Thank you!