Overview of the progress of work in revising ISCO-08 and major recent developments


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Overview of the progress of work on the ISCO-08 revision

The case to revise ISCO-08 at the 20th ICLS in 2018

- 20th ICLS: support and mandate to start the revision of ISCO-08, after the 20th ICLS, to be completed in time for the 2030 round of housing and population censuses

ISCO revision following the 20th ICLS

- Established the TWG in June 2021 and undertook several online meetings
- Evaluated the various known issues and recommendations of the 20th ICLS
- Identified additional issues and made proposals for improvements
Undertaking the revision of ISCO-08 following the 20th ICLS

Identified and evaluated a considerable number of issues in ISCO-08, from various sources

Main types of issues in ISCO-08:
- Structure, group descriptions
- Skill model
- Align ISCO with recent standards
- The modernization of ISCO

Top-down approach: address structural concerns/ issues, update ISCO structure and related concerns

Identified approaches to address many issues, but not all, as the work is in progress (may improve some)
Progress of work: major skill related issues and aligning ISCO with recent statistical standards
Progress of work on major issues in ISCO-08

Major concerns/issues identified by users regarding skill levels

- Breadth of Skill Level 2/ Boundary between Skill Levels 2 and 3
- Measurement and application of skill level as a classification criterion

Align ISCO with recent statistical standards

- The 19th and the 20th ICLS resolution I
Progress of work on major skill-related issues in ISCO-08

Breadth of Skill Level 2/ boundary between skill levels 2 and 3

The nature of the issue(s)

Skill Level 2: most problematic level, it incorporates a broad range of skill complexity

No systematic distinction between occupations requiring the completion of extensive, structured training/ VET and those requiring a short period of training

Problems with the boundary in skill level between the most skilled technical occupations of Major Group 7 and occupations of Major Group 3

The proposed approach(s)

• **Adjust the boundary** between Skill Levels 2 and 3 to reduce the breadth of Skill Level 2

• Moving ISCED-11 Level 4 *Post-secondary non-tertiary education* from Skill Level 2 to Skill Level 3

<table>
<thead>
<tr>
<th>ISCO-08 Skill levels</th>
<th>ISCED-97 levels of education</th>
<th>Revised ISCO skill levels</th>
<th>ISCED-11 levels of education</th>
<th>Scope of change on ISCO skill levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>6 - Second stage of tertiary education</td>
<td>4</td>
<td>8 - Doctoral or equivalent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5a - First stage of tertiary education, 1st degree (medium duration)</td>
<td></td>
<td>7 - Master’s or equivalent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5b - First stage of tertiary education (short or medium duration)</td>
<td></td>
<td>6 - Bachelor’s or equivalent</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3b - First stage of tertiary education (short or medium duration)</td>
<td>3</td>
<td>5 - Short-cycle tertiary education</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 - Post-secondary non-tertiary education</td>
<td></td>
<td>4 - Post-secondary non-tertiary education</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>4 - Post-secondary non-tertiary education</td>
<td>3</td>
<td>3 - Upper secondary education</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 - Upper secondary education</td>
<td>2</td>
<td>2 - Lower secondary education</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1 - Primary level of education</td>
<td>1</td>
<td>1 - Primary level of education</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 - Early childhood education</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ISCED level 4 Post-secondary non-tertiary education is moved from ISCO Skill Level 2 to Skill Level 3.
The nature of the issue (s)

- Dimensions, other than formal levels of education, are not identified as a possible requirement in themselves (such as experience, on-the-job training)
  - Do not contribute to the placement of categories within the framework of ISCO
- Some dimensions were broadly described (no typical requirements or measurement guidelines were provided)
- Responsibilities were not defined at each skill level

The proposed approach (s)

- **Extend the measurement** of skill levels, reflects a more comprehensive approach (skill level framework) that extends beyond formal education.
- the boundaries between skill levels would be based on *sets of criteria or dimension*, in addition to the level of formal education, such as responsibilities, experience, and other forms of training
  - Identified as a possible requirement in themselves
- Most criteria will be objectively defined and measured
## The skill level framework

Set of independent criteria, considered as a possible requirement in themselves

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Inclusion criteria for Skill level 1</th>
<th>Inclusion criteria for Skill level 2</th>
<th>Inclusion criteria for Skill level 3</th>
<th>Inclusion criteria for Skill level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formal levels of education</strong></td>
<td>Up to primary education</td>
<td>Lower secondary education or Upper secondary education</td>
<td>Post-secondary non-tertiary education or Short-cycle tertiary education</td>
<td>Bachelor's or Master's or Doctoral or equivalent level</td>
</tr>
<tr>
<td><strong>Typical requirements using ISCED-11 levels</strong></td>
<td>Up to ISCED-11 level 1</td>
<td>ISCED-11 level 2 or level 3</td>
<td>ISCED-11 level 4 or level 5</td>
<td>ISCED-11 level 6 or level 7 or level 8</td>
</tr>
<tr>
<td><strong>Responsibilities</strong></td>
<td>No responsibilities are involved (none)</td>
<td>Not a significant component of the work</td>
<td>Moderate component of the work</td>
<td>Significant component of the work</td>
</tr>
<tr>
<td><strong>Typical requirements</strong></td>
<td>No requirement, most jobs are supervised by workers at other Skill levels. Occupations at this skill level require close and extensive guidance. They typically involve performing simple and routine tasks with minimal decision-making.</td>
<td>Relevant for some occupations when this involves carrying out the line or technical work with limited supervision of workers and/or overseeing of the day-to-day activities of a small business, but responsibilities are not a major component of the work. Occupations at this skill level typically involve a range of tasks that may require some degree of judgement.</td>
<td>Relevant for some occupations when this involves: - Supervision of staff when supervisors do not mainly perform the same tasks as the workers they supervise, or - Considerable safety responsibility Occupations at this level typically involve a variety of tasks that require independent decision-making.</td>
<td>Relevant for some occupations -when management of an enterprise or organization or a department within an organization with a hierarchy of managers is the major or significant component of the work. - or when occupations typically involve complex tasks that require advanced skills, knowledge, and significant decision-making.</td>
</tr>
<tr>
<td><strong>Experience</strong></td>
<td>Little or no previous experience is required</td>
<td>Some previous relevant experience is required</td>
<td>Considerable previous relevant experience is required</td>
<td>Extensive previous relevant experience is required</td>
</tr>
<tr>
<td><strong>Typical requirements</strong></td>
<td>Few days to a few months, when applicable</td>
<td>Less than 2 years in a related occupation, when applicable</td>
<td>Between 2 and less than 5 years in a related occupation from skill level 2, possibly in a related field, when applicable</td>
<td>5 or more years in a related occupation from skill levels 3 or 4, often in a specialized field, when applicable</td>
</tr>
<tr>
<td><strong>Other training/learning dimensions (To be identified)</strong></td>
<td>Ongoing discussion within the TWG (example: often not a requirement, but a short demonstration or a basic level training/learning may be provided for some jobs classified at this level)</td>
<td>Ongoing discussion within the TWG (example: a moderate-term or initial levels of training/learning may be provided)</td>
<td>Ongoing discussion within the TWG (example: may involve long-term or advanced levels of specialized training/learning provided after completion of secondary education, in some cases leading to a certification, if any)</td>
<td>Ongoing discussion within the TWG (example: often not a requirement, but may involve some highly specialized or professional training/learning to develop expertise, when relevant)</td>
</tr>
</tbody>
</table>
Progress of work: Align ISCO with recent statistical standards

The 19th ICLS Resolution I concerning statistics of work, employment and labour underutilization adopted five forms of work:

- Restricts employment to any activity to produce goods and provide services for pay or profit and uses work activity to measure forms of work other than employment.

The 19th ICLS Resolution I concerning statistics of work, employment and labour underutilization also adopted an updated definition of the concept of job which was used by the 20th ICLS Resolution I concerning statistics on work relationships.

- A job or work activity is defined as a set of tasks and duties performed, or meant to be performed, by one person for a single economic unit.

A job is defined in ISCO-08 as “a set of tasks and duties performed, or meant to be performed, by one person, including for an employer or in self-employment.”
Progress of work: Align ISCO with recent statistical standards

Update definition of job and occupations

Extend the unit in ISCO

- Jobs and work activities
- ISCO can be used to code all forms of work, when needed
- Not maintain market orientation in any category in ISCO, as they is now established by the forms of work
- discontinue SMG 63 Subsistence Farmers, Fishers, Hunters and Gatherers and merge with SMG 61/62 as relevant (many tasks in common) as such a distinction becomes irrelevant at the level of any specific group in ISCO (becomes not relevant to employment)
Approaches to other issues in ISCO-08

- Contributing to improving the measurement of mismatches (reducing breadth of SL2, introducing additional criteria in the measurement of skill levels, etc)
- Addressing a number of categories or occupation-specific issues
  - Specialist Medical practitioner (a separate category for Surgeons)
  - Biomedical engineer (a separate category)
  - Vehicle and mechanics and accessory fitters (a separate category)
  - Home improvement installers (a separate category)
  - etc
Conclusions related to the proposed approaches

- Not deviating from the approach used in ISCO-08, builds and capitalizes on ISCO-08
- Improve many areas and reflect many of the recommendations of the 20th ICLS
- Similar approaches (varying details) were used in recently updated NOCs or similar frameworks
The modernization of ISCO and future plans
The modernization of ISCO

Objectives

• Approaches and activities to improve various aspects of ISCO, including:
  • Maintaining ISCO relevant between major revisions
  • Improving ISCO presentation and dissemination
  • Establishing a research agenda on the future of ISCO (resolve outstanding and non-priority issues, rethink critical aspects of ISCO, anticipate change to the ISCO conceptual approach, rethink the future of ISCO, etc)

• Long-term plans
  • Concrete work was undertaken by the TWG or the office
Maintain ISCO relevant between major revisions

Periodic targeted ISCO updates or maintenance

- Non-structural changes
  - Will not alter the groups at aggregate levels, they remain stable until the next major revision (structural changes, revision of skills, conceptual approach, boundaries, etc)
- Focus on areas where changes are essential for the proper use of the classification:
  - Incorporating NEO
  - Guidance on how to treat these
  - Updating/ drafting related group descriptions
  - Updating the Index of occupational titles, etc

<table>
<thead>
<tr>
<th>ISCO code</th>
<th>ISCO Unit group title</th>
<th>Status</th>
<th>Type of change</th>
<th>Date of change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2120</td>
<td>Mathematicians, Actuaries and Statisticians</td>
<td>Existing</td>
<td>New Unit Group</td>
<td>XXX</td>
</tr>
<tr>
<td>2120X</td>
<td>Data Scientist</td>
<td>New entry</td>
<td>New Unit Group</td>
<td>XXX</td>
</tr>
</tbody>
</table>

ISCO- XX V 1.0.0 Versioning protocol

Group description, guidance, etc
Index
Crosswalk with ISCO-08
Maintain ISCO relevant between major revisions

Key requirements of the successful maintenance and targeted updates of ISCO

Periodicity and type of modifications

• Structured proposal for discussions at the 22nd ICLS (type and nature of change, modalities, considering country practices)

Governance arrangements

• Feedback mechanism
• Establish an advisory committee to co-chair & collaboratively undertake the task, decision-making and advice on areas of improvements in ISCO

Essential data sources to update ISCO

• In addition to current available sources
• Explore avenues of using new data sources and technologies

Versioning protocol of ISCO

• Clear and transparent understanding of the updates
• ILO constituents anticipate and plan for necessary modifications

Availability of resources

• Collaborations and partnerships

SIDE EVENT OCTOBER 18th

• PoC on the feasibility of updating ISCO by leveraging AI and new data sources from OJA
• Pilot tests for sustainable industry solutions: leveraging advanced AI technologies (ChatGPT and Azure ML Cloud)

Annex 2
Enhanced ISCO presentation and dissemination

- Categories in ISCO are organized on the basis of skill levels first, and then on skill specialization
  - E.g. agriculture related groups are not only in Major Group 6; health-related groups are found in several major groups, etc.

Proposal: Developing job families or thematic views

- Group together categories in a thematic view or job cluster/ family regardless of skill levels or their current organization in the framework of ISCO
  - Example: science, technology, engineering, and math (STEM) occupations, health occupations, tourism occupations, ICT occupations, agriculture occupations, etc
  - Demand on grouping together occupations on certain topics (policy needs, including planning and analysis, coding)
- Future work, but TWG needs proposals from users on the topics of interest and (methodological) proposals on grouping categories together
Key milestones and next steps on the ISCO revision

Technical Working Group Meetings (depending on the availability of resources: mixed mode: online + in person)

2023-2025
- Address major outstanding issues
- Develop an updated structure of ISCO (Incorporate NEO, improve structure, address group specific issues, etc)

2026-2027
- Update/develop group descriptions, scope
- Global/essential consultations (draft structure, approaches & major proposed modifications) and group descriptions, etc

ICLS
- Revised ISCO Documentation Meetings
- Analyse and incorporate feedback

Implementation
- Start developing modernization activities
- Guidance notes for the implementation
- Provide necessary capacity building and training to ILO constituents

Develop necessary methodological material (conceptual approach, changes, Index, crosswalk)
Discussions at the 21st ICLS (11-20 Oct 2023)

Strong support on the proposed approaches and interest to contribute to many proposed activities

Room document: 18

The International Standard Classification of Occupations (ISCO-08): Recent developments and revision
Major recent developments

Survey of country practice review (21st ICLS)

ISCO is widely adopted by most countries worldwide

Classification to code information on occupations (number of countries)

NOC different from ISCO, 14
ISCO-08/NOC based on it, 101

Previous version of ISCO or NOC aligned with it, 10

Source: Survey on country practice review, ILO 2023 (n: 125)

New ISCO webpage

‘ISCO-08 companion guide’

- Systematic approach for ISCO-08 use and adaptation
- Examples based on countries practices

21st International Conference of Labour Statisticians

- Basic ‘search code function’
- Material in Excel
Thank you!