Measuring fields of education and training in cross-national surveys

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Motivation

• Education is a key socio-economic variable, covered in virtually every survey

• Apart from educational qualifications, fields of education are covered more and more

❖ Educational qualification -> vertical axis
Main ISCED-A Levels 2011

ISCED level 0 – Early childhood education
ISCED level 1 – Primary education
ISCED level 2 – Lower secondary education
ISCED level 3 – Upper secondary education
ISCED level 4 – Post-secondary non-tertiary education
ISCED level 5 – Short-cycle tertiary education
ISCED level 6 – Bachelor’s or equivalent level
ISCED level 7 – Master’s or equivalent level
ISCED level 8 – Doctoral or equivalent level
Motivation

• Education is a key socio-economic variable, covered in virtually every survey
• Apart from educational qualifications, fields of education is covered more and more

- Educational qualification -> vertical axis
- Fields of education -> horizontal axis
Broad fields (1st level) of ISCED-F 2013
00 Generic programmes and qualifications
01 Education
02 Arts and humanities
03 Social sciences, journalism and information
04 Business, administration and law
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10 Services
Why are fields of education important?

• Gender segregation in fields of education (Jonsson 1999, Bradley 2000, Charles & Bradley 2008)
• Social selection into fields of education by family background:
  ❖ Social class, cultural and economic capital of parents (van de Werfhorst et al. 2003)
  ❖ Domain of father’s occupation (van de Werfhorst, Luijkx 2010)
Tasks of SERISS WP8 – Fields of education and training

• Development of a survey tool to ask for fields of education and training
• By which we receive a codable answer

➢ Extension of the CAMCES database by fields of education and training
Short excurse on CAMCES
CAMCES so far

- CAMCES tool for measuring and coding educational attainment in cross-cultural surveys
- Components of the CAMCES tool:
  - CAMCES question module
  - CAMCES survey interfaces:
    - Combination Box (CB), including algorithm for textstring matching
    - Search Tree (ST)
  - CAMCES/SERISS education database
Combination Box (CB) – Italy

What is your highest educational qualification?
- Please enter the qualification in Italian.
- Please do not type the subject area or your occupation.
- Please select the best match.

lau
Laurea di 1° livello o Laurea di 3 anni
Diploma di Laurea, 4-6 anni [vecchio ordinamento]
Diploma di specializzazione post laurea magistrale, 1-2 anni
Diploma di specializzazione post laurea magistrale, 3-4 anni
Laurea magistrale, 5-6 anni
Laurea specialistica
Search Tree (ST) – Russian Federation

What is your highest educational qualification?

- Вообще не учились в школе, незаконченная начальная школа
- Аттестат об основном общем образовании
  - Аттестат об основном общем образовании, 7 классов [по системе до 1958 года]
  - Аттестат об основном общем образовании, 8 классов [по советской системе 60-80-х годов]
  - Аттестат об основном общем образовании, 9 классов [по современной системе]
  - Начальное или среднем профессиональное-техническое образование или на базе основного общего образования
- Аттестат о законченном среднем общем образовании
- Начальное или среднем профессиональное-техническое образование или на базе полного среднего
- Высшее образование
**Search Tree (ST) - Iraq**

**What is your highest educational qualification?**

- لم يذهب إلى المدرسة
- أقل من شهادة التعليم الابتدائي
- شهادة التعليم الابتدائي
- شهادة التعليم المتوسط
- شهادة التعليم الإعدادي
- شهادة التعليم المهني
- معهد فني
- جامعة
- درجة بكالوريوس (4 سنة)
- درجة بكالوريوس (5 سنة)
- بكالوريوس الطب (6 سنة)
- دبلوم عالي
- درجة ماجستير
- درجة دكتوراه
Measuring and classifying fields of education and training
What are fields of education and training?

• “A field is the broad domain, branch or area of content covered by an education programme or qualification” (UNESCO-UIS, 2014, p. 5)
• Fields of education are not defined within levels of education, they are independent of levels (e.g. teacher training programmes on different levels)
• Translation of fields of education and training is possible
What is ISCED-F?

- International Standard Classification of Education - Fields of Education and Training (ISCED-F)
- Developed by UNESCO, last updated in 2013
- Units: Educational programmes
- Focus on secondary, post-secondary and tertiary level
- Separate classification (independent from ISCED-A)
- Classification consists of 3 digits/levels:
  - 1st level: 11 entries
  - 2nd level: 29 entries
  - 3rd level: ≈ 80 entries
Broad fields (1st level) of ISCED-F 2013

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10 Services
Further classifications on fields of education

- ISCED 1997 (also includes field of education)
  - Used for further development by Eurostat
- European Union’s Fields of Training (FoT) 1997 and Fields of Education and Training (FoET) 1999
  - FoET is widely-used incl. international surveys
  - FoET used as starting point for updating ISCED-F
  - Large overlap on the categories of FoET and ISCED-F
Broad Fields of Education and Training (FoET) 1999

0 General programmes
1 Education
2 Humanities and arts
3 Social sciences, business and law
4 Sciences
5 Engineering, manufacturing and construction
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- Fields of Science and Technology (FoS) 2007
  - Not used for updating ISCED-F
Relation to other classifications

- **ISCED11-A Orientation of Programme**
  - General: those programmes should be classified as “Generic programmes and qualifications” in ISCED-F
  - Vocational: those programmes should be ‘easily’ classified to the main field of education and training in ISCED-F

- **International Standard Classification of Occupations (ISCO) 2008**
  - ISCO: Focus on job and it’s tasks/ duties based on skill level and specialisation
  - ISCED-F: Focus on subject of education programme
  - No direct link between ISCED-F and ISCO
Example questions
What is the main subject area of your highest qualification?

01 General programmes
02 Teacher training and education science
03 Humanities, languages and arts
04 Social sciences, business and law
05 Science, mathematics and computing
06 Engineering, manufacturing and construction
07 Agriculture and veterinary
08 Health and welfare
09 Services

Source: PIAAC round 1
In which one of these fields or subjects is your highest qualification?

01 General or no specific field
02 Art – fine or applied
03 Humanities – languages, classics, history, theology, etc
04 Technical & engineering, including architecture and planning, industry, craft, building trades, etc
05 Agriculture & forestry
06 Teacher training or education
07 Science, mathematics, computing, etc
08 Medical, health services, nursing, etc
09 Economics, commerce, business administration, accountancy, etc
10 Social & behavioural studies, public administration, media, culture, sport and leisure studies, etc
11 Law and legal services
12 Personal care services - catering, domestic science, hairdressing, etc
13 Public order and safety – police, army, fire services, etc
14 Transport and telecommunications

Source: ESS round 4
Discussion
Summary

• Classification of ISCED-F is exists, not yet implemented
• A lot of surveys still use FoET 1999
• Often use broader categories (like ISCED-F 1st level)
• Surveys adapt a classification for their own purposes
Challenges

We want to use ISCED-F, but how?

• How many digits of ISCED-F do we want to cover?
• Adaptation of proposed search tree of ISCED-F:
  ❖ make it more user-friendly
  ❖ more cognitive intuitive for respondents
• Do we want to consider further classifications like FoET 1999?
Thank you!

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