

# ISLED: A WORLD-WIDE COMPARATIVE MEASURE OF LEVEL OF EDUCATION

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## RESEARCH AIMS

- Develop an International Standard Level of Education [ISLED] scale
- Continuous measure, that can accommodate country-specific qualifications in survey data without common-denominator harmonization.
- World-wide hierarchical scale, constructed on five ISSP Social Inequality waves: 1987-1992-1999-2009-2019.

## Data & Codingfile

- Merge all data from ISSP Social Inequality modules: 1987-1992-1999-2009-2019 in a codingfile.
- Codingfile contains 1700 country-specific educational qualifications with a unique identifier EDUCTP (ISO-code + xx\_DEGR code).
- Codingfile is also merged with ISCED codes provided by ISSP for 2020-2021.
- All qualifications are coded into ISCED-2011, taking into account:
  - Description (labels) and ranking in ISSP (DEGREE) and ESS, EVS
  - Wikipedia
  - Unesco's ISCED manual and conversion schemes

## ISCED

- ISCED-2011 is the new International Standard Classifications of Educations,
- ISCED-2011 has been adopted by ISSP since 2018 to post-harmonize all country-specific educational qualifications (that were hardly used by anyone).
- ISCED-2011 has a 3-digit nested structure
  - **Digit 1** measures general level of education, between 000 (No education) and 800 (PhD and Post-doctoral)
  - **Digit 2** measures Academic vs Vocational orientation (40 vs 50).
  - **Digit 3** measures Completion, between (1, 2) Incomplete and (3,4) Partial Completion.

ALL THREE DIGITS (MAY) HAVE HIERARCHICAL VALUE AND ARE USED TO DEVELOP ISLED.

## Schröder & Ganzeboom, 2014

- Schroeder & Ganzeboom (2014) have developed ISLED using ESS R1-R4 and demonstrated the usefulness of the optimal scaling concept.
- This existing ISLED is limited to European (ESS) data and hard to use with other databases.

THERE IS A NEED FOR A REVISION: ISLEDn.

## Better than optimal: double indicator measurement

- Perfect measurement can be obtained by latent-variable measurement using ISLED and EDDUR (years of education = duration measurement) as indicators.
- Duration measurement is less reliable and may be less valid than qualification measurement, but it can be used as a second indicator in latent-variable measurement.
- Latent-variable measurement is used to validate the ISLED scales and compare it to other harmonizations.

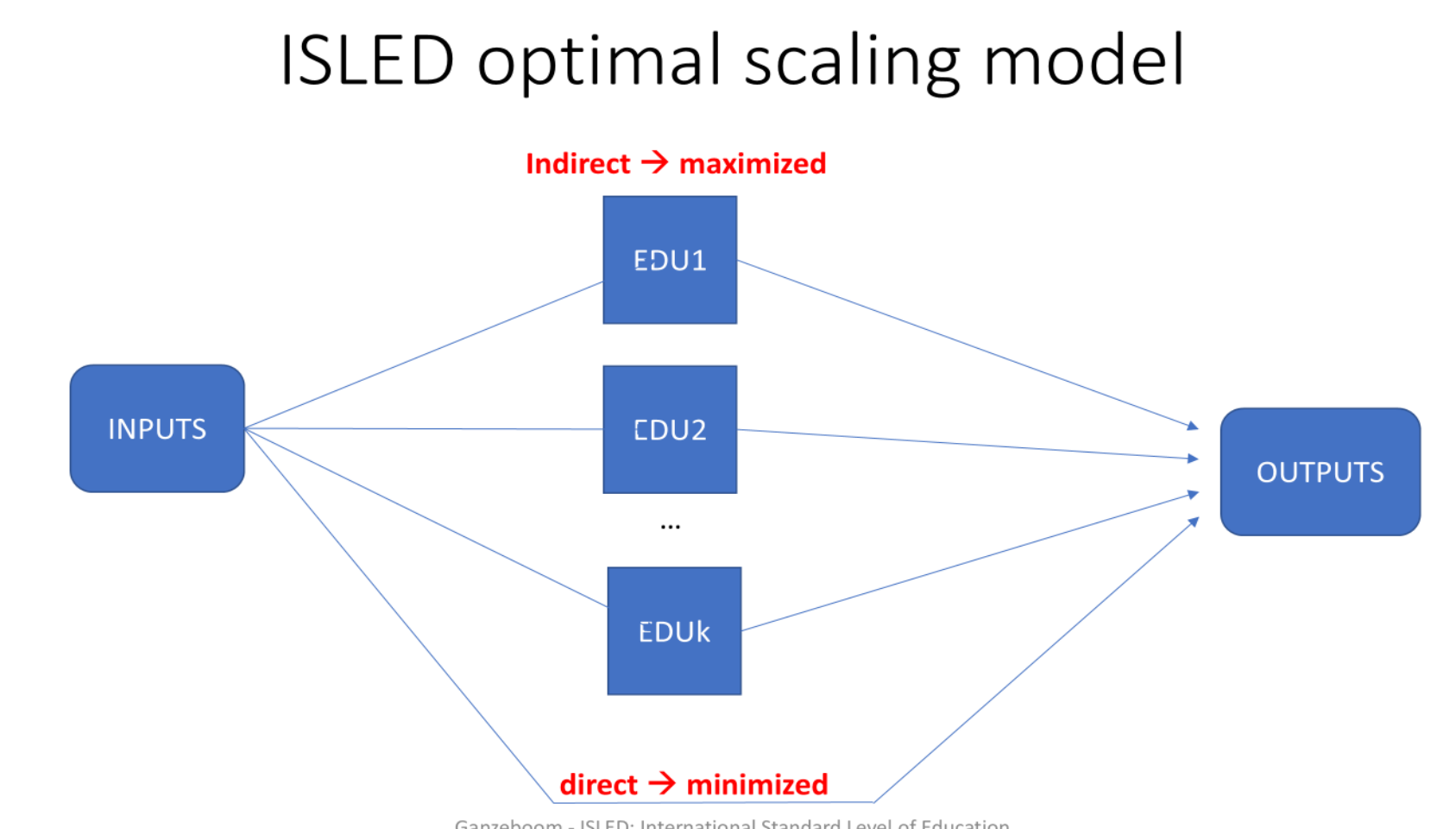
IT IS BETTER TO HAVE A BAD SECOND INDICATOR THAN A SINGLE INDICATOR

## Theory: optimal scaling

- Level of education can be inferred from OUTPUTS (occupation, earnings, spouse's occupation) and INPUT (parental occupations).
- ISLED is constructed by optimally scaling all qualifications in ad mediation model (see Schröder & Ganzeboom, 2014).
- Conceptually, ISLED conceives of education as the reproduction mechanism between parental background and social
- Methodologically, ISLED is the most reliable and valid measurement within a status-attainment framework.

ISLED IS THE BEST SINGLE HIERARCHICAL MEASURE FOR QUALIFICATION MEASUREMENT

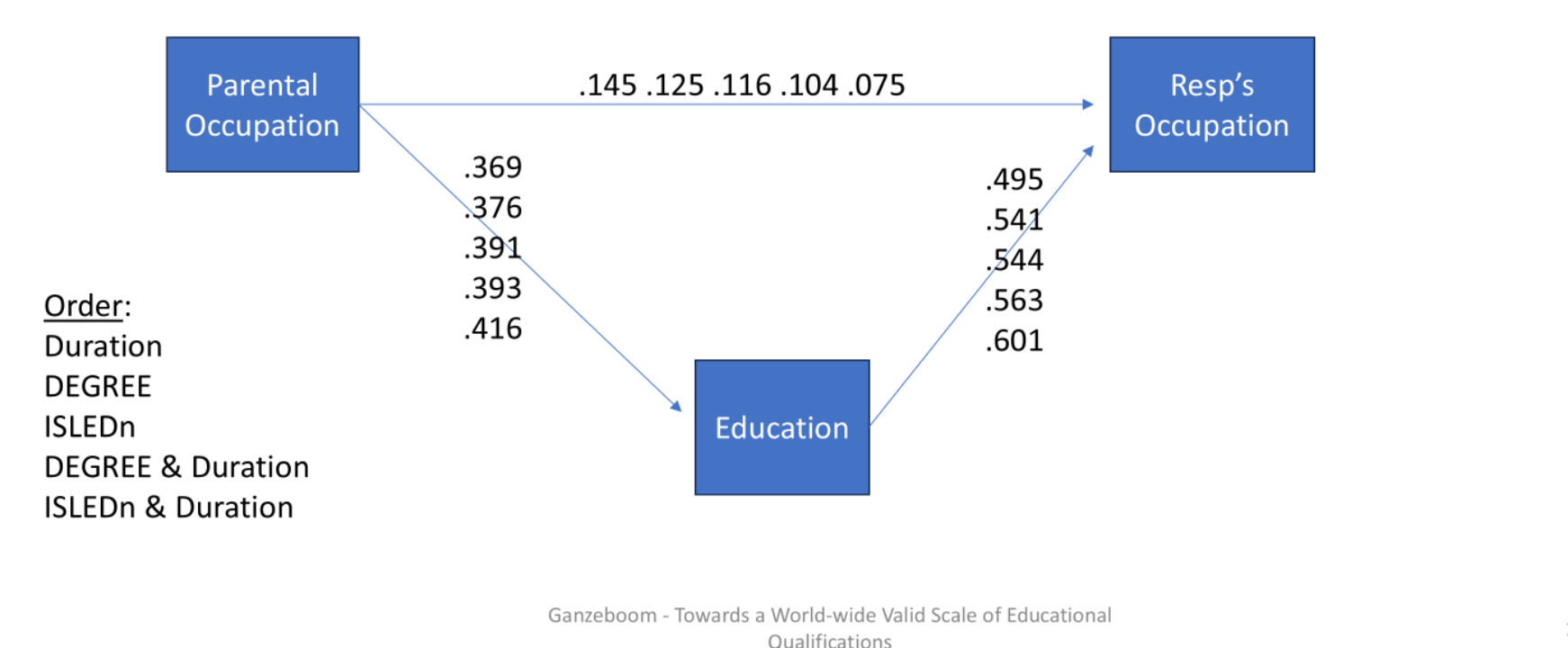
## Optimal scaling model



ISCED-2011	ISLEDn	N
010 Less than primary: Never attended an education programme	1.3	273
020 Less than primary: Some early childhood education	10.6	877
030 Less than primary: Some primary education (excl. level completion)	9.7	3900
100 Primary education	12.2	8995
240 Lower secondary education: General	21.7	12893
242 Lower sec general: Partial level completion, excl. direct access to upper sec educ	14.5	1436
250 Lower secondary education: Vocational	20.2	7424
252 Lower sec voc: Partial level completion, NO direct access to upper sec educ	17.8	196
340 Upper secondary education: General	42.8	19967
342 Upper sec general: Partial level completion, excl. direct access to tert educ	65.9	185
350 Upper secondary education: Vocational	37.4	6703
440 Post-secondary non-tertiary education: General	56.6	2275
450 Post-secondary non-tertiary education: Vocational	37.3	5325
454 Post-sec non-tert educ voc: Level completion, WITH direct access to tert educ	57.9	82
540 Short-cycle tertiary education: General	58.9	4317
550 Short-cycle tertiary education: Vocational	50.6	752
640 Bachelor's or equivalent level: Academic	74.3	9866
650 Bachelor's or equivalent level: Professional	55.9	1858
740 Master's or equivalent level: Academic	93.6	9759
750 Master's or equivalent level: Professional	69.7	1015
840 Doctoral or equivalent level: Academic	94.1	1967
850 Doctoral or equivalent level: Professional	100.3	23
<b>Total</b>	<b>43.6</b>	<b>100088</b>

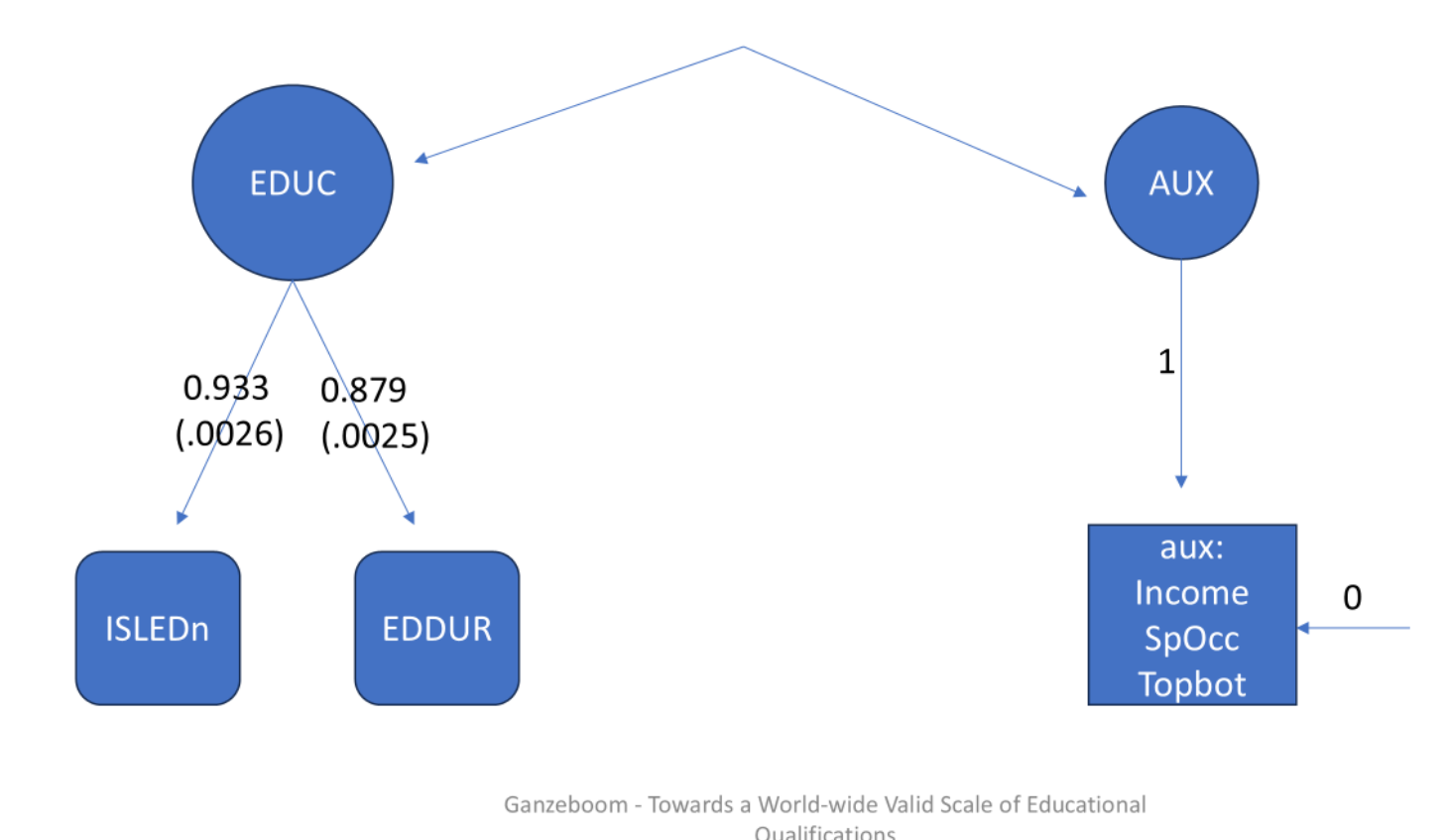
## How ISLED improves

Testing: Intergenerational status reproduction in ISSP 2009 & 2019



## Correlational Validation

Correlational validation model



## Incomplete qualifications

- Incomplete / partial completion have value over and above not starting a programme!
- Having incomplete / partially completed qualifications may apply to as much as 50% of a population.
- **As education expands, partial or not completing a program become more frequent.**
- ISCED-2011 uses its digit-3 to measure incomplete or partially complete qualifications.
- ISSP only allows for complete qualifications.

INCOMPLETE QUALIFICATIONS HAVE VALUE AND SHOULD BE MEASURED (IN ISSP).

## CONCLUSIONS

- Educational qualifications vary wildly between and within societies. ISSP has collected country-specific information on qualifications from its beginning (1985) – this information has been rarely used.
- ISCED-2011 (three digits, 28 categories) makes it possible to harmonize this information without losing much detail.
- All three digits of ISCED-2011 contain hierarchical information, which is not used by common-denominator harmonization.
- ISLED aims to be a conceptually and methodologically superior way to measure level of education using all information. Improvement: about 5-10%,