

Towards a World-wide Valid Scale of Educational **Qualifications**

== work in progress ==

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July 30, 2024

Acknowledgements

- Earlier (extended) presentation: Ganzeboom, Harry BG. “Towards a world-wide valid scale of educational status”, Presented at Leibniz-Institut für Bildungsverläufe LiBfi, Bamberg, December 19 2023, (on: www.harryganzeboom.nl/index.htm).
- I used sources from:
 - Schröder, Heike. 2014. *Levels and Loadings. Two Methods to Improve the Measurement of Education in Comparative Research*. [PhD-thesis] Amsterdam: VU University.
 - Van Ampt, Charlene. 2023. *Harmonisatie van land-specifieke opleidingsmetingen in het International Social Survey Programme ISSP*. [MA-thesis Sociology] Amsterdam: VU University.

Main points / Conclusions

- ISCED-2011 has been introduced in ISSP 2020 – we can now begin to work with it.
- The three digits of ISCED-2011 all contain information about the level of education. This is not only so for Digit 1 (EDULEVEL) but also for Digit 2 (Vocational vs Academic) and Digit 3 (Completion and Access to higher level).
- The project is an attempt to construct ISLEDn, a new and globally valid version of the International Standard Level of Education (ISLED), using ISSP data from the five Social Inequality modules (2007 – 2019).
- Until now the success of ISLEDn is marginal.

(Comparative) measurement of education in ISSP

- DEGREE_XX: Country-specific classification.
 - Content may have changed between rounds. ISSP does not provide a versioning of these data.
- DEGREE: Harmonized version of DEGREE_XX.
 - Content has changed repeatedly in the history of ISSP, including the number and meaning of the categories used. As of 2020: EDULEVEL.
 - See: Ganzeboom, ““What has happened to DEGREE?”. Cape Town (ZA): ISSP Annual Meeting.”, Presentation at ISSP Research Session, Cape Town ZA, April 2015.
- EDUCYRS: Duration of education
 - Supposed to be independently measured. However, there are repeated ‘cheats’, i.e. countries that simply re-express (=recode) DEGREE_XX EDUCYRS.
 - Duration is a weaker, but still surprisingly good measure of level of education. See: Ganzeboom, “Qualifications and Duration as Measures of Level of Education”. Zagreb (HR): ESRA., July 2019.

Problems with the country-specific measures DEGREE_XX and DEGREE.

- The country-specific information DEGREE_XX is hardly ever used.
- Partly in country-specific language, or (even worse) translated into English.
- Users are not aware of the version changes that have occurred in DEGREE.

ISCED-2011

- ISSP adopted ISCED-2011 as a coding frame as of ISSP 2020 (Environment IV).
- We currently have country specific ISCED data from ISSP 2020 and ISSP 2021 (Health II).
- It is time to look at it.

ISCED-2011

- ISCED-2011 is a three-digit code to classify programs and qualifications.
- The three digits have a specific meaning (simplified):
 - Digit 1: Level of education, ranging (ranking) between 000 No education attended, 100 Elementary education, .. 800 PhD training.
 - Digit 2: (40) Vocational / professional; (50) General / academic orientation.
 - Digit 3: Completion, to be coded as (1) Incomplete, no certificate, (2) Partial completion; (3) Completion but no access to higher level; (4) Complete with access to higher level.
- It is clear that Digit 1 is not the only digit that informs about level of education, Digit 2 and Digit 3 also provide hierarchical information.

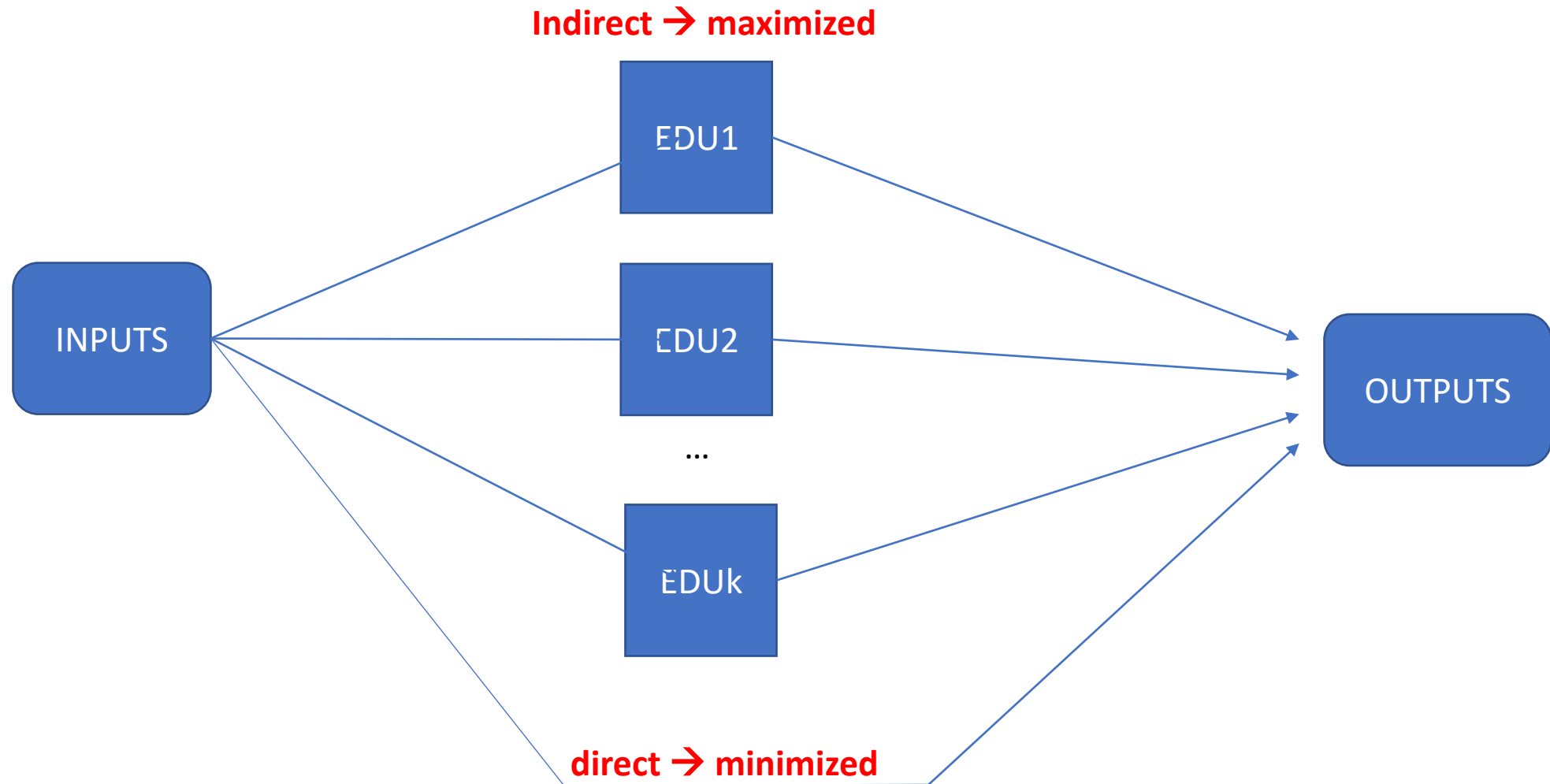
ISLED = International Standard Level of Education

- Developed by Schröder & Ganzeboom (2014) to scale all country-specific qualifications in ESS R1-R5 to a single hierarchical scale.
Schröder, Heike, and Harry BG Ganzeboom. 2014. “Measuring and Modelling Level of Education in European Societies.” *European Sociological Review* 30 (1): 119–36. <https://doi.org/10.1093/esr/jct026>.
- ISLED was effectively developed before ISCED-2011 became available; a new version ISLED56, based on ESS R5-R6, is available, and connects it to ISCED-2011.
- Problems with ISLED:
 - European based
 - Hard to apply outside ESS: ESS does not use ISCED properly, but an adapted version (EDULVLb).

The value of qualifications: conceptual and methodological underpinnings of ISLED

- Value of qualifications can be derived from **outputs**: occupation, partners education; as well as **inputs**: parental educations and occupation.
- Operationally: ISLED is derived as the **optimal scaling** of qualifications is a **mediator between inputs and outputs**.
- Conceptual underpinning: educational qualifications are the social (intergenerational) reproduction mechanisms.
- Methodological underpinning: ISLED aims at measuring the social reproduction mechanism with least measurement error.

ISLED optimal scaling model



ISLEDn: new ISLED based on (worldwide) ISSP data

- A new version of ISLED is needed:
 - Worldwide valid
 - Direct connection to ISCED-2011
- Data: Five ISSP Social Inequality modules I-V (1987 – 2019).
 - Have country-specific measures of qualifications.
 - Have measures of parental occupation and partner's occupation (but not parental and partner's education).
- Problems:
 - The information is very heterogeneous and needs to be harmonized
 - Education: post-harmonize to ISCED-2011
 - Occupations: post-harmonize to ISCO-08.

ISSP data to be used to develop a new ISLED measure

| ISSP | N | #qual | #cntry |
|-------|-------|--------------------------|--------|
| | | <u>ISCED to be coded</u> | |
| 1987 | | | |
| 1992 | | | |
| 1999 | | | |
| 2009 | 55617 | 410 | 38 |
| 2019 | 44539 | 369 | 27 |
| | | <u>ISCED available</u> | |
| 2017 | | | |
| 2020 | 43353 | 312 | 27 |
| 2021 | | | |
| Total | | | 44 |

Codingfile

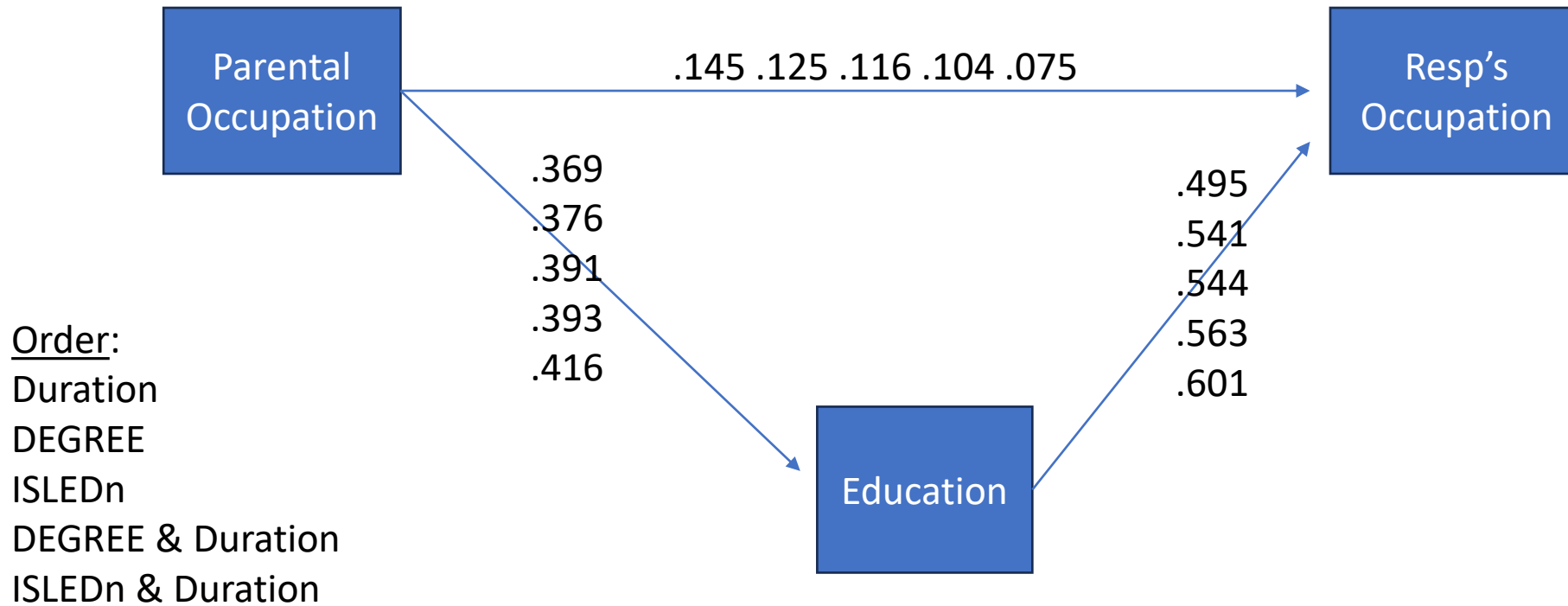
- Codingfile contains:
 - Unique code for DEGREE_xx by wave.
 - Qualification (value) labels
 - N of Cases
 - Mean duration
 - Mean age
 - DEGREE as found in the source files
 - ISCED as available from ISSP 2020 and 2021.
- To be coded:
 - Digit 1
 - Digit 2
 - Digit 3
 - ISCEDn, final (revised) code.

Coding process

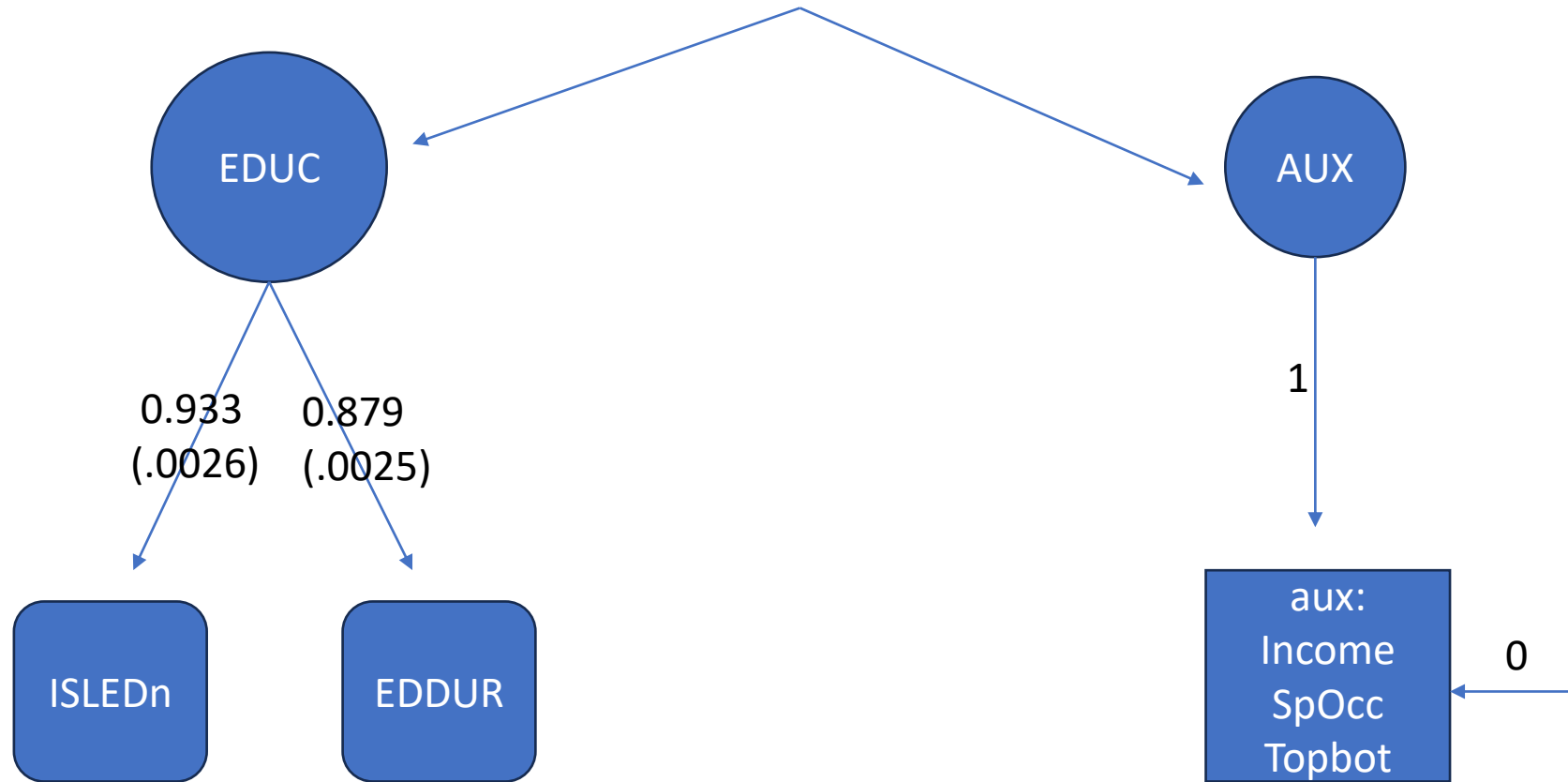
- The three digits are coded independently.
 - Most information on Digit 1 is generated from the old DEGREE code + label
 - Most information on Digit 2 is generated from the label
 - Information on Digit 3 is coded from auxiliary sources
- Auxiliary sources:
 - ISCED codes in ISSP 2020 and 2021.
 - Codes of similar qualifications in ESS and EVS.
 - ISCED manuals (UNESCO and OECD)
 - UNESCO mappings (these are of limited utility..)
 - Wikipedia . Other online encyclopedias.
- **We have now only finished ISSP 2019 and ISSP 2009.**

| ISLEDn by ISCED | Mean | 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 |
| Total | 43.6 | 100088 |

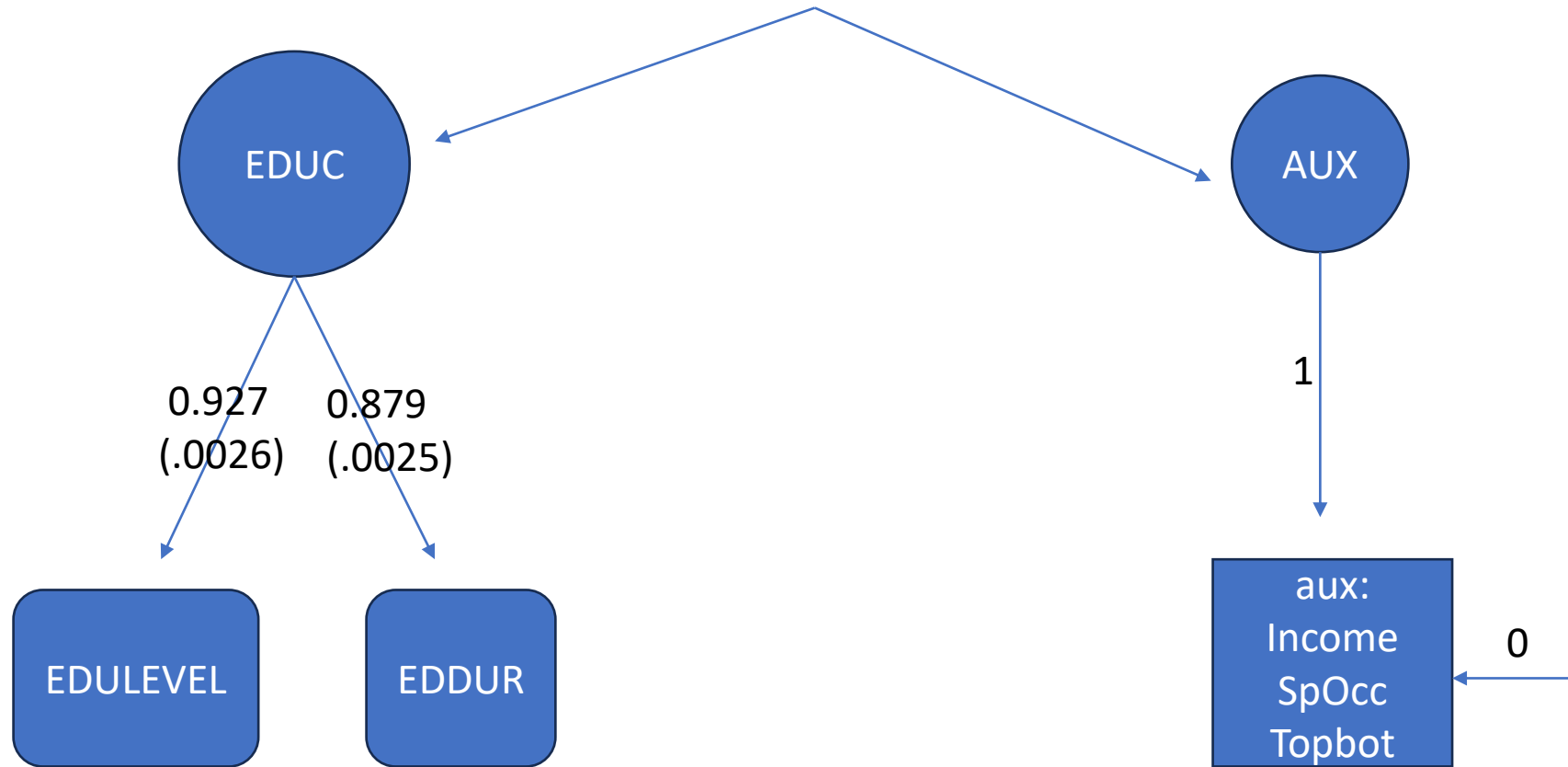
Testing: Intergenerational status reproduction in ISSP 2009 & 2019



Correlational validation model



Correlational validation model



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