



Revisiting the determinants of literacy proficiency

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Aims

- Exploit comparable measures of literacy proficiency in PIAAC and IALS
- Review evidence and discuss how socio-demographic and practice-oriented factors can be implicated in the development of literacy proficiency at an individual level from a life cycle perspective
- Examine changes to underlying structure of the determinants of literacy proficiency in a cross-national setting
- Ascertain how well changes in micro-level determinants over time aggregate into changes to the macro-level literacy profiles
- Contribute to understanding of how determinants of literacy can be implicated in the development of literacy at the individual and country levels



Questions

- **Individual (micro) level analysis**

What factors influence literacy proficiency at the individual (micro) level?

Which factors are the most important?

How has their importance changed over time?

- **Country (macro) level analysis**

How does observed change in national literacy profiles relate to country (macro) level changes in the factors that influence literacy proficiency at the individual level?



Methods

- **Multivariate models at micro-level**

Logistic regression (useful for discrete proficiency scale)

Linear regression (useful for continuous proficiency scale)

Structural equation modelling (useful for capturing indirect and total effects)

- **Correlation analysis at macro-level**

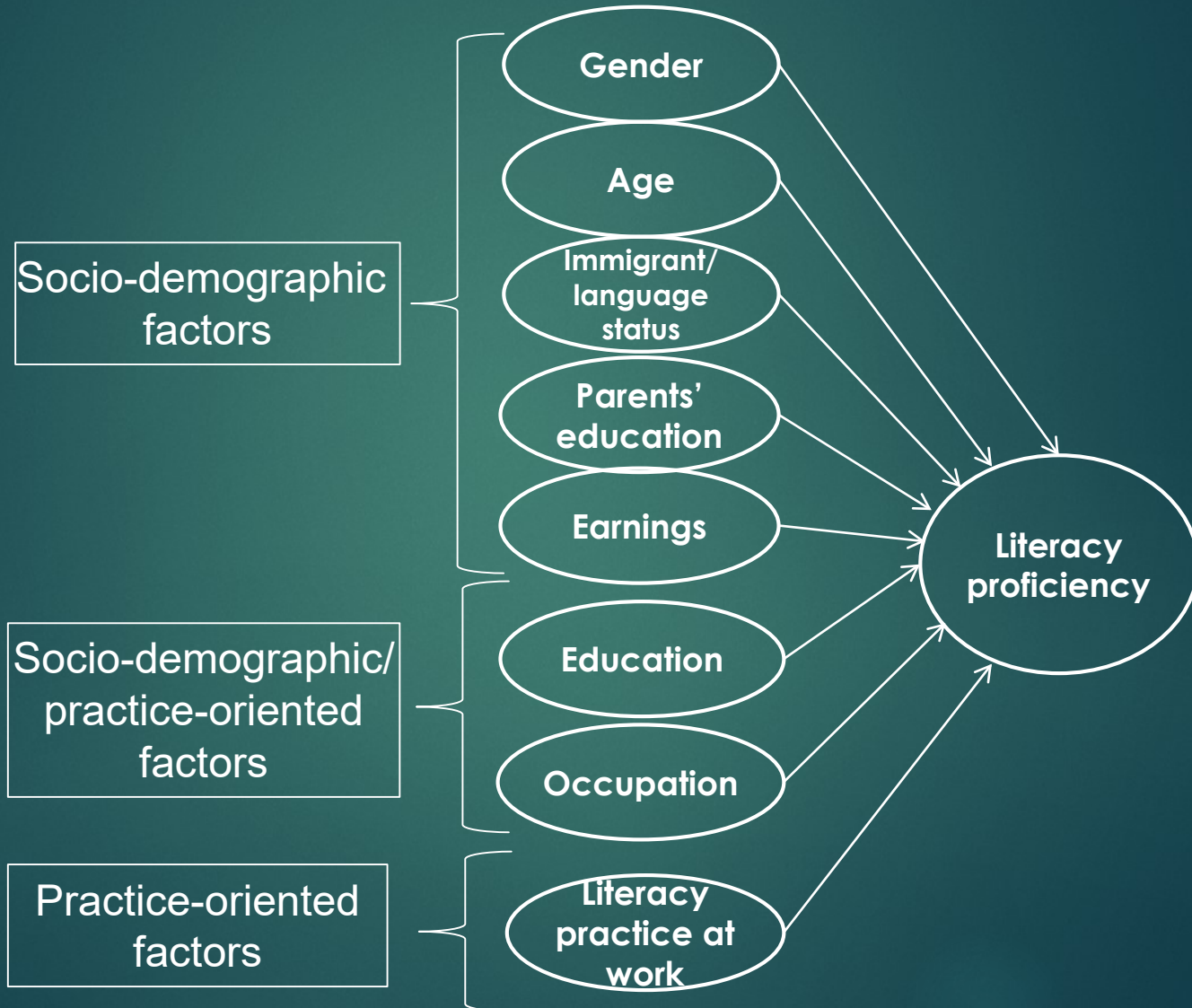
Only 13 countries in the analysis:

Belgium, Czech Republic, Denmark, Finland, Germany, Ireland, Italy, Netherlands, Norway, Poland, Sweden, UK, and USA.

Enables insight into relationship between structural changes to micro-level determinants and changes to national literacy profiles

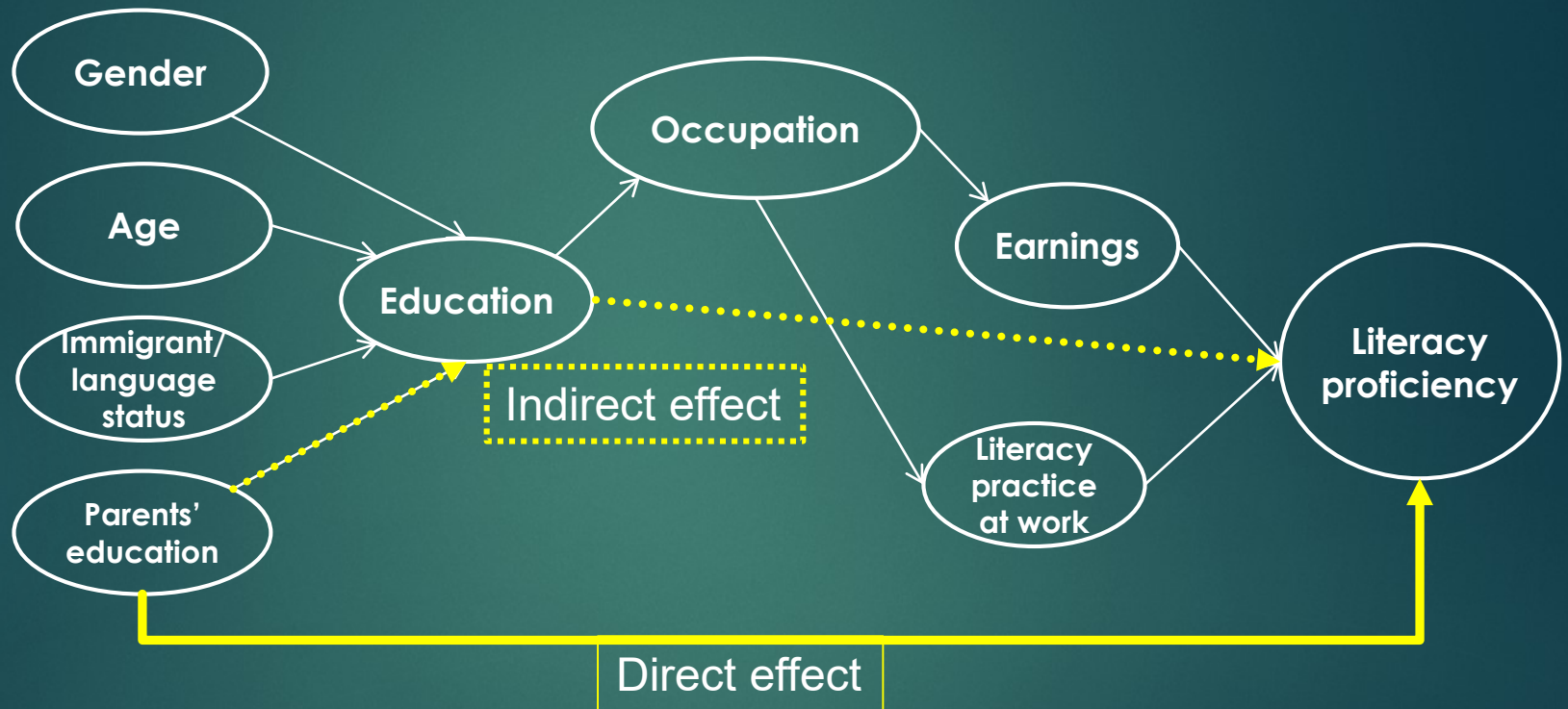


Multivariate models focusing on direct effects only





Structural models focusing on direct, indirect and total effects





Findings

- Education most important micro-level predictor over time and across models for most countries.
- Immigration status can be more important in certain countries particularly those with many recent immigrants (eg. Sweden, Norway).
- This is followed by parents' education and type of occupation.
- When indirect effects of parents' education are taken into account using a structural model, parent's education becomes the most important predictor in the UK and US, and this has increased over time for the US.



Findings

- A few countries have significantly worse literacy profiles over time (incl. Norway, Sweden, US).

More so than otherwise expected from increases to the proportion of foreign speaking adults, and

Despite substantial increases to the proportion of: higher level qualifications among individuals and their parents those who undertake adult education/training; and, those working in high skilled occupations.

- Despite growing number of adults with higher qualifications and in higher skilled occupations, there is a drop in the proportion of adults who report engaging in at least two types of reading at work per week in most countries including the US.



Implications

- **Micro-level relationships and results do not aggregate well into macro-level results.**
 - Importance of assessing micro-level statistical results within a macro level framework of analysis with careful consideration of the mechanisms that link antecedent factors and outcomes.
- **Educational and occupational quality may partly explain why micro-level results do not translate well into macro level results.**
 - Increased variation in proficiency among higher-level qualifications and skilled occupations as these become more prevalent.



Implications

- This increased variation may be related to socioeconomic status (SES) where it plays an increased role in the positional competition for quality education and jobs.
 - In US, increased predictive capacity of parents' education indication that as educational systems are expanding, sorting or stratification by SES is getting stronger.



Implications

- A similar phenomenon may be occurring in relation to skilled occupations.
 - Proportion of skilled jobs increasing but proportion of adults who report engaging in at least two types of reading at work per week is decreasing
 - Technology related? Deskilling process?
 - Measurement related? → need better measures of reading practice in PIAAC
- Results raise important implications for equitable access to quality education as well as the ongoing changing nature of work practices related to literacy proficiency.