The use of test scores in secondary analysis

PIAAC Methodological Seminar

Paris, 14 June 2019

Presentation

The increasing availability of microdata from large-scale assessments of students and adults have spurred a great deal of research in labour economics and economics of education. Test scores from these assessments are often seen as better and more precise proxies of cognitive skills or human capital than years of schooling. Researchers using these data are however often unaware of how assessments are designed, and of how test scores are estimated on the basis of the answers provided by respondents sitting an assessment. Large-scale assessments are primarily designed to describe the distribution of proficiency in the population of interest, and are not intended to provide unbiased measures of the individual proficiency of any single respondent. This has important implications for their use in secondary, individual-level analysis. The purpose of this Seminar is to raise awareness about the methodology used to estimate test scores in large-scale assessments and to stimulate a reflection on how methodological choices made at the production stage affect the use of data in secondary analysis. The Seminar intends to bring together *users* and *producers* of this type of data, in order to stimulate an inter-disciplinary dialogue and reflect on how the production and the dissemination of the data could be improved in order to better serve the multiplicity of demands that these data are called to satisfy.

For more information, including an extended concept note that discusses the main topics of the seminar, please visit the seminar webpage: <u>www.oecd.org/skills/piaac/events/</u>

Agenda

09:00-10:45

Session 1 – Overview

Item 1. Welcome and introduction

Item 2. The use of test scores in secondary analysis: an economist's perspective

Jesse Rothstein (University of California, Berkeley)

Item 3. The measurement of cognitive ability in large-scale assessments

Matthias von Davier (National Board of Medical Examiners)

Item 4. Discussions

Andrew Ho (Harvard Graduate School of Education)

Edwin Leuven (University of Oslo)



10:45-11:15: Coffee break

11:15-12:30

Session 2 – Applications

Item 5. Mixed-Effects Structural Equation Models

Lynne Schofield (Swarthmore College)

Item 6. Factor Models in Economics Research

Sergio Urzua (University of Maryland)

Item 7. Discussion

Irini Moustaki (London School of Economics and Political Science)

12:30-13:30: Lunch break

13:30-15:00

Session 3 – Applications

Item 8. Putting test scores on an interval scale

Timothy Bond (Purdue University)

Item 9. Discussion

Peter van Rijn (Educational Testing Services)

Item 10. The use of survey weights in regression analysis

Jeffrey Wooldridge (Michigan State University)

Item 11. Discussion

Sabine Meinck (IEA)

15:00-15:30: Coffee break

15:30-16:15

Session 4 - Roundtable and Open Discussion

Moderated by Michele Pellizzari (University of Geneva)

16:15-16:45

16:45-17:00

Concluding Remarks

Session 5 – Available Software

Practical Information

Venue: The seminar will be held in the Auditorium of the OECD Boulogne Building, at 46, quai Alphonse Le Gallo, 92100 Boulogne-Billancourt, France. <u>www.oecd.org/site/conferencecentre/</u>

Registration: To register, please complete the attached registration form and send it to <u>piaac@oecd.org</u>. Participation is free of charge.

Seminar webpage: <u>http://www.oecd.org/skills/piaac/events/</u>

