Symposium VII

Wednesday, April 5th, 2017, 15:00 – 16:30

Symposium: The social context of skills: Improving the PIAAC background questionnaire

Chair
Natascha Massing & Silke Schneider (GESIS – Leibniz-Institute for the Social Sciences)

Room: Richard Strauss

Abstract
Developing a background questionnaire (BQ) for a cross-national assessment study like PIAAC is a major challenge. Theoretical input, questionnaire design, ex-ante harmonization, pretesting, coding, as well as negotiations between stakeholders and logistics are all very complex, and time pressure is usually high. Firstly, in order to achieve unbiased estimates in statistical analyses, the background questionnaire needs to cover indicators (and if possible, multiple indicators) of all concepts regarded as relevant predictors, covariates and outcomes of the basic competencies covered in the assessment part. What is „relevant“ is determined by the theoretical framework underlying questionnaire development, which therefore needs to be strong and well-grounded in prior research. Secondly, the chosen indicators should be measured using state-of-the-art instruments and harmonization procedures resulting in reliable, valid and comparable measurements, and if these do not yet exist, they need to be developed and comprehensively tested for crossnational use. Thirdly, in as far as indicators were covered in preceding studies like IALS and ALL, achieving comparability over time was another goal for PIAAC. Fourthly, in order to make efficient use of interview time, questions and routing needed to be highly efficient. This for example means that questions need to be applicable to the whole adult population, and only few or very crucial topics should apply to sub-groups (such as the working population) only. This session brings together experts from various scientific fields – economics, education, labour market sociology and sociology of education – to review and reflect upon the PIAAC BQ and discuss suggestions for future PIAAC cycles. Some of this work was initiated by OECD directly. Important subsequent questions to discuss are: Was the balance right between direct assessment and BQ? Was the balance right between topic areas and concepts within the BQ? Which procedures can ensure that optimal decisions are made in future BQ development, to achieve a BQ that is fit for purpose? What have we learned substantively from PIAAC cycle one that helps revising the BQ for future cycles?

Presentations

- **Title:** Education and Training – What is being measured and what needs to be improved  
  Authors: Natascha Massing & Silke Schneider (GESIS – Leibniz Institute for the Social Science)

- **Title:** A critical review of the 2012 PIAAC background questionnaire.  
  Author: Richard Desjardins (University of California, USA)

- **Title:** Strengths and weaknesses of the PIAAC background questionnaire from a sociological point of view.  
  Authors: Gwendolin Blossfeld (Leibniz Institute for Educational Trajectories, Germany) & Pia N. Blossfeld (University of Leipzig, Germany)

- **Title:** Making PIAAC even better: Perspectives from sociological research on education
Title: Education and Training – What is being measured and what needs to be improved
Authors
Natascha Massing & Silke Schneider (GESIS – Leibniz Institute for the Social Science)

Abstract
Educational attainment is one of the most important control variables in all kinds of survey micro data analysis, but, especially in a study like PIAAC, it is also one of the most important – if not THE most important – variable captured in the background questionnaire for theoretical reasons: Formal education is the main policy instrument for skill production. After initial education, adult education or lifelong learning opportunities become increasingly important in order to maintain or further develop skills and competencies throughout the life course. The investment in training is one of the key measures of policy makers to increase skills and competencies after leaving initial education. However, the analysis of the PIAAC data shows that improvements can be made in the measurement of these two important concepts.

With respect to educational attainment, since the measurement instruments refer to national educational systems, output harmonization is a ‘necessary evil’. The chosen methods of harmonization are a major influence on data quality and comparability. When a harmonised variable carries less information than a non-harmonised (national) one, and the amount of information lost differs across countries, the comparative validity and thus comparability of the harmonised measure is limited. Methods of comparative construct validation can be used to evaluate and improve comparative validity of harmonised variables. By comparing the predictive power of educational attainment on skills using differently coded education variables, we will check empirically which aspects of educational attainment are most important for the analysis of skills across PIAAC countries.

With respect to training, measurement instruments do not require output harmonization. However, the theoretical framework surrounding adult education is much less clear. Again, analysing training and skills information empirically enables us to better understand which aspects of training are important to measure in order to find out more about antecedents to training participation but also to reasons preventing adults from lifelong learning activities. We will conclude our presentation by proposing changes to the questionnaire items and/or variables on education and training for the next cycle of PIAAC. For educational attainment, in order to achieve cross-nationally more comparable and useful variables for PIAAC, they need to be output-harmonized into a better (but still ISCED-based) coding scheme. Country-specific education items should more clearly differentiate vocational and general education than in PIAAC Cycle 1. Concerning training participation, the changes are intended to better measure the intensity and the aims of training participation.

Title: A critical review of the 2012 PIAAC background questionnaire.
Author
Richard Desjardins (University of California, USA)

Abstract
This paper assesses the extent to which the PIAAC 2012 Background Questionnaire (BQ) meets its analytic goals, that is, to provide information that helps understand: (1) The antecedents and outcomes of proficiency in information processing skills; (2) The practices that are associated with the development and maintenance of proficiency; (3) The use of generic skills in the workplace and the match of workers' skills and qualification with job requirements. The paper considers the balance of information collected in different sections of the BQ, and the coverage of different domains of interest such as education and training, labour market participation and skills use. It also attempts to identify priorities for revision of the BQ (together with a rationale for these priorities) and offers suggestions as to how the BQ could be revised to better meet the information needs of researcher and policy makers in the next cycle of the study.

Title: Strengths and weaknesses of the PIAAC background questionnaire from a sociological point of view.

Authors
Gwendolin Blossfeld (Leibniz Institute for Educational Trajectories, Germany) & Pia N. Blossfeld (University of Leipzig, Germany)

Abstract
This contribution aims to discuss the PIAAC background questionnaire with a focus on social inequality issues. The current PIAAC background questionnaire lacks important information for sociologists, making an analysis of the given data rather unattractive. Therefore, we would like to discuss the strengths and weaknesses of the PIAAC background questionnaire from a sociological point of view. For example, previous research has shown that social origin seems to play a particularly important role for educational careers and educational outcomes for both men and women (Baumert & Schümer, 2001; Jackson & Jonsson, 2013; Jonsson et al., 1996; OECD, 2001, 2004). This is particularly true for countries that: (1) track students at a comparatively early age, (2) have a very rigid tracking system, making incorrect (early) placements hard to revise, and (3) have school systems that are organized in half-day schools relying heavily on parents actively helping their children with homework and exam preparation. When analyzing social origin, sociologists usually base their analyses on multi-dimensional social origin measures to gain a better understanding of how different kinds of family capital influence the opportunities of the next generation. To capture all kinds of social origin effects, empirical analyses must not only capture highest parental educational level but also include information on both parental status and parental class as separate concepts (Chan & Goldthorpe, 2007, p. 529; Mayer, 1977, p. 156).

Title: Making PIAAC even better: perspectives from sociological research on education and the labor market.

Authors
Jan Paul Heisig & Heile Solga (WZB Berlin Social Science Center, Germany)

Abstract
"The first round of the PIAAC is a major milestone for research on skills, education, and employment, and it has stimulated exciting research on a wide variety of topics. At the same time, PIAAC, like any data set, also has certain limitations. In this contribution, we describe some of the issues that we have encountered while working with PIAAC and suggest changes for future cycles.

Perhaps the greatest strength of PIAAC is its comparative nature. For this potential to be
realized, researchers need to have access to maximally detailed individual-level data for the largest possible set of countries, while respecting reasonable standards of confidentiality and data protection. Currently, public use files (PUFs) are readily available for all countries except Australia, but important information is coarsened substantially or not available at all in the PUFs. A few countries provide restricted-access Scientific Use Files (SUFs), but their value for comparative research is very limited because the majority of countries do not offer a SUF. Provision of access to SUFs for all countries based on a single application procedure would greatly facilitate the work of comparative researchers.

As for the contents of the background questionnaire, a unique and remarkable feature of the first round of PIAAC is the (perhaps excessively) large number of items devoted to skill use at work and in private life. In other areas the information provided is relatively thin, especially in the PUFs. Drawing on our own research and current debates in sociology and adjacent disciplines, we advocate the collection/provision of more comprehensive information on the following aspects:
- Educational biographies (e.g., more fine-grained information on fields of study, information on final grades)
- Immigrant background (e.g., country/region of origin)
- Family background (e.g., parental occupation)
- Health (e.g., chronic conditions)
- Economic situation (e.g., household income)
- Income of last job for those not employed at time of interview

Title: A critical evaluation of the PIAAC cycle 1 background questionnaire.

Authors
Jim Allen & Rolf van der Velden (ROA, Maastricht University, Netherlands)

Abstract
In this paper we provide an evaluation of the background questionnaire (BQ) as it was developed in Round 1 of the first cycle of PIAAC. As members of the PIAAC consortium we bore the primary responsibility for developing the cycle 1 BQ. In that role we frequently encountered issues that were difficult to solve within the time frame of the first cycle, due to the heavily path-dependent nature of the project and the difficulty of altering things in a later stage of proceedings without causing major problems for the countries as well as our consortium partners. Since the BQ was finalized prior to the round 1 field phase (the same BQ being implemented in rounds 2 and 3 with only minor modifications) we have had the opportunity to reflect on the process as well as to extensively analyse the data with a view to establishing the things that worked well, and perhaps more importantly the things that didn’t work as well as might have been hoped. In the capacity of leaders of the BQ development in cycle 1 we have twice been engaged by the OECD to conduct an evaluation of the BQ. The first occasion resulted in a general report on the PIAAC BQ finalized in the spring of 2015. The second occasion, currently ongoing, involves a detailed evaluation, together with partners Silke Schneider and Natascha Massing form GESIS, of the education and training module which will culminate in a proposal for an improved module for this section of the BQ. In this paper we will focus heavily, although not exclusively, on this section of the BQ. The evaluation addresses both general points relating to the process of BQ development, as well as more specific points relating to the various BQ sections and the concepts covered in them.