Symposium X

Thursday, April 6th, 2017, 9:45 – 11:15

Symposium: Assessing non-cognitive skills in large-scale assessments

Chair
Beatrice Rammstedt & Daniel Danner (GESIS – Leibniz-Institute for the Social Sciences, Germany)

Room: Joseph Haydn

Abstract
The symposium addresses different concepts and different measurement approaches for non-cognitive skills and especially addresses how noncognitive skills can be measured in large scale assessments with limited time and in heterogeneous samples. Clemens Lechner emphasizes the relevance of non-cognitive skills by demonstrating that conventional markers of cognitive skills such as aptitude tests are confounded with non-cognitive skills. Daniel Danner and Beatrice Rammstedt illuminate the incremental value of the Big Five facet structure for predicting real life outcomes. Susanne Weis introduces social skills, how they can be assessed and to what extent social skills can predict outcomes beyond the Big Five. Richard Roberts suggests situational judgments tests as an alternative way for assessing non-cognitive skills and presents data demonstrating the incremental validity of situational judgment tests in various countries.

Presentations

- Title: Identification problems in educational psychology: A replication and extension of Borghans et al. and Salkever.
  Author: Clemens Lechner (GESIS – Leibniz-Institute for the Social Sciences, Germany)
- Title: The incremental value of a big five facet structure.
  Authors: Daniel Danner & Beatrice Rammstedt (GESIS – Leibniz-Institute for the Social Sciences, Germany)
- Title: Social skills: A valuable complement in large scale assessments?
  Authors: Susanne Weis (University of Koblenz-Landau, Germany) & Richard D. Roberts (Professional Examination Service, USA)
- Title: Situational judgment tests: Beyond self-report assessment of the big five?
  Authors: Richard D. Roberts, Jeremy Burrus & Gabriel Olaru (Professional Examination Service, USA)

Title: Identification problems in educational psychology: A replication and extension of Borghans et al. and Salkever.

Author
Clemens Lechner (GESIS – Leibniz-Institute for the Social Sciences, Germany)

Abstract
In two equally enlightening contributions on identification problems in personality psychology, Borghans, Golsteyn, Heckman, and Humphries (2011) and Salkever (2015) discussed two questions with potentially farreaching implications for studies on the effects of cognitive skills on important life outcomes: (1) whether measures of “achievement” and
"intelligence" are distinct; (2) and to what extent achievement measures are confounded with non-cognitive skills (personality). In the present article, we revisit this controversy, identify unresolved issues, and provide a fresh look at the key questions. An independent replication and extension using a large representative sample of German ninth-grade students (N = 13,648) demonstrates that achievement and intelligence tests are highly but not perfectly correlated. Non-cognitive skills account for a substantial share of the variance in achievement but only a small share of that in intelligence. Importantly, non-cognitive skills incrementally explain variance in achievement after adjusting for intelligence. The problem of achievement measures being confounded with non-cognitive skills is particularly pressing for school grades, which are only modestly correlated with intelligence and highly laden with non-cognitive skills. We recommend that studies using achievement tests or school grades to identify the effects of cognitive skills on important life outcomes routinely control for non-cognitive skills.

**Title: The incremental value of a big five facet structure.**

**Authors**  
Daniel Danner & Beatrice Rammstedt *(GESIS – Leibniz-Institute for the Social Sciences, Germany)*

**Abstract**  
On a global level, non-cognitive skills or personality characteristics can be described along five dimensions: extraversion, agreeableness, conscientiousness, emotional stability, and openness. Previous research has already demonstrated that these constructs are related with competence, educational attainment, success in the labor market, and life in general. We suggest that a facet structure of the Big Five allows a more fine grained description of non-cognitive skills also a better prediction of such life success indicators. Using the Big Five Inventory 2 (BFI-2) and data from three large scale assessments (N=2,000) from the US, the UK, and Germany, we examine the incremental predictive value of Big five facets over Big Five dimensions and discuss conceptual and practical implications.

**Title: Social skills: A valuable complement in large scale assessments?**

**Authors**  
Susanne Weis *(University of Koblenz-Landau, Germany)* & Richard D. Roberts *(Professional Examination Service, USA)*

**Abstract**  
Social skills are seen as an important predictor of life and job success, both in laypersons' as well as employers' concepts of human resources. Social skills seem to represent the prototype of noncognitive skills and thus, are one of the major candidates for upcoming large scale assessments that want to extend their scope. This contribution first addresses the potential role of social skills within a predictor-criterion-model of variables assessed in large scale assessments such as PIAAC. Second, the paper describes the methodological challenges and opportunities in assessing social skills. Third, some data based on a large OECD online survey (N=7525) are presented investigating a) the psychometric properties of social skills as assessed by self-reports varying different item and response scale formats and b) the validity in predicting PIAAC outcomes over and above the Big Five personality dimensions and facets.
Title: Situational judgment tests: Beyond self-report assessment of the big five?

Authors
Richard D. Roberts, Jeremy Burrus & Gabriel Olaru (Professional Examination Service, USA)

Abstract
Situational Judgment Tests (SJTs) are a commonly used method in personnel selection and training, and more recently have begun to be used in educational contexts. Typically, these assessments contain a situation describing a dilemma or problem that can be solved with relevant knowledge, skills, abilities and other characteristics, about the correct behavior in that given situation. Respondents are presented with different options and are required to select the most appropriate response. We discuss recent research that uses this methodology to assess each of the Big Five personality factors, that is Conscientiousness, Agreeableness, Emotional Stability, Openness and Extraversion. Two studies involving cohorts of children and adolescents given SJTs to assess Conscientiousness, not only indicate a similar nomological network as found with self-report assessments, but also noteworthy advantages (e.g., repurposing the assessments to be formative, closer alignment with emerging social and emotional learning curriculum). In two further studies, conducted in several countries with recent high school graduates, SJT assessments of all Big Five constructs not only again mirror findings concerning the various nomological networks associated with each construct, but extend to prediction of meaningful workforce outcomes (e.g., supervisor ratings, counterproductive workplace behaviors). Numerous challenges exist for using this approach in large scale group score assessments, though benefits may far exceed costs. The presentation concludes with a discussion of these issues, and some potential remedies that could make this a reality.