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### The Measurement of Teenagers' General Cognitive Abilities in the German Socio-Economic Panel Study (SOEP)

### SOEP-Pretest in 2005

- Pilot study on 217 teenagers
- Testing teenage first-time respondents' full cognitive abilities and potentials and school/training attainment
- Test: I-S-T 2000 R (Amthauer et al. 2001) (copy fee = 1 € / Interview)
- Interview time: max. 30 minutes for test (stopwatch as additional incentive)

#### **Dimensions**

- Verbal potential (analogies)
- Numerical potentials (number sequences)
- Figural potentials (matrices/pictorial material)
- Reasoning (= sum score)

#### Results of Pretest in 2005

Solga, Heike; Stern, Elsbeth, Bernhard v. Rosenbladt; Schupp, Jürgen; Gert G. Wagner (2006): The Measurement and Importance of General Reasoning Potentials in Schools and Labor Markets. DIW Research Notes 2006-10. Berlin: DIW Berlin.

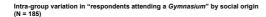
### 1. Ein treffendes Wort ...

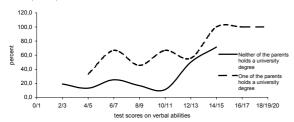
### 2. Ein gutes Zeichen ...

Ihnen eine unvollständige Gleichung vor, für die Sie die fehlenden in sollen, um das Ergebnis hinter dem Gleichheitszeichen (=) zu erz

### 3. Eine passende Figur ...

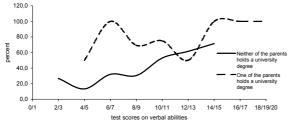
## **Analysis of Social Disparities between Cognitive Potentials and School Attainment**





dents attending a Gymnasium in each test score group - separately for each parental edu group

Intra-group variation in social origin (N = 185)



nendation for attending a Gymr.

### **Initial findings**

- Cognitive abilities explain part of the intra-group variation for children with highly educated parents as well as for those whose parents have a lower level of education
- For both social groups, the likelihood of attending a Gymnasium increases with the child's learning potential. For children from lower-educated families, the initial results indicate the (general) social disadvantage in educational opportunities
- Teachers' recommendations and children's general cognitive abilities
  - Teachers' recommendations for children from highereducated families seem to be fairly independent of children's general cognitive abilities
  - But for children with less-educated parents, teachers' recommendations are associated with general cognitive

### **SOEP's Potential in Analysing Cognitive Abilities for Life Course**

# (250 respondents Birth cohort 198) (250 respondents (250 respondent (250 respondent mple size for the 750 1000 1250 1250 750

### **Outlook**

The measurement of general cognitive abilities of seventeen-year-olds will add an innovative component to the SOEP with future high analytic potential

- to investigate the relationships between school careers, educational attainment (school degrees achieved) and cognitive abilities
- to disentangle the impact of school attainment and learning potential on future life-course outcomes (e.g., training careers, participation in lifelong learning, employment careers, health behavior, etc.)

#### The "Discovery" of Youth Learning Potential Early in the Life Course

A project funded by (2007-2011)



PI - Heike Solga (WZB, Berlin)

in cooperation with E. Stern (ETH Zurich), Jürgen Schupp & Gert G. Wagner (SOEP, DIW Berlin)

#### **Objectives**

- Insights for improving skill formation processes among young people (skill acquisition)
- Contribution to interdisciplinary research efforts on social disparities in educational attainment and labor market success

