

## “PIAAC, English Pilot Study on Non-Cognitive Skills” – Study description for the GESIS Data Catalogue

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### Content

This online survey was designed to test the measurement properties of nine personality scales – the Big Five, Traditionalism, Self-Control, Self-Efficacy, Honesty/Integrity, Socio-Emotional Skills, Intellectual Curiosity, Job Orientation Preferences and Vocational Interests. Eight of these nine scales are existing scales (or combinations of scales) available for use in public domain. The scale assessing socio-emotional skills was developed by an expert group<sup>1</sup>. The complete formulations of items from all the scales including the different forms/test conditions of the scales are presented in the data documentation.

#### Simplified scales

Based on the work of members of the expert group, simplified versions of original scales were developed (see data documentation). This was done in order to make the wording of the original scales more appropriate for use with general adult population (in many cases the original items were perceived as possibly too complex and abstract for less literate members of general population).

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Not all items have simplified versions since in some cases the original formulations were seen by the expert group as suitable for the target population. This is especially the case in the Job Orientations, Integrity/Honesty and Vocational Interests' scales as well as the entire Intellectual Curiosity scale. In total, there are 174 original items and 130 simplified or reversed versions of the items.

#### Neutral/middle point

In addition to comparing scales containing the original and simplified items, the second main design feature of this online survey was the use of a neutral/middle point in the Likert scales (agree/disagree). In particular, there were two versions of each original and simplified scale – one with 5 agree/disagree response options, including a “neither agree nor disagree” neutral/middle category and another with 4 response options, which did not include the option of “neither agree nor disagree”. This was done in order to see which of the two response formats worked better for each of the scales in target population.

#### Balanced scales

Some of the original scales were balanced and some unbalanced, with the majority of items being part of balanced scales. The unbalanced scales (self-control, self-efficacy and socio-emotional skills) were balanced by including alternative reverse formulations of a selected small group of items. The process of balancing was achieved by reversing the original formulations of 22 items (in the item bank document, the reversed items are marked with “R” while newly reversed items are marked as “new R”). These newly reversed items were tested against their original counterparts in order to see if the creation of balanced scales led to improvements (comparing both item- and scale-level properties).

#### Multiple choice vs forced choice

In case of the Vocational Interest scale, the two design features that were tested were the original vs simplified and multiple choice vs forced choice item formats. The original format of the Vocational Interest scale was multiple choice. However, the force choice format is often used in other Vocational Interest scales and the expert group wanted to test which of the two formats works better for general adult population.

#### Design of the online survey

The objectives of the online survey were the following, to test:

1. the measurement characteristics of the selected scales;
2. the relationships of the selected scales with background and other characteristics of respondents;
3. different item formulations – original vs. simplified;
4. different response options – with or without a neutral/middle category;
5. scales with different item formats – multiple choice vs. forced choice (voc. interests scale); and
6. the new balanced scales (in comparison with the original unbalanced scales).

Table 1. Design of the online survey

Scale	Number of original and simplified items	Response scale	Test of simplified scale	Test of middle point	Test of balanced items	Test of response format/method
Big Five	60 - 54	Agree/disagree	yes	yes	no	no
Traditionalism	8 - 8	Agree/disagree	yes	yes	yes	no
Self-Control	20 - 15	Agree/disagree	yes	yes	yes	no
Self-Efficacy	8 - 7	Agree/disagree	yes	yes	yes	no
Socio-Emotional Skills	18 - 18	Never/always	yes	no	no	yes*
Job Orientations	12 - 6	Not at all/very important	yes	no	no	no
Integrity-Honesty	12- 6	Agree/disagree	yes	yes	no	no
Vocational Interests	30 - 24	Like/dislike	yes	yes	no	yes**
Intellectual Curiosity	6 - 2	Not at all/to a high extent	no	no	no	no
<b>Total</b>	<b>174 - 130</b>	<b>5 different response scales</b>	<b>8 out of 9 scales</b>	<b>7 out of 9 scales</b>	<b>4 out of 9 scales</b>	<b>2 out of 9 scales</b>

\* Two versions of Always/Never scale were tested, with 4 and 6 answer categories

\*\* Two item formats were tested: multiple choice vs forced choice

## Background questionnaire

The survey included a number of socio-demographic, economic and personal wellbeing indicators as well as a short cognitive ability test.

Socio-demographic characteristics: Gender, age, country of birth/residence, mother tongue, marital status, educational attainment, and parental education

Economic and wellbeing indicators: Broad activity status, occupational status, income, subjective health, social trust, life satisfaction, and personal wellbeing

Quality control questions: In order to check the quality of responses, the survey included three quality control items placed within the Big Five, Self-Control, and Socio-Emotional skills scales. These were used, together with other indicators of data quality, to create an overall quality control indicator and guided the exclusion of poor quality responses.

## Methodology

Geographic Coverage	United States (USA) and United Kingdom (UK)
Universe	Persons between 16 and 65 years in the United States and United Kingdom
Selection Method	<p>Around 8,000 complete responses were collected in the first phase and around 2,000 in the second phase. Some 25% of respondents were excluded from the data base after failing to meet various quality control criteria - country of residence, age, testing time, ability test, consistency of answers, and answers on quality control questions. Thus, in the final sample there are 4,957 US respondents 953 UK respondents in the first phase and additional 1,606 US respondents in the second phase.</p> <p>The sample was a convenience sample and is unrepresentative of the populations of the US and UK. Quotas were used to ensure a gender, age and regional distribution that broadly represented census data in the US and UK. These desired gender distribution was not achieved as there are somewhat more women than men in both the US and UK samples.</p>
Mode of Data Collection	The survey was conducted online. The Survey was implemented using the Survey Monkey platform.
Survey implementation	<p>The survey was conducted in two phases:</p> <p>In the <u>first phase</u>, each respondent was randomly assigned to one of the four test conditions (as indicated above, Socio-emotional skills and Vocational interest scales have slightly modified test conditions):</p> <ul style="list-style-type: none"><li>Condition A: Original scales with neutral response option</li><li>Condition B: Original scales without neutral response option</li><li>Condition C: Simplified scales with neutral response option</li><li>Condition D: Simplified scales without neutral response option</li></ul> <p>Apart from the nine personality scales, all other scales were assigned to all respondents, including the ability test which was administered as the last scale in the survey.</p> <p>In the <u>second phase</u>, three groups of respondents (around 500 in each group) were administered different sets of personality scales under all four test conditions. In particular, the first group of respondents were assigned the Big Five questionnaire with 60 items in four conditions, representing 240 items in total (plus all other additional variables and ability test). The second group were administered the Traditionalism, Self-Control, Self-Efficacy and Socio-Emotional skills scales (54 items) in all four conditions (216 items in total). The third group was administered the Integrity/Honesty, Job orientations and Vocational Interests scales (54 items) in all four conditions as (216 personality items).</p> <p>The second phase was added to the project in order to complement the between-subject design of the first phase with a within-subject design, in order to identify scale and item properties across different conditions in a more straightforward manner.</p>

Missing data	Respondents were not allowed to skip any of the personality questions. Only completed responses are retained in the data base. The only missing data on personality items in the two datasets are those missing by design.
Data Collector	Cint company
Date of Collection	06.2016 – 07.2016

## Data & Documents

Dataset	<p>Number of Units: 5910 (First phase) / 1606 (Second phase)</p> <p>Number of Variables: 716 (First phase) / 710 (Second phase)</p> <p>Analysis System(s): SPSS, Stata</p>
Availability	C - Data and documents are only released for academic research and teaching after the data depositor's written authorization. For this purpose the Data Archive obtains a written permission with specification of the user and the analysis intention.
Available Data and Documents	<ul style="list-style-type: none"> <li>• Two datasets (Stata and SPSS format), containing data from the first and second phases</li> <li>• Questionnaire item bank – presenting all scales and items, in all four formulations/test conditions</li> <li>• Codebook – presenting variable names, original item formulations and response options</li> <li>• Design scheme – graphically presenting implemented survey design in both phases</li> </ul>

## Publications

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*conscientiousness*. University of Illinois at Urbana-Champaign.

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## Groups

### Study List

- [ZA5650](#) Programme for the International Assessment of Adult Competencies (PIAAC), Cyprus
- [ZA5845](#) Programme for the International Assessment of Adult Competencies (PIAAC), Germany - Reduced Version
- [ZA5846](#) Programme for the International Assessment of Adult Competencies (PIAAC), Germany - Extended Version – Regional Data
- [ZA5963](#) Programme for the International Assessment of Adult Competencies (PIAAC), Germany - Extended Version – microm data
- [ZA5951](#) Programme for the International Assessment of Adult Competencies (PIAAC), Germany – Prime Age (2012)
- [ZA5969](#) Competencies in Later Life (CiLL) - Programme for the International Assessment of Adult Competencies (PIAAC), Germany
- [ZA5989](#) PIAAC-Longitudinal (PIAAC-L), Germany
- [ZA6712](#) Programme for the International Assessment of Adult Competencies (PIAAC), log files
- [ZA6940](#) Programme for the International Assessment of Adult Competencies (PIAAC), English Pilot Study on Non-Cognitive Skills
- [ZA6941](#) Programme for the International Assessment of Adult Competencies (PIAAC), International Pilot Study on Non-Cognitive Skills