**Instruction five point test data**

*Introduction*

The Five point test (FPT), also known as the Design Fluency Test, is a cognitive assessment tool that measures an individual's ability to generate as many different/novel designs as possible within a certain amount of time, using a limited set of shapes and lines. The FPT has been used in research to investigate various aspects of cognitive functioning, such as executive functioning (such as strategy use), working memory, and creative thinking. The advantage is that it is a standardized measure: The FPT has a standardized administration protocol and scoring system, which potentially increases e.g., the reliability of the test administration. Based on research, the FPT is believed to be able to detect subtle cognitive changes within and differences in cognitive functioning among individuals. Also, given the fact that the instruction is relatively easy, it can be used across different populations, including children, adults, and older adults, making it a versatile tool.

The traditional scoring is to give participants within a limited time interval (e.g., 90 seconds or in our case 180 seconds) and then count all unique patterns and subtract the number of doubles.

We administrated this test among students at secondary school in Limburg who are in grade 3 and therefore typically 15 years of age. Although the test is traditionally administered on paper, we developed an online version of the FPT. This allows us to measure e.g., reaction times more precisely.

*Variables in main file (Ozdb\_fivepoints\_vo3\_2019-2020\_vo4\_2020-2021.csv)*

primary counts the order in which submitted patterns entered the server.

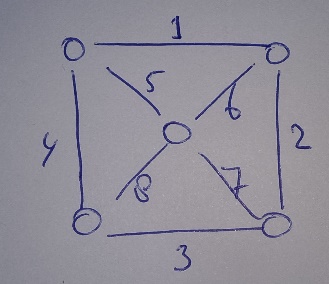
idll\_vo3lv is the student identifier, so best is to sort first on idll\_vo3lv and than on primary, to get the input student by student for each of them on the right order.

name is the type of data that is stored and value the content of this data

timestamp is the time this data was stored

name can be:

patternsm: The submitted pattern, giving a 1 for each line that is drawn and 0 for each line that is not drawn when submitting the figure. This is the numbering of the lines:



timestampsm: how many milliseconds after the page was retrieved did the student submit the pattern

statuscl: For each click was it an on- or an off-click

numbercl: In what order have the lines been clicked (in theory statuscl can be derived from this. The first time a line is clicked it should be on, the second time it should be an off, …).

timestampcl: gives for each click the unix time stamp

timestampload: Gives thes unix time stamp for the moment the page was loaded. Timestampload + timestampload = the time the page was submitted

*Original set up*

The original set-up can be seen (in Dutch) at inventaar.nl/vragenlijst

You need a password to enter, that can be used once. We will provide some passwords.

*Timing*

We used a time limit of 180 seconds. Usually, participants get 90 seconds for completing this test. In the data set, you’ll find that sometimes people continued slightly longer than 180 seconds. You can take out all the responses after 180 seconds, but also use shorter time spans.

In some other cases, the timing does not make sense. These problems could result from problems with the script in the web page running well in the local environment or because respondents used the forward and back buttons of the browser. If timing is important, the best approach is not to use very long spells.

*Big 5 data*

The file big5.csv contains the responses of participants on a Big 5 personality test. The theory of the Big 5 distinguishes five personality traits: Openness, Conscientiousness, Extraversion, Agreeableness, and Emotional stability (for more information, see e.g., https://en.wikipedia.org/wiki/Big\_Five\_personality\_traits). For each traits, several statements are given to the student (items) asking to participant to state to which extent this applies to him. These responses are then together form a score for each trait.

This is the stata code that generated the five factors, so you can see which questions belong to which trait:

alpha karak2\_vo3lv karak87\_vo3lv karak89\_vo3lv karak5\_vo3lv karak94\_vo3lv karak2b\_vo3lv, gen(open) item std

alpha karak6\_vo3lv karak8\_vo3lv karak7\_vo3lv karak10b\_vo3lv karak95\_vo3lv karak98\_vo3lv, gen(cons) item std

alpha karak12\_vo3lv karak88b\_vo3lv karak11b\_vo3lv karak53b\_vo3lv karak96\_vo3lv, gen(extra) item std

alpha karak50\_vo3lv karak16\_vo3lv karak15\_vo3lv karak93\_vo3lv karak16b\_vo3lv, gen(agree) item std

alpha karak92\_vo3lv karak20\_vo3lv karak19\_vo3lv karak90\_vo3lv karak97\_vo3lv, gen(neur) item std

These are the items (in Dutch):

karak2\_vo3lv double %12.0g Ik barst van de ideeën

karak6\_vo3lv double %12.0g Ik doe klusjes meteen

karak12\_vo3lv double %12.0g Ik ben stil in een groep van vreemden

karak50\_vo3lv double %12.0g Ik leef mee met anderen

karak92\_vo3lv double %12.0g Ik stel andere kinderen op hun gemak

karak87\_vo3lv double %12.0g Ik zoek graag allerlei informatie bij elkaar

karak8\_vo3lv double %12.0g Ik houd me altijd aan afspraken

karak88b\_vo3lv double %12.0g Ik vind het leuk om het middelpunt van de belangstelling te

zijn

karak16\_vo3lv double %12.0g Ik ben geïnteresseerd in anderen

karak20\_vo3lv double %12.0g Ik ben snel gestrest

karak89\_vo3lv double %12.0g Ik denk lang over dingen na

karak7\_vo3lv double %12.0g Ik laat mijn spullen slingeren

karak11b\_vo3lv double %12.0g Ik praat niet veel

karak15\_vo3lv double %12.0g Ik probeer mensen te helpen

karak19\_vo3lv double %12.0g Ik raak makkelijk van streek

karak5\_vo3lv double %12.0g Ik heb een grote woordenschat

karak10b\_vo3lv double %12.0g Ik ben netjes en precies als ik iets moet doen

karak53b\_vo3lv double %12.0g Ik begin gesprekken met anderen

karak93\_vo3lv double %12.0g Ik begrijp vaak hoe anderen zich voelen

karak90\_vo3lv double %12.0g Ik denk vaak dat iets misgaat of fout afloopt

karak94\_vo3lv double %12.0g Ik ben geïnteresseerd in moeilijke ideeën

karak95\_vo3lv double %12.0g Ik ben altijd goed voorbereid

karak96\_vo3lv double %12.0g Ik praat met veel verschillende kinderen op feesten

karak16b\_vo3lv double %12.0g Ik ben niet echt geïnteresseerd in anderen

karak97\_vo3lv double %12.0g Ik ben snel boos

karak2b\_vo3lv double %12.0g Ik heb heel goede ideeën

karak98\_vo3lv double %12.0g Ik maak er vaak een puinhoop van

*Test at primary school*

The file eindtoets.csv contains the scores of students at the test they took at the end of primary education. Schools can take several tests. This file only contains the version by CITO. Furthermore, we only have this information for a part of Limburg. Therefore, there are substantially fewer observation than we have in the Five Points Test. The main score, which is calculated as a weighed combination of the subscores, ranges from 500 to 550 for students. There are also scores for three subscales: i.e., for language (8000), match (8001), and knowledge about the world (wereldorientatie) (8002), with both the number and percentage of right answers.