User manual for Online-VAAST words

Please read carefully the instructions and follow the procedure described below step by step. Please note that you will need a number of files that are available in the section entitled “Reference files for the online-VAAST”.

Step 1: Creating and adapting own version of the online-VAAST

1. Create a new experiment on Psytoolkit and call it “VAAST_words”.

2. Copy/paste the Psytoolkit script provided below in the white box (SCRIPT 1).

3. In table TrainingTrials and table testTrials, replace words in quotation marks by your own words. In the current version, there are 30 words for each category A and B (10 words for training trials and 20 words for test trials).

4. Adapt instructions to participants to your own categories. To this aim, open the “To_modify_instructions.pptx” document and replace words in red by the names of your categories (e.g., “positive words”/”negative words”). Save all the slides in JPG format. Rename each slide “instruction1”, “instruction2”, “instruction3”, etc.

5. Upload the five backgrounds (i.e., startBackgr, apBackgr, avBackgr, prefixation and fixation) and the nine instruction slides in your Psytoolkit experiment. Don’t forget to save the experiment after having uploaded images.

6. Compile the experiment.

Step 2: Creating a survey with embedded version of the online-VAAST.

Creating a survey allows adding questions such as demographics, questionnaires etc.

1. Create a new survey.

2. Copy/paste the Psytoolkit script provided below in the white box (SCRIPT 2).

3. Complete all the sections required on the page of your survey. Please read the “Help” section of Psytoolkit if you have any problem to complete the survey options.

   WARNING: In the “Optional requirements for the computer of the participants” section, check “This study requires a real keyboard”. In the “Optional Browser exclusion”, check “Exclude mobile phone and tablet users” and “Exclude Safari use” (requirement of Psytoolkit).

4. SAVE and only after having saved, compile the survey. Then, in the "Survey Status" section, check "Should this survey be online accessible?" (if you don't check it, you will not have a link) and validate by clicking on "change the survey status".

Step 3: Collecting data.

1. Share the link of your survey to participants.

Step 4: Downloading and preparing participant data.

1. In the "Prepare and download participant data" section of your survey, click on "Prepare datafiles for download". Then, click on "download data in zip file". If there are many datafiles, preparation can take several minutes.

2. Open the data.zip file. For each participant, you will have a data file containing all the data information from the PsyToolkit experiment (i.e., files beginning by the name of the experiment created on PsyToolkit as "VAAST_words") and a data file containing the technical information from the PsyToolkit survey (i.e., files beginning by "s."). The file named "data" contains participants' responses to your survey (e.g., demographic information). The file "data_times" contains redundant information and will not be used.

3. Copy/paste all the data in a folder called "raw_data".

4. Open the R script called "ReadPsytoolkit.R". Please note that we created our R scripts by using R studio, thus some of the R command might need re-adjustments to be used in R. We recommend using R studio to run R scripts.

   WARNING: Before running R scripts, the "data" file (from the "raw_data" folder) have to be in a csv format with ";" as sep. Otherwise, the file cannot be loaded in R studio. R scripts and "raw_data" folder have to be at the same level (i.e., in the same folder).

5. Once you checked these points, you will be able to run the "readPsytoolkit.R" script. At the end of the script, you will be able to register the merged file in either a csv format (in the "raw_data" folder) or in a Rdata format. Only the Rdata file will be used in main data analysis (i.e., in the R script "R_Script_to_analyze_data_Online-VAAST"), the other file being for possible data analysis via another software.

Step 5: Analyzing data.

1. To perform the main data analysis, you will need the R script called "R_Script_to_analyze_data_Online-VAAST" and the "data_VAAST" file created before. Both files have to be in the same folder.

2. Open the R script and run it.

3. Enjoy your results!

Psytoolkit scripts

SCRIPT 1: TO COPY/PASTE in the box of your new experiment

```
options
  set &iti 750  # inter trial interval (ITI)
  fullscreen
  resolution 1200 675 # minimum resolution screen needed

bitmaps
  startBackgr startBackgr.jpg  # starting background
  apBackgr apBackgr.jpg  # approach background
  avBackgr avBackgr.jpg  # avoidance background
  instr1  instruction1.JPG
  instr2  instruction2.JPG
  instr3  instruction3.JPG
  instr4  instruction4.JPG
  instr5  instruction5.JPG
  instr6  instruction6.JPG
  instr7  instruction7.JPG
  instr8  instruction8.JPG
  instr9  instruction9.JPG
  prefix  prefixation.jpg
  fix     fixation.jpg

fonts
  myfont arial 60
  myfontap  arial 68
  myfontav  arial 52


table trainingTrials # Replace words in quotation marks by your own words
  startBackgr apBackgr avBackgr "catA_TrainingWord1"  1
  startBackgr apBackgr avBackgr "catA_TrainingWord2"  1
  startBackgr apBackgr avBackgr "catA_TrainingWord3"  1
  startBackgr apBackgr avBackgr "catA_TrainingWord4"  1
  startBackgr apBackgr avBackgr "catA_TrainingWord5"  1
  startBackgr apBackgr avBackgr "catA_TrainingWord6"  1
  startBackgr apBackgr avBackgr "catA_TrainingWord7"  1
  startBackgr apBackgr avBackgr "catA_TrainingWord8"  1
  startBackgr apBackgr avBackgr "catA_TrainingWord9"  1
  startBackgr apBackgr avBackgr "catA_TrainingWord10"  1
  startBackgr apBackgr avBackgr "catB_TrainingWord1"  2
  startBackgr apBackgr avBackgr "catB_TrainingWord2"  2
  startBackgr apBackgr avBackgr "catB_TrainingWord3"  2
  startBackgr apBackgr avBackgr "catB_TrainingWord4"  2
  startBackgr apBackgr avBackgr "catB_TrainingWord5"  2
  startBackgr apBackgr avBackgr "catB_TrainingWord6"  2
  startBackgr apBackgr avBackgr "catB_TrainingWord7"  2
  startBackgr apBackgr avBackgr "catB_TrainingWord8"  2
  startBackgr apBackgr avBackgr "catB_TrainingWord9"  2
  startBackgr apBackgr avBackgr "catB_TrainingWord10"  2

table testTrials # Replace words in quotation marks by your own words
  startBackgr apBackgr avBackgr "catA_word1"  1
```

```
  startBackgr apBackgr avBackgr "catA_word2"  1
  startBackgr apBackgr avBackgr "catA_word3"  1
  startBackgr apBackgr avBackgr "catA_word4"  1
  startBackgr apBackgr avBackgr "catA_word5"  1
  startBackgr apBackgr avBackgr "catA_word6"  1
  startBackgr apBackgr avBackgr "catA_word7"  1
  startBackgr apBackgr avBackgr "catA_word8"  1
  startBackgr apBackgr avBackgr "catA_word9"  1
  startBackgr apBackgr avBackgr "catA_word10"  1
  startBackgr apBackgr avBackgr "catA_word11"  1
  startBackgr apBackgr avBackgr "catA_word12"  1
  startBackgr apBackgr avBackgr "catA_word13"  1
  startBackgr apBackgr avBackgr "catA_word14"  1
  startBackgr apBackgr avBackgr "catA_word15"  1
  startBackgr apBackgr avBackgr "catA_word16"  1
  startBackgr apBackgr avBackgr "catA_word17"  1
  startBackgr apBackgr avBackgr "catA_word18"  1
  startBackgr apBackgr avBackgr "catA_word19"  1
  startBackgr apBackgr avBackgr "catA_word20"  1
  startBackgr apBackgr avBackgr "catB_word1"  2
  startBackgr apBackgr avBackgr "catB_word2"  2
  startBackgr apBackgr avBackgr "catB_word3"  2
  startBackgr apBackgr avBackgr "catB_word4"  2
  startBackgr apBackgr avBackgr "catB_word5"  2
  startBackgr apBackgr avBackgr "catB_word6"  2
  startBackgr apBackgr avBackgr "catB_word7"  2
  startBackgr apBackgr avBackgr "catB_word8"  2
  startBackgr apBackgr avBackgr "catB_word9"  2
  startBackgr apBackgr avBackgr "catB_word10"  2
  startBackgr apBackgr avBackgr "catB_word11"  2
  startBackgr apBackgr avBackgr "catB_word12"  2
  startBackgr apBackgr avBackgr "catB_word13"  2
  startBackgr apBackgr avBackgr "catB_word14"  2
  startBackgr apBackgr avBackgr "catB_word15"  2
  startBackgr apBackgr avBackgr "catB_word16"  2
  startBackgr apBackgr avBackgr "catB_word17"  2
  startBackgr apBackgr avBackgr "catB_word18"  2
  startBackgr apBackgr avBackgr "catB_word19"  2
  startBackgr apBackgr avBackgr "catB_word20"  2

# tasks for training phase

task trainingCatAAp
  table trainingTrials
  keys n y h
  show bitmap prefix
  readkey 3 500000
  set &key1 KEY
  set &randomfix random 800 2000 100
  show bitmap fix
  delay &randomfix
  show bitmap @1
  font myfont
  show text @4
  set &trialNb increase
  readkey 2 300000
  set &key2 KEY
  ### feedback
  if @5 == 2 and &key2 == 1
    set &acc 1
    show bitmap @3
    font myfontav
    show text @4
```

```
    delay 500
    clear -1
  fi
  if @5 == 1 and &key2 == 1
    set &acc 0
    show bitmap startBackgr
    font myfont
    show text "ERROR!" 0 0 255 0 0
    delay 500
    clear -1
  fi
  if @5 == 1 and &key2 == 2
    set &acc 1
    show bitmap @2
    font myfontap
    show text @4
    delay 500
    clear -1
  fi
  if @5 == 2 and &key2 == 2
    set &acc 0
    show bitmap startBackgr
    font myfont
    show text "ERROR!" 0 0 255 0 0
    delay 500
    clear -1
  fi
  if &key2 == 3
    set &acc 0
    show bitmap startBackgr
    font myfont
    show text "ERROR!" 0 0 255 0 0
    delay 500
    clear -1
  fi
  delay &iti
  save  BLOCKORDER BLOCKNAME @4 @5 &randomfix &key1 &key2 &acc RT


task trainingCatBAp
  table trainingTrials
  keys n y h
  show bitmap prefix
  readkey 3 500000
  set &key1 KEY
  set &randomfix random 800 2000 100
  show bitmap fix
  delay &randomfix
  show bitmap @1
  font myfont
  show text @4
  set &trialNb increase
  readkey 2 300000
  set &key2 KEY
  ### feedback
  if @5 == 1 and &key2 == 1
    set &acc 1
    show bitmap @3
    font myfontav
    show text @4
    delay 500
    clear -1
  fi
```

```
  if @5 == 2 and &key2 == 1
    set &acc 0
    show bitmap startBackgr
    font myfont
    show text "ERROR!" 0 0 255 0 0
    delay 500
    clear -1
  fi
  if @5 == 2 and &key2 == 2
    set &acc 1
    show bitmap @2
    font myfontap
    show text @4
    delay 500
    clear -1
  fi
  if @5 == 1 and &key2 == 2
    set &acc 0
    show bitmap startBackgr
    font myfont
    show text "ERROR!" 0 0 255 0 0
    delay 500
    clear -1
  fi
  if &key2 == 3
    set &acc 0
    show bitmap startBackgr
    font myfont
    show text "ERROR!" 0 0 255 0 0
    delay 500
    clear -1
  fi
  delay &iti
  save  BLOCKORDER BLOCKNAME @4 @5 &randomfix &key1 &key2 &acc RT



# tasks for test phase

task testCatAAp
  table testTrials
  keys n y h
  show bitmap prefix
  readkey 3 500000
  set &key1 KEY
  set &randomfix random 800 2000 100
  show bitmap fix
  delay &randomfix
  show bitmap @1
  font myfont
  show text @4
  set &trialNb increase
  readkey 2 300000
  set &key2 KEY
  ### feedback
 if @5 == 2 and &key2 == 1
    set &acc 1
    show bitmap @3
    font myfontav
    show text @4
    delay 500
    clear -1
  fi
```

```
  if @5 == 1 and &key2 == 1
    set &acc 0
    show bitmap @3
    font myfontav
    show text @4
    delay 500
    clear -1
  fi
  if @5 == 1 and &key2 == 2
    set &acc 1
    show bitmap @2
    font myfontap
    show text @4
    delay 500
    clear -1
  fi
  if @5 == 2 and &key2 == 2
    set &acc 0
    show bitmap @2
    font myfontap
    show text @4
    delay 500
    clear -1
  fi
  if &key2 == 3
    set &acc 0
    show bitmap startBackgr
    font myfont
    show text "ERROR!" 0 0 255 0 0
    delay 500
    clear -1
  fi
  delay &iti
  save  BLOCKORDER BLOCKNAME @4 @5 &randomfix &key1 &key2 &acc RT


task testCatBAp
  table testTrials
  keys n y h
  show bitmap prefix
  readkey 3 500000
  set &key1 KEY
  set &randomfix random 800 2000 100
  show bitmap fix
  delay &randomfix
  show bitmap @1
  font myfont
  show text @4
  set &trialNb increase
  readkey 2 300000
  set &key2 KEY
  ### feedback
  if @5 == 2 and &key2 == 2
    set &acc 1
    show bitmap @2
    font myfontap
    show text @4
    delay 500
    clear -1
  fi
  if @5 == 1 and &key2 == 2
    set &acc 0
    show bitmap @2
```

```
    font myfontap
    show text @4
    delay 500
    clear -1
  fi
  if @5 == 1 and &key2 == 1
    set &acc 1
    show bitmap @3
    font myfontav
    show text @4
    delay 500
    clear -1
  fi
  if @5 == 2 and &key2 == 1
    show bitmap @3
    font myfontav
    show text @4
    delay 500
    clear -1
  fi
  if &key2 == 3
    set &acc 0
    show bitmap startBackgr
    font myfont
    show text "ERROR!" 0 0 255 0 0
    delay 500
    clear -1
  fi
  delay &iti
  save  BLOCKORDER BLOCKNAME @4 @5 &randomfix &key1 &key2 &acc RT

# Blocks

block instructions
  bitmap instr1
  wait_for_key
  bitmap instr2
  wait_for_key
  bitmap instr3
  wait_for_key
end

block blkTrainingCatAAp
  bitmap instr4
  wait_for_key
  bitmap instr5
  wait_for_key
  tasklist
    trainingCatAAp 10 all_before_repeat
  end
  bitmap instr6
  wait_for_key
end

block blkTestCatAAp
  tasklist
    testCatAAp 40 all_before_repeat
  end
  bitmap instr9
  wait_for_key
end

block blkTrainingCatBAp
```

```
  bitmap instr7
  wait_for_key
  bitmap instr5
  wait_for_key
  tasklist
    trainingCatBAp 10 all_before_repeat
  end
  bitmap instr8
  wait_for_key
end

block blkTestCatBAp
  tasklist
    testCatBAp 40 all_before_repeat
  end
  bitmap instr9
  wait_for_key
end


# Block orders

blockorder
  instructions
  blkTrainingCatAAp
  blkTestCatAAp
  blkTrainingCatBAp
  blkTestCatBAp

blockorder
  instructions
  blkTrainingCatBAp
  blkTestCatBAp
  blkTrainingCatAAp
  blkTestCatAAp
```

SCRIPT 2: TO COPY/PASTE in the box of your <u>new survey</u>

```
l: vaast
t: experiment
- {fullscreen} VAAST_words


l: language  # OPTIONAL
t: radio
o: require
q: What is your native language?
- English
- Other


l: gender
t: radio
q: What is your gender?
- Male
- Female
- Other

l: age
t: textline
q: How old are you?
- your age


l: comment
t: textbox
q: Do you have any comments on the study? Feel free to leave your comments on the functioning of the study, the possible technical problems, etc.
- Enter your comments
```