

# User manual for Online-VAAST words

Please read carefully the instructions and follow the procedure described below step by step:

## 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

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## 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 new survey**

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