**USER MANUAL - Online Bourdon Vos Test**

*Version 1* *22/05/2017*

The Online Bourdon Vos Test (O-BVT) has transformed the Bourdon Vos Test (BVT; 1998) from a paper-and-pencil version to a web based test.

Goal

The BVT is designed to measure continued attention in children. The O-BVT is also designed to automatically record the participant's scores and report these back to the test leader.

Target Group

The O-BVT is suited for children aged 6 – 17. The O-BVT is administered to children with diagnosed attention deficits or to confirm a suspicion of attention deficits.

Description

The O-BVT contains two sections: a test leader section (light yellow background) and a participant section (light green background). The experiment leader is responsible for entering the participants demographics, and can review the scores after the participant has completed the test. The participant will practice the test first, and then complete the Bourdon Vos paradigm.

During the Bourdon Vos paradigm participants are exposed to 33 rows containing 24 figures with 3, 4, or 5 dots (Figure 1). They are instructed to cross-out (i.e. click once) the figures containing 4 dots. Corrections can be made by clicking twice on the same figure. This will make the red line disappear. The BVT measures both speed and accuracy in completing the test and compares these to the relevant BVT norm-groups.

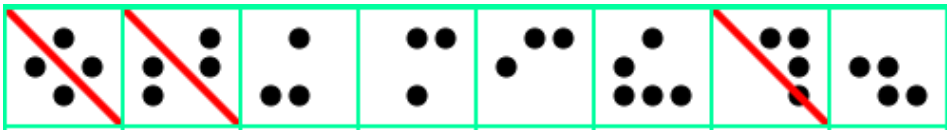


*Figure 1.* An example of the O-BVT. Figures with a single red line were clicked once (i.e. cross out).

Duration

Duration of the O-BVT procedure is variable.

Administration

The O-BVT is administered on the computer and can be downloaded once (to allow for offline use) or be completed online.

System Requirements

- Computer or laptop with functioning keyboard and mouse

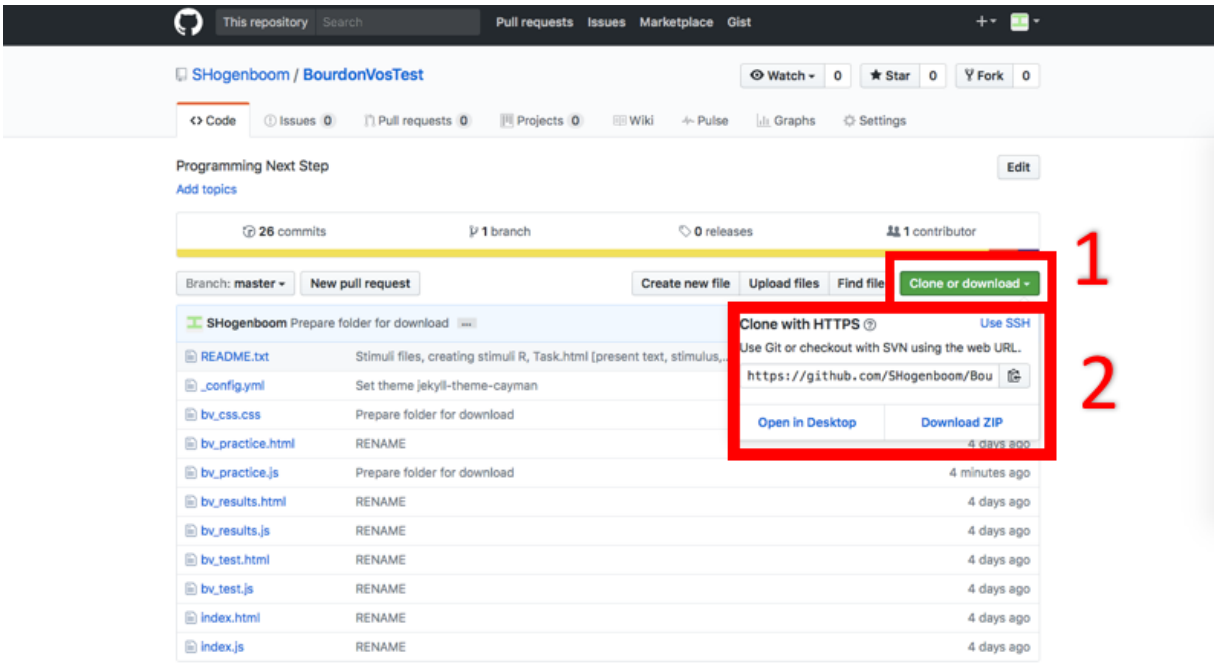
- *Safari* or *Google Chrome* web browser
- Disabled pop-up blocker

Operation – Online Use

1. Start up the computer or laptop
2. Open a web browser (i.e. *Safari* or *Google Chrome*)
3. Go to: https://shogenboom.github.io/BourdonVosTest/index.html
4. Follow the instructions in the browser
5. **WARNING:** Remember the password you specify! If you do not recall the password you will not be able to access your participant's data.
6. Store data safely into client files (print option available)

Operation – Offline Use

1. Start up the computer or laptop
2. Open a web browser (i.e. *Safari* or *Google Chrome*)
3. Go to: https://github.com/SHogenboom/BourdonVosTest
4. Click "Clone or download" (red box 1)




5. Click "Download ZIP" (red box 2)

6. Store the file in sensible folder
7. Go to folder (or "Downloads" if downloads are saved automatically)
8. Unzip the file "BourdonVosTest-master"
9. Open "index.html" in web browser (i.e. *Safari* or *Google Chrome*). **NOTE:** even though the file opens in the web browser, this does not require an active internet connection.
10. Follow the instructions in the browser
11. **WARNING:** Remember the password you specify! If you do not recall the password you will not be able to access your participant's data.
12. Store data safely into client files (print option available)

Interpretation of Results

The participant responses are measured on two dimensions: time and accuracy. All scores are compared to the norm group data (see Appendix) to calculate the participant's "*continued attention age*". If this age is younger than the participant's calendar age, this means that the participant is suffering from any attention deficits. However, if the "*continued attention age*" is higher than the calendar age, this indicates above average performance. **WARNING:** if the participant did not respond to all figures (i.e. hovered over them with the mouse) this will greatly disturb interpretability of the results. You can check if this is the case by viewing the "Missed Responses" in the results section (Figure 2). Although these "Missed Responses" are not part of the score calculations in the BVT, we do report them as an extra indication of the extent of the participant's *continued attention span.*

| | Absolute Amounts | Percentages | Calender Age | Accuracy Age |
|---|---|---|---|---|
| Hits | 528 | 66.67 % | 12 | - |
| Misses | 263 | 33.21 % | 12 | 11 |
| False Alarms | 1 | 0.13 % | 12 | 13 |
| Corrections | 0 | 0 % | 12 | 13 |
| **Missed Responses** | **747** | **94.32 %** | - | - |
| Responses | 45 | 5.68 % | - | - |
| **TOTAL** | | | **12 years** | **13 years** |

*Figure 2*. An example of results output. The red box signals where to look for missed responses by the participant.

## Contact

Please contact sally.hogenboom@student.uva.nl for comments and questions. If you encounter any problems, please do not hesitate to complete the bug report form: https://goo.gl/forms/eOf5efi0RSLs2xjr1.

## References


- Code files
  - https://github.com/SHogenboom/BourdonVosTest
- Bourdon Vos Test (Vos, 1998)
  - http://www.pearsonclinical.nl/bourdon-vos-test
- Validation
  - https://www.apollopraktijk.nl/Publicaties bestanden/Betrouwbaarheid%20Bourdon-Vos%20(Kaldenbach,%202015).pdf

Appendix

Bourdon Vos Norm Table (Vos, 1998)

Tabel I (bijlage 1). Normen voor snelheid (A) en nauwkeurigheid (B).

A. SNELHEID

| kalender leeftijd | −2 | −1 | 0 | +1 | +2 |
|---|---|---|---|---|---|
| 6 | RT > 31.5 | 31.5 ⩾ RT > 24.9 | 24.9 ⩾ RT > 18.4 | 18.4 ⩾ RT > 16.5 | RT ⩽ 16.5 |
| 7 | RT > 27.6 | 27.6 ⩾ RT > 23.5 | 23.5 ⩾ RT > 18.0 | 18.0 ⩾ RT > 15.6 | RT ⩽ 15.6 |
| 8 | RT > 23.2 | 23.2 ⩾ RT > 19.6 | 19.6 ⩾ RT > 16.4 | 16.4 ⩾ RT > 13.7 | RT ⩽ 13.7 |
| 9 | RT > 20.4 | 20.4 ⩾ RT > 18.0 | 18.0 ⩾ RT > 14.3 | 14.3 ⩾ RT > 12.5 | RT ⩽ 12.5 |
| 10 | RT > 20.6 | 20.6 ⩾ RT > 16.8 | 16.8 ⩾ RT > 13.7 | 13.7 ⩾ RT > 12.0 | RT ⩽ 12.0 |
| 11 | RT > 17.2 | 17.2 ⩾ RT > 14.9 | 14.9 ⩾ RT > 12.4 | 12.4 ⩾ RT > 11.1 | RT ⩽ 11.1 |
| 12 | RT > 17.1 | 17.1 ⩾ RT > 14.7 | 14.7 ⩾ RT > 11.9 | 11.9 ⩾ RT > 10.0 | RT ⩽ 10.0 |
| 13 | RT > 16.5 | 16.5 ⩾ RT > 14.2 | 14.2 ⩾ RT > 11.1 | 11.1 ⩾ RT > 9.1 | RT ⩽ 9.1 |
| 14 | RT > 15.3 | 15.3 ⩾ RT > 12.8 | 12.8 ⩾ RT > 9.9 | 9.9 ⩾ RT > 8.4 | RT ⩽ 8.4 |
| 15 | RT > 14.2 | 14.2 ⩾ RT > 11.6 | 11.6 ⩾ RT > 9.7 | 9.7 ⩾ RT > 9.2 | RT ⩽ 9.2 |
| 16 | RT > 13.6 | 13.6 ⩾ RT > 11.4 | 11.4 ⩾ RT > 9.0 | 9.0 ⩾ RT > 8.4 | RT ⩽ 8.4 |
| 17 | RT > 13.0 | 13.0 ⩾ RT > 11.1 | 11.1 ⩾ RT > 9.1 | 9.1 ⩾ RT > 8.2 | RT ⩽ 8.2 |

B. NAUWKEURIGHEID

| | | | |
|---|---|---|---|
| Weglatingen (w): | w < 4 = +1 | 4 ⩽ w ⩽ 12 = 0 | w > 12 = −1 |
| Correcties (c) | : c = 0 = +1 | 1 ⩽ c ⩽ 3 = 0 | c > 3 = −1 |
| Fouten (f) | : | f = 0 = 0 | f > 0 = −1 |

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