

Berlin Emotion Recognition Test (BERT)

Background

The Berlin Emotion Recognition Test (BERT) is a computer-based sensitive test for emotion recognition. It consists of 48 emotional facial expressions of the six basic emotions in different intensities, performed by professional actors. Each facial expression is presented with three emotion words (one correct). The participant is asked to indicate how the person feels. The percentage of correct answers constitutes the emotion recognition score. In several studies, the images as well as the distractors were tested and improved in terms of reliability and sensitivity.

Installation

To play the BERT on a computer, you need the presentation software Opensesame. This is freeware and you can download it under the following link for your operating system: <https://osdoc.cogsci.nl/3.3/download/> We recommend installing BERT on a Windows computer. In principle, however, it is also possible to install it on a Mac computer. In this case, you may have to change your security settings to allow foreign programs for installation.

Launch

After installing Opensesame you can open the BERT directly: To do this, please start Opensesame. Now open the BERT: To do this, click on "File" in the top left of the menu bar and then on "Open" in the menu that pops up. Then select the file "BERT_3.0.osexp" on your computer.

Now you still have to start the BERT: To do this, go to "Run" in the top left of the Opensesame menu bar and then select "Run fullscreen" in the drop-down menu.

The program now asks you to assign a subject number. Enter a number and click on "OK". The program will then ask you where and under what name it should save the subject's data.

Now the BERT should start. If you want to cancel it, press Escape. After BERT is completed, you can exit Opensesame. On the following pages you will find instructions on how to evaluate the data at the end of your study.

Test procedure

As the experimenter, go through the instructions and examples with the participant:

"You will now see photos of people expressing a certain feeling. Your task is to indicate as quickly as possible how the person is probably feeling by pressing a key after each photo. Work as quickly and accurately as possible. Sometimes it's very hard to tell what the feeling is because the person doesn't show it very strongly. In this case, choose the feeling that most closely matches it. Even if you feel like you are just guessing. This task takes about fifteen minutes."

You then leave the room and the participant starts the test independently. During the test, the participant only needs to press the numbers 1, 2 or 3. Their fingers should rest on these two keys so that she does not have to lower their gaze.

Data

The program saves the data of participant in csv format. The result file contains for each presented image a column with among others the presented emotion ("emo_label"), the gender of the actors ("gender"). Both the correctness of the response ("correct") and the response time ("response_time") of the subjects are stored. At the end of the entire study, the individual files of all subjects must be merged.

Feedback

If you do not want the subject to see his or her emotion recognition performance at the end of the BERT, please use the file "BERT_3.0 _withoutFeedback.osexp".

Usage

If you have any questions about the test or the evaluation, you can reach us at: drimalla@uni-bielefeld.de or isabel.dziobek@hu-berlin.de.

When using the test, please refer to the appropriate publication on BERT:

Drimalla, H., Baskow, I., Behnia, B., Roepke, S., & Dziobek, I. (2021). Imitation and recognition of facial emotions in autism: a computer vision approach. *Molecular autism*, 12, 1-15.

Drimalla, H. and Dziobek, I. (2019) Berlin Emotion Recognition Test (BERT), URL: www.hannadrimalla.de/bert.html, DOI: <http://dx.doi.org/10.18452/20019>.