ERI User's Guide

1. Goal and features of the ERI

The Emotion Recognition Index (Scherer & Scherer, 2011) is a rapid screening instrument measuring emotion recognition ability. The ERI consists of a facial and a vocal subtest; each one measuring accuracy in detecting sad, fearful, angry, happy, and neutral expressions.

The facial subtest uses pictures of posed expressions from the Pictures of Facial Affect set (Ekman & Friesen, 1976) that are each presented for 3 seconds.

The vocal subtest is composed of recordings produced by radio actors that are part of the GVEESS corpus (Banse & Scherer, 1996). In these recordings, the verbal content is one of two pseudo-linguistic sentences, i.e., sentences that resemble natural speech but are meaningless.

In both subtests, participants are asked to choose after each portrayal (without time limitation), which emotion had been expressed. The total score (%) is computed from the number of items in which the participant's response matched the target emotion. Due to the low number of items per emotions, the authors do not recommend using subscores per emotion. The duration of the complete ERI is 10-15 minutes.

The ERI is currently available in English.

2. Obtaining the ERI for research purposes

The ERI is available for academic research purposes free of charge. Researchers who would like to use the test are requested to complete the user agreement that can be downloaded here:
http://www.affective-sciences.org/content/emotion-recognition-index-eri

The distribution of the test is currently handled by the European Consortium for Research on Emotional Competence Assessment (EURECA) based at Ghent University in Belgium. The completed user agreement (signed and scanned) and a 1/2 page project description need to be sent to eureca@ugent.be. If all conditions specified in the user agreement are met, EURECA will share the requested test either via **Qualtrics** (Qualtrics is a registered trademark of Qualtrics, Provo, UT) or **LimeSurvey** (LimeSurvey Project Team/ Carsten Schmitz, 2012). If you do not have any experience with any of the two survey tools, we recommend using Qualtrics.

Please keep in mind that each new study requires a new application, even if you have previously received access for a different study. Access to the ERI is granted for a maximum period of one year per study.

Qualtrics version

The Qualtrics version requires the researcher to have a Qualtrics account (please check with your research institution whether you have access). Please note: You cannot use the ERI with the free trial account – you need to have the paid version.

If you have a Qualtrics account through your institution, EURECA will share the ERI with you and it will appear under "My Surveys" in your account.

The researcher may not make copies of the survey without permission from the EURECA contact person. Other people involved in the study besides the researcher (e.g., research assistants) can be invited to collaborate in the survey with permission from EURECA. The survey can be adapted by the researcher for his or her specific needs (e.g., by adding questions before or after the test), but no changes to the instructions or the structure of the ERI may be made (e.g., removing stimuli).

The last item in the Qualtrics version is a feedback page showing the percentage of correct answers the respondent gave for different presentation modalities. Please delete this item if you do not want your participants to see any feedback.

Please note that we do not provide support for Qualtrics-related issues. Please see the Qualtrics support page or contact the customer support if you have questions.

Limesurvey version

The researcher will receive a free account on the EURECA Limesurvey server, which will contain a personal copy of the ERI survey. He or she may not make copies of the survey without permission from the EURECA contact person, i.e., data needs to be collected with the survey created by EURECA. Other people involved in the study besides the researcher (e.g., research assistants) can request an extra account on the EURECA Limesurvey server to receive access to this survey. The survey can be adapted by the researcher for his or her specific needs (e.g., by adding questions before or after the test), but no changes to the instructions or the structure of the ERI may be made (e.g., removing stimuli).

If you do not want your participants to see any feedback at the end of the survey please delete the "Feedback question" in the "Calculate score" group before you activate the survey. Don't delete the "scoreFaces" and "scoreSounds" questions in this group since these calculate the total score for each subtest.

To activate the survey click on the activate button

On the next page click on Save / Activate Survey (you can leave the default settings). On the next screen you can choose between token based and open access mode (anonymous). With token-based access mode you have to invite a respondent to participate so you can keep track of who completes the survey. With open access mode the url of the survey is fixed. For more information https://manual.limesurvey.org/Tokens/en

Please note that we do not provide support for Limesurvey-related issues. Please consult the Limesurvey support forum if you have questions. (https://www.limesurvey.org/en/communityservices/forums)

3. Results

Qualtrics datafile and scoring

We recommend downloading the data in SPSS format under "View results". In this file, in the Variable View, you can find the percentage (%) of correct answers for both the facial (scoreFaces) and the vocal (scoreSounds) subtest.

See below for a description of the timing and item-level variables.

Timing and item-level variables in Qualtrics SPSS file:

- Time_spent(F or V)_1_(1-30): Time in seconds between when the sound stopped playing or the picture disappeared and the participant made the first click for item 1 to 30 ("reaction time")
- Time_spent(F or V)_2_(1-30): Time in seconds between when the sound stopped playing or the picture disappeared and the participant made the last click for item 1 to 30
- Time_spent(F or V)_3_(1-30): Time in seconds between when the sound stopped playing or the picture disappeared and when the response of the participant was submitted for item 1 to 30
- Time_spent(F or V)_4_(1-30): Number of times the participant clicked on the page for item 1 to 30.
- ERI_F_(1-30): Shows what emotion was selected by the participant (1="Anger", 2="Fear", 3="Joy", 4="Sadness", 5="Disgust" for the facial subtest for item 1-30
- ERI_V_(1-30): Shows what emotion was selected by the participant (1="Anger", 2="Fear", 3="Joy", 4="Sadness", 5="Neutral" for the vocal subtest for item 1-30

Limesurvey datafile and scoring

To export your data click on the data icon and select "Responses & statistics". The two main export formats available in Limesurvey can be found here.

1. SPSS format

2. CSV format (Comma Separated Values)

We will explain both formats since the data layout is different. In the CSV format timing data is available which isn't available in the SPSS format. If you don't need the timing data we recommend downloading your data in the SPSS format. The table 1 and 2 in Appendix A can be used to deduct which emotion was selected for each item.

SPSS format

When exporting data to SPSS there are two filter options. You can select **which data** should be selected (*all records/completed records only/incompleted records only*) and for **which SPSS version** the export files will be used (prior version 16/16 or up).

SPSS export includes two files:

1. a syntax file (*survey_xxxx_SPSS_syntax_file.sps*)
2. and a data file (*survey_xxxx_SPSS_data_file.dat*).

The syntax file holds the commands that should be run to import the data. It is like a programming language inside SPSS. The data file contains a comma-separated file with all data.
Place the two files in the same folder on your drive (example:
c:\data\survey_xxxx_SPSS_syntax_file.sps and
c:\data\survey_xxxx_SPSS_data_file.dat)
Open SPSS

• Choose File->Open->Syntax
• Choose the appropriate file: *c:\data\survey_xxxx_SPSS_syntax_file.sps*
• Now the syntax opens.
• Change the line that reads */FILE='survey_xxxx_SPSS_data_file.dat'* to include the path where the files are: */FILE='c:\data\survey_xxxx_SPSS_data_file.dat'*
• Now mark the whole command text and choose Run->All from the menu and after a while (please be patient) your dataset will open in a separate window.
• save your dataset as a normal .sav file.

In this file, in the Variable View, you can find the percentage (%) of correct answers for both the facial (scoreFaces) and the vocal (scoreSounds) subtest.

CSV format

Make the following selections in the "Export options" window.

Format: CSV format
Heading: question codes

Open the downloaded CSV file in Excel. The data is now represented in one column instead of separate columns for each variable (Appendix B screenshot 1). Select the first column, open the Data tab and select "Text to Columns". Select "delimited

data" in the wizard (screenshot 2) that opens and click next. Select a comma as data separator and a double quote as text qualifier (screenshot 3). On the next screen open the "Advanced settings" (screenshot 4 & 5) and change the decimal separator to a point and the thousands separator to nothing and click "Finish". The variable "ERI(F or V)(1-30)" contains the selected emotion for each item. The variable "ERI(F or V)(1-30)Time" contains how much time the participant spent on the response page for each item ("reaction time"). Most other variables in the file represent the instructions of the ERI and can be disregarded.

Appendix A

Table 1: Values for each emotion in data file for the facial presentation modality

	Target emotion
1	Anger
2	Fear
3	Joy
4	Sadness
5	Disgust

Table 2: Values for each emotion in data file for the vocal presentation modality

	Target emotion
1	Anger
2	Fear
3	Joy
4	Sadness
5	Neutral

Table 3: Correct answers for the vocal presentation modality

Item	Variable Name	Target emotion	Target answer (value)
1	ERI_V_1	Sadness	4
2	ERI_V_2	Sadness	4
3	ERI_V_3	Fear	2
4	ERI_V_4	Fear	2
5	ERI_V_5	Anger	1
6	ERI_V_6	Sadness	4
7	ERI_V_7	Joy	3
8	ERI_V_8	Anger	1
9	ERI_V_9	Neutral	5
10	ERI_V_10	Anger	1
11	ERI_V_11	Neutral	5
12	ERI_V_12	Joy	3
13	ERI_V_13	Anger	1
14	ERI_V_14	Joy	3
15	ERI_V_15	Fear	2
16	ERI_V_16	Joy	3
17	ERI_V_17	Sadness	4
18	ERI_V_18	Fear	2
19	ERI_V_19	Anger	1
20	ERI_V_20	Sadness	4
21	ERI_V_21	Sadness	4
22	ERI_V_22	Fear	2
23	ERI_V_23	Neutral	5

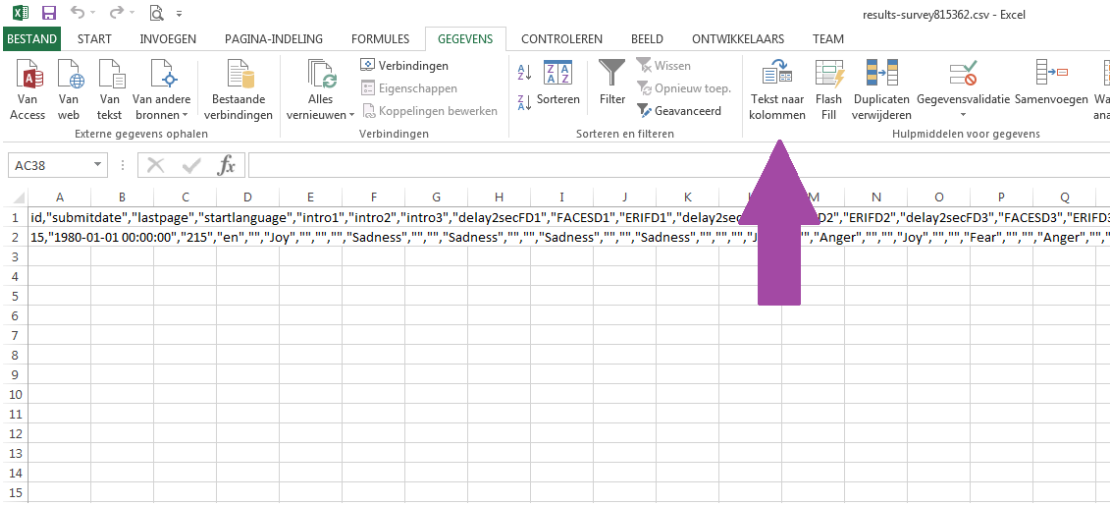
24	ERI_V_24	Joy	3
25	ERI_V_25	Joy	3
26	ERI_V_26	Anger	1
27	ERI_V_27	Sadness	4
28	ERI_V_28	Neutral	5
29	ERI_V_29	Sadness	4
30	ERI_V_30	Anger	1

Table 4: Correct answers for the facial presentation modality

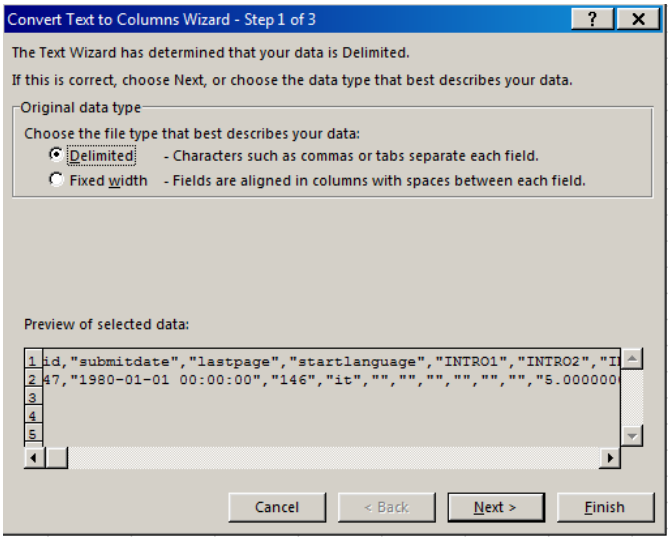
Item	Variable Name	Target emotion	Target answer (value)
1	ERI_F_1	Joy	3
2	ERI_F_2	Anger	1
3	ERI_F_3	Joy	3
4	ERI_F_4	Fear	2
5	ERI_F_5	Anger	1
6	ERI_F_6	Disgust	5
7	ERI_F_7	Sadness	4
8	ERI_F_8	Sadness	4
9	ERI_F_9	Fear	2
10	ERI_F_10	Anger	1
11	ERI_F_11	Disgust	5
12	ERI_F_12	Fear	2
13	ERI_F_13	Sadness	4
14	ERI_F_14	Joy	3
15	ERI_F_15	Anger	1
16	ERI_F_16	Fear	2
17	ERI_F_17	Joy	3
18	ERI_F_18	Fear	2
19	ERI_F_19	Disgust	5
20	ERI_F_20	Anger	1
21	ERI_F_21	Sadness	4
22	ERI_F_22	Fear	2
23	ERI_F_23	Anger	1
24	ERI_F_24	Sadness	4
25	ERI_F_25	Fear	2
26	ERI_F_26	Sadness	4
27	ERI_F_27	Anger	1
28	ERI_F_28	Fear	2
29	ERI_F_29	Sadness	4
30	ERI_F_30	Disgust	5

Appendix B

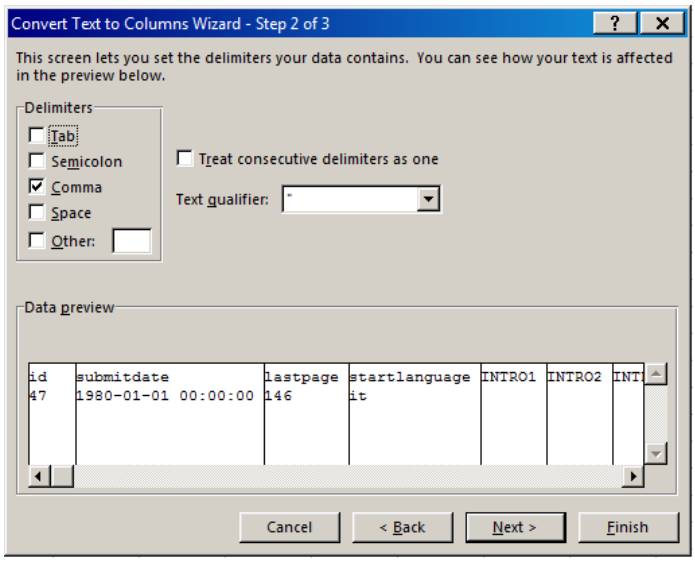
screenshot 1



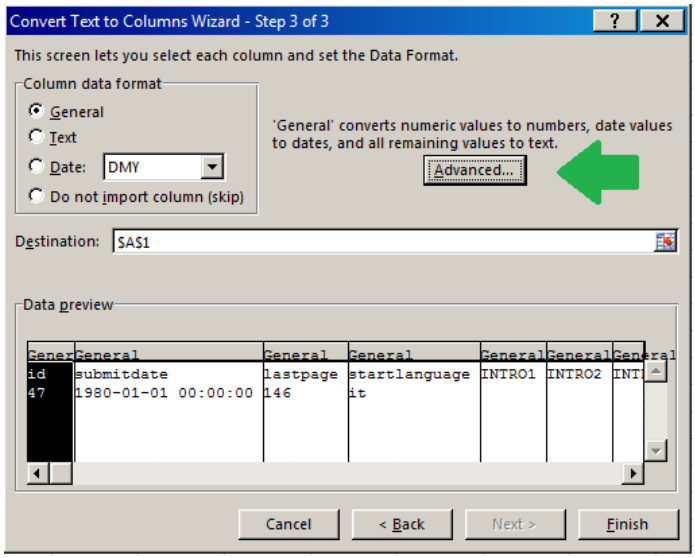
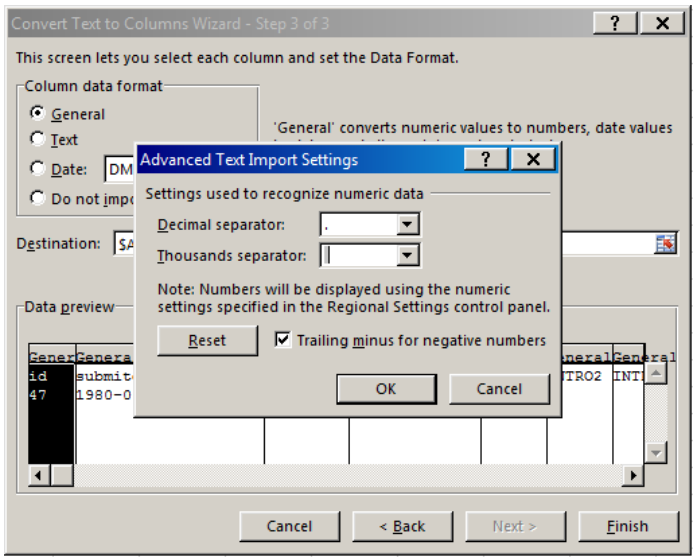
screenshot 2



screenshot 3



screenshot 4



screenshot 5