

Data Analysis Tool

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The goal of this tool is to make the analysis of UEQ (User Experience Questionnaire) data as easy as possible for you. You simply enter the data obtained from your respondents into the Data worksheet. The tool then automatically calculates all statistics necessary to interpret the results. In addition, several graphs are shown that you may want to use in your result presentations. Simply copy them to your word processor or presentation tool.

The instructions in this tool are in English. To make the interpretation of the results easier and to have the charts in your language you can switch the language in the following dropdown. This will only switch the items and scale names, not the instructions in the Excel.

Choose your Language:

Please Note: Changing the language will show the UEQ items and the UEQ dimensions in the selected language. All other texts will remain in English.

The tool contains the following work sheets:

Data: Here you can enter the raw data of your evaluation. **This is the only work sheet that you need to modify. Do not change the content of the other work sheets, you may destroy unintentionally some of the formulas in the cells!**

DT: The order of the items (i.e. if the positive term is left or right in an item) is randomized in the questionnaire to minimize answer tendencies. Here the items are changed to a common order (negative term left, positive term right). The transformed data are used for all the further calculations.

Results: Main results of the questionnaire. Here the scale means and the mean and standard deviation per item are calculated.

Confidence_Intervals: Confidence intervals for the scale means and for the mean of each item are calculated.

Answer_Distributions: Here you can see the distributions of the answers (values 1 to 7) for the single items. This can help to find items that show a polarization of opinions, i.e. where many negative and many positive answers can be found.

Scale_Consistency: Here the Cronbach-Alpha Coefficient and Guttman's Lambda2 coefficient per scale are calculated. Check here if the scales have a sufficiently high value. Scales with a small value (<0.5) should be treated carefully in the interpretation (if you have only a small sample size (< 50 responses) then interpret these values very carefully. In such cases a small value for these coefficients may result solely from sampling effects and may not indicate a real problem.

Benchmark: The benchmark shows you in an easy way how good the evaluated product is compared to the products in the benchmark data set. There is also a graphic that shows for each scale how the results are related to the products in the benchmark data set.

Inconsistencies: On this work sheet the data are analysed for inconsistent answers, i.e. answers from participants that answered at least a part of the items randomly. You may want to remove these data before you calculate the results.

Sample_Size: If you observe big error bars concerning the scale means you may ask yourself if you need to collect additional data. This sheet helps you to estimate how many data you need in order to reach a certain precision.

KPI_Calculation: There is an extension of the UEQ with 6 additional questions. This extension allows to calculate a KPI (single number representing the overall user experience). This work sheet is only relevant if you used this extension. It allows to enter the data obtained for the 6 additional questions and calculates the KPI.

Items: Contains the item and dimension names in the different languages. Used for switching the language. Please do not modify data in this sheet.

Please enter the data here!

Use the item numbers in the printed questionnaire and the categories 1 (if the alternative on the extreme left is marked) to 7 (if the alternative on the extreme right is marked).

Leave the cell empty if the person has not answered the item. Please do not enter a special character in such cases, since this would cause errors in the calculations.

You can enter data for a **maximum of 1000** participants. If you need more, you have to adjust the fomulas in the Excel.

The data analysis tool is delivered with some example data in this work sheet. Simply delete them before you enter your data here.

| Items | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | | |
| 6 | 6 | 2 | 1 | 1 | 5 | 6 | 4 | 1 | 2 | 6 | 1 | 6 | 6 | 5 | 6 | 1 | 2 | 2 | 7 | 2 | 7 | 1 | 2 | 1 | 7 | 1 | |
| 7 | 7 | 1 | 1 | 1 | 7 | 7 | 7 | 1 | 1 | 7 | 1 | 7 | 7 | 1 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 2 |
| 7 | 7 | 2 | 1 | 1 | 5 | 6 | 2 | 2 | 2 | 5 | 1 | 5 | 6 | 6 | 6 | 2 | 3 | 2 | 6 | 3 | 6 | 2 | 3 | 3 | 6 | 3 | |
| 6 | 6 | 2 | 1 | 1 | 5 | 6 | 4 | 1 | 2 | 6 | 1 | 6 | 6 | 5 | 6 | 1 | 2 | 2 | 7 | 2 | 7 | 1 | 2 | 1 | 7 | 7 | |
| 6 | 3 | 4 | 5 | 2 | 4 | 5 | 5 | 2 | 4 | 5 | 2 | 5 | 5 | 4 | 5 | 2 | 3 | 2 | 6 | 3 | 6 | 2 | 3 | 3 | 4 | 5 | |
| 3 | 6 | 2 | 7 | 4 | 4 | 4 | 6 | 2 | 4 | 4 | 4 | 4 | 3 | 4 | 3 | 5 | 5 | 4 | 4 | 2 | 6 | 2 | 4 | 3 | 6 | 6 | |
| 7 | 5 | 4 | 5 | 1 | 4 | 5 | 4 | 3 | 3 | 6 | 1 | 6 | 7 | 4 | 7 | 1 | 3 | 1 | 7 | 2 | 6 | 2 | 4 | 1 | 6 | 7 | |
| 5 | 6 | 4 | 3 | 1 | 4 | 4 | 6 | 3 | 2 | 4 | 3 | 6 | 4 | 6 | 5 | 1 | 4 | 2 | 5 | 1 | 7 | 3 | 4 | 4 | 5 | 8 | |
| 7 | 7 | 1 | 1 | 1 | 5 | 6 | 4 | 1 | 4 | 4 | 1 | 7 | 7 | 7 | 7 | 2 | 4 | 1 | 7 | 2 | 7 | 3 | 1 | 1 | 4 | 9 | |
| 6 | 7 | 6 | 6 | 5 | 5 | 5 | 3 | 5 | 6 | 6 | 1 | 7 | 6 | 5 | 6 | 2 | 2 | 2 | 6 | 1 | 7 | 1 | 2 | 1 | 1 | 10 | |
| 5 | 5 | 6 | 6 | 2 | 4 | 5 | 3 | 4 | 2 | 5 | 3 | 5 | 5 | 5 | 5 | 1 | 4 | 2 | 5 | 3 | 5 | 6 | 2 | 2 | 6 | 11 | |
| 6 | 6 | 4 | 2 | 2 | 5 | 5 | 5 | 4 | 3 | 4 | 2 | 5 | 4 | 4 | 5 | 3 | 4 | 2 | 5 | 2 | 4 | 3 | 3 | 3 | 4 | 12 | |
| 6 | 6 | 2 | 1 | 1 | 5 | 6 | 4 | 1 | 2 | 6 | 1 | 6 | 6 | 5 | 6 | 1 | 2 | 2 | 7 | 2 | 7 | 1 | 2 | 1 | 7 | 13 | |
| 6 | 6 | 2 | 2 | 3 | 6 | 6 | 6 | 2 | 2 | 6 | 2 | 6 | 6 | 3 | 6 | 2 | 3 | 2 | 6 | 2 | 6 | 2 | 2 | 2 | 3 | 14 | |
| 7 | 7 | 4 | 1 | 3 | 5 | 7 | 5 | 1 | 4 | 7 | 1 | 7 | 7 | 7 | 7 | 1 | 3 | 1 | 7 | 1 | 7 | 1 | 1 | 1 | 1 | 15 | |
| 7 | 7 | 1 | 1 | 1 | 6 | 6 | 4 | 3 | 3 | 6 | 2 | 7 | 7 | 7 | 7 | 1 | 1 | 1 | 5 | 2 | 7 | 1 | 1 | 1 | 7 | 16 | |
| 2 | 6 | 3 | 3 | 4 | 3 | 2 | 6 | 6 | 5 | 2 | 7 | 4 | 1 | 5 | 1 | 2 | 6 | 2 | 7 | 3 | 6 | 1 | 4 | 4 | 5 | 17 | |
| 5 | 7 | 4 | 2 | 4 | 6 | 6 | 3 | 4 | 3 | 5 | 2 | 5 | 6 | 5 | 7 | 3 | 5 | 3 | 7 | 3 | 6 | 1 | 1 | 1 | 4 | 18 | |
| 6 | 7 | 2 | 2 | 2 | 4 | 5 | 6 | 2 | 3 | 5 | 1 | 7 | 6 | 5 | 6 | 2 | 2 | 2 | 6 | 2 | 7 | 1 | 2 | 1 | 6 | 19 | |
| 6 | 6 | 2 | 2 | 2 | 6 | 6 | 5 | 2 | 1 | 6 | 2 | 5 | 6 | 7 | 6 | 2 | 3 | 1 | 7 | 2 | 6 | 2 | 2 | 2 | 7 | 20 | |
| 6 | 5 | 2 | 2 | 2 | 6 | 6 | 3 | 2 | 1 | 6 | 1 | 5 | 7 | 5 | 6 | 2 | 3 | 1 | 7 | 2 | 6 | 3 | 4 | 2 | 6 | 21 | |
| 6 | 6 | 2 | 1 | 1 | 5 | 6 | 4 | 1 | 2 | 6 | 1 | 6 | 6 | 5 | 6 | 1 | 2 | 2 | 7 | 2 | 7 | 1 | 2 | 1 | 7 | 22 | |
| 7 | 6 | 1 | 1 | 1 | 6 | 6 | 4 | 1 | 6 | 6 | 1 | 7 | 6 | 7 | 6 | 1 | 1 | 2 | 7 | 1 | 6 | 2 | 2 | 2 | 7 | 23 | |
| 5 | 7 | 4 | 1 | 1 | 4 | 5 | 6 | 2 | 6 | 6 | 1 | 7 | 6 | 2 | 6 | 2 | 4 | 2 | 7 | 1 | 7 | 1 | 3 | 1 | 4 | 24 | |
| 5 | 7 | 4 | 2 | 4 | 4 | 4 | 6 | 3 | 4 | 4 | 3 | 6 | 3 | 4 | 5 | 2 | 3 | 2 | 6 | 2 | 6 | 2 | 3 | 3 | 4 | 25 | |
| 6 | 7 | 2 | 2 | 3 | 5 | 4 | 6 | 1 | 2 | 5 | 2 | 6 | 6 | 6 | 6 | 2 | 2 | 1 | 7 | 1 | 6 | 1 | 2 | 1 | 6 | 26 | |
| 6 | 5 | 1 | 3 | 2 | 5 | 6 | 5 | 1 | 2 | 6 | 2 | 4 | 6 | 3 | 6 | 2 | 2 | 2 | 6 | 2 | 6 | 2 | 1 | 1 | 4 | 27 | |
| 3 | 3 | 7 | 7 | 4 | 1 | 1 | 7 | 4 | 4 | 4 | 7 | 1 | 1 | 4 | 4 | 4 | 7 | 7 | 1 | 7 | 4 | 7 | 7 | 4 | 4 | 28 | |
| 7 | 6 | 1 | 1 | 2 | 7 | 6 | 5 | 2 | 2 | 6 | 1 | 7 | 7 | 6 | 7 | 1 | 2 | 1 | 7 | 1 | 7 | 1 | 1 | 1 | 6 | 29 | |
| 3 | 5 | 4 | 5 | 4 | 4 | 3 | 4 | 3 | 3 | 3 | 3 | 4 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 3 | 4 | 4 | 30 | |
| 6 | 7 | 3 | 2 | 2 | 6 | 6 | 6 | 2 | 2 | 6 | 2 | 6 | 6 | 6 | 6 | 2 | 2 | 2 | 6 | 2 | 6 | 2 | 2 | 2 | 6 | 31 | |
| 5 | 5 | 4 | 3 | 3 | 5 | 2 | 5 | 3 | 5 | 2 | 2 | 5 | 3 | 5 | 3 | 2 | 2 | 3 | 5 | 2 | 4 | 4 | 3 | 2 | 3 | 32 | |
| 6 | 6 | 2 | 1 | 1 | 5 | 6 | 4 | 1 | 2 | 6 | 1 | 6 | 6 | 5 | 6 | 1 | 2 | 2 | 7 | 2 | 7 | 1 | 2 | 1 | 7 | 33 | |
| 5 | 7 | 1 | 2 | 2 | 5 | 6 | 5 | 2 | 1 | 6 | 1 | 6 | 6 | 6 | 6 | 1 | 4 | 2 | 6 | 3 | 7 | 1 | 2 | 2 | 6 | 34 | |
| 5 | 5 | 4 | 2 | 2 | 5 | 5 | 3 | 2 | 3 | 5 | 2 | 6 | 6 | 4 | 5 | 2 | 3 | 2 | 6 | 6 | 6 | 5 | 3 | 3 | 5 | 35 | |
| 7 | 7 | 1 | 1 | 1 | 7 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 7 | 7 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 1 | 1 | 1 | 7 | 36 | |
| 6 | 7 | 2 | 1 | 1 | 6 | 6 | 3 | 1 | 2 | 7 | 1 | 6 | 7 | 5 | 6 | 1 | 3 | 1 | 6 | 1 | 7 | 1 | 2 | 1 | 6 | 37 | |
| 6 | 7 | 2 | 1 | 2 | 6 | 6 | 4 | 2 | 1 | 7 | 1 | 7 | 6 | 5 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 1 | 1 | 1 | 4 | 38 | |
| 7 | 7 | 2 | 1 | 1 | 6 | 6 | 4 | 1 | 4 | 7 | 1 | 7 | 7 | 4 | 7 | 2 | 3 | 1 | 7 | 1 | 7 | 1 | 1 | 1 | 4 | 39 | |
| 5 | 6 | 4 | 3 | 2 | 6 | 6 | 4 | 3 | 4 | 4 | 2 | 5 | 6 | 5 | 5 | 5 | 3 | 3 | 6 | 2 | 6 | 2 | 3 | 4 | 5 | 40 | |
| 4 | 6 | 4 | 3 | 4 | 4 | 4 | 5 | 3 | 4 | 5 | 3 | 5 | 5 | 3 | 4 | 2 | 4 | 3 | 5 | 2 | 6 | 3 | 4 | 3 | 3 | 41 | |
| 6 | 6 | 2 | 1 | 1 | 5 | 6 | 4 | 1 | 2 | 6 | 1 | 6 | 6 | 5 | 6 | 1 | 2 | 2 | 7 | 2 | 7 | 1 | 2 | 1 | 7 | 42 | |
| 6 | 6 | 3 | 3 | 3 | 5 | 6 | 5 | 2 | 4 | 5 | 2 | 4 | 5 | 6 | 5 | 2 | 3 | 2 | 6 | 2 | 6 | 3 | 2 | 3 | 6 | 43 | |
| 7 | 6 | 1 | 1 | 1 | 7 | 7 | 5 | 1 | 1 | 7 | 1 | 7 | 7 | 6 | 7 | 1 | 2 | 1 | 7 | 1 | 6 | 5 | 2 | 1 | 5 | 44 | |
| 7 | 7 | 1 | 1 | 1 | 7 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 7 | 7 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 1 | 1 | 1 | 1 | 45 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|
| 6 | 7 | 2 | 2 | 1 | 6 | 6 | 4 | 3 | 5 | 6 | 2 | 6 | 6 | 6 | 7 | 2 | 1 | 2 | 7 | 2 | 7 | 1 | 1 | 2 | 6 | 274 |
| 6 | 7 | 7 | 2 | 3 | 4 | 5 | 3 | 1 | 5 | 7 | 1 | 3 | 6 | 5 | 4 | 1 | 2 | 1 | 6 | 1 | 4 | 1 | 1 | 5 | 6 | 275 |
| 6 | 6 | 3 | 2 | 2 | 4 | 4 | 6 | 3 | 4 | 5 | 2 | 6 | 6 | 5 | 4 | 3 | 3 | 2 | 5 | 3 | 6 | 5 | 2 | 2 | 4 | 276 |
| 6 | 6 | 2 | 1 | 1 | 5 | 6 | 4 | 1 | 2 | 6 | 1 | 6 | 6 | 5 | 6 | 1 | 2 | 2 | 7 | 2 | 7 | 1 | 2 | 1 | 7 | 277 |
| 6 | 6 | 2 | 1 | 1 | 5 | 6 | 4 | 1 | 2 | 6 | 1 | 6 | 6 | 5 | 6 | 1 | 2 | 2 | 7 | 2 | 7 | 1 | 2 | 1 | 7 | 278 |
| 6 | 7 | 7 | 2 | 3 | 4 | 5 | 3 | 1 | 5 | 7 | 1 | 3 | 6 | 5 | 4 | 1 | 2 | 1 | 6 | 1 | 4 | 1 | 1 | 5 | 6 | 279 |
| 6 | 7 | 2 | 2 | 1 | 6 | 6 | 4 | 3 | 5 | 6 | 2 | 6 | 6 | 6 | 7 | 2 | 1 | 2 | 7 | 2 | 7 | 1 | 1 | 2 | 6 | 280 |
| 6 | 5 | 3 | 4 | 2 | 6 | 6 | 4 | 2 | 2 | 3 | 4 | 3 | 5 | 5 | 6 | 3 | 4 | 2 | 5 | 3 | 7 | 3 | 4 | 3 | 6 | 281 |
| 7 | 6 | 2 | 1 | 1 | 7 | 7 | 5 | 1 | 3 | 7 | 1 | 7 | 7 | 5 | 7 | 1 | 2 | 1 | 7 | 1 | 7 | 1 | 1 | 1 | 3 | 282 |
| 6 | 6 | 3 | 2 | 3 | 5 | 6 | 4 | 3 | 3 | 5 | 3 | 6 | 5 | 5 | 5 | 3 | 4 | 2 | 4 | 2 | 5 | 3 | 2 | 1 | 5 | 283 |
| 6 | 7 | 7 | 2 | 3 | 4 | 5 | 3 | 1 | 5 | 7 | 1 | 3 | 6 | 5 | 4 | 1 | 2 | 1 | 6 | 1 | 4 | 1 | 1 | 5 | 6 | 284 |
| 6 | 5 | 3 | 2 | 3 | 5 | 5 | 6 | 3 | 5 | 6 | 2 | 6 | 6 | 2 | 6 | 2 | 4 | 2 | 5 | 3 | 6 | 2 | 2 | 3 | 4 | 285 |
| 6 | 6 | 2 | 1 | 1 | 5 | 6 | 4 | 1 | 2 | 6 | 1 | 6 | 6 | 5 | 6 | 1 | 2 | 2 | 7 | 2 | 7 | 1 | 2 | 1 | 7 | 286 |
| 6 | 6 | 3 | 2 | 3 | 5 | 6 | 4 | 3 | 3 | 5 | 3 | 6 | 5 | 5 | 5 | 3 | 4 | 2 | 4 | 2 | 5 | 3 | 2 | 1 | 5 | 287 |
| 6 | 7 | 7 | 2 | 3 | 4 | 5 | 3 | 1 | 5 | 7 | 1 | 3 | 6 | 5 | 4 | 1 | 2 | 1 | 6 | 1 | 4 | 1 | 1 | 5 | 6 | 288 |
| 6 | 6 | 3 | 2 | 2 | 4 | 4 | 6 | 3 | 4 | 5 | 2 | 6 | 6 | 5 | 4 | 3 | 3 | 2 | 5 | 3 | 6 | 5 | 2 | 2 | 4 | 289 |
| 6 | 7 | 2 | 1 | 1 | 6 | 6 | 4 | 2 | 1 | 5 | 2 | 5 | 6 | 7 | 6 | 1 | 3 | 1 | 6 | 1 | 6 | 1 | 2 | 2 | 7 | 290 |
| 6 | 6 | 2 | 1 | 1 | 5 | 6 | 4 | 1 | 2 | 6 | 1 | 6 | 6 | 5 | 6 | 1 | 2 | 2 | 7 | 2 | 7 | 1 | 2 | 1 | 7 | 291 |
| 7 | 6 | 2 | 1 | 1 | 7 | 7 | 5 | 1 | 3 | 7 | 1 | 7 | 7 | 5 | 7 | 1 | 2 | 1 | 7 | 1 | 7 | 1 | 1 | 1 | 3 | 292 |
| 6 | 6 | 2 | 1 | 1 | 5 | 6 | 4 | 1 | 2 | 6 | 1 | 6 | 6 | 5 | 6 | 1 | 2 | 2 | 7 | 2 | 7 | 1 | 2 | 1 | 7 | 293 |
| 6 | 7 | 2 | 2 | 1 | 6 | 6 | 4 | 3 | 5 | 6 | 2 | 6 | 6 | 6 | 7 | 2 | 1 | 2 | 7 | 2 | 7 | 1 | 1 | 2 | 6 | 294 |
| 6 | 6 | 3 | 2 | 3 | 5 | 6 | 4 | 3 | 3 | 5 | 3 | 6 | 5 | 5 | 5 | 3 | 4 | 2 | 4 | 2 | 5 | 3 | 2 | 1 | 5 | 295 |
| 6 | 7 | 7 | 2 | 3 | 4 | 5 | 3 | 1 | 5 | 7 | 1 | 3 | 6 | 5 | 4 | 1 | 2 | 1 | 6 | 1 | 4 | 1 | 1 | 5 | 6 | 296 |
| 6 | 5 | 3 | 4 | 2 | 6 | 6 | 4 | 2 | 2 | 3 | 4 | 3 | 5 | 5 | 6 | 3 | 4 | 2 | 5 | 3 | 7 | 3 | 4 | 3 | 6 | 297 |
| 7 | 6 | 2 | 1 | 1 | 7 | 7 | 5 | 1 | 3 | 7 | 1 | 7 | 7 | 5 | 7 | 1 | 2 | 1 | 7 | 1 | 7 | 1 | 1 | 1 | 3 | 298 |
| 6 | 6 | 3 | 2 | 2 | 4 | 4 | 6 | 3 | 4 | 5 | 2 | 6 | 6 | 5 | 4 | 3 | 3 | 2 | 5 | 3 | 6 | 5 | 2 | 2 | 4 | 299 |
| 6 | 5 | 3 | 2 | 3 | 5 | 5 | 6 | 3 | 5 | 6 | 2 | 6 | 6 | 2 | 6 | 2 | 4 | 2 | 5 | 3 | 6 | 2 | 2 | 3 | 4 | 300 |
| 6 | 7 | 2 | 2 | 1 | 6 | 6 | 4 | 3 | 5 | 6 | 2 | 6 | 6 | 6 | 7 | 2 | 1 | 2 | 7 | 2 | 7 | 1 | 1 | 2 | 6 | 301 |
| 6 | 7 | 7 | 2 | 3 | 4 | 5 | 3 | 1 | 5 | 7 | 1 | 3 | 6 | 5 | 4 | 1 | 2 | 1 | 6 | 1 | 4 | 1 | 1 | 5 | 6 | 302 |
| 7 | 6 | 2 | 1 | 1 | 7 | 7 | 5 | 1 | 3 | 7 | 1 | 7 | 7 | 5 | 7 | 1 | 2 | 1 | 7 | 1 | 7 | 1 | 1 | 1 | 3 | 303 |
| 6 | 6 | 2 | 1 | 1 | 5 | 6 | 4 | 1 | 2 | 6 | 1 | 6 | 6 | 5 | 6 | 1 | 2 | 2 | 7 | 2 | 7 | 1 | 2 | 1 | 7 | 304 |
| 6 | 6 | 2 | 1 | 1 | 5 | 6 | 4 | 1 | 2 | 6 | 1 | 6 | 6 | 5 | 6 | 1 | 2 | 2 | 7 | 2 | 7 | 1 | 2 | 1 | 7 | 305 |
| 6 | 7 | 2 | 1 | 1 | 6 | 6 | 4 | 2 | 1 | 5 | 2 | 5 | 6 | 7 | 6 | 1 | 3 | 1 | 6 | 1 | 6 | 1 | 2 | 2 | 7 | 306 |

Results

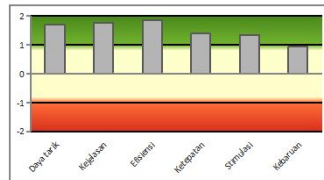
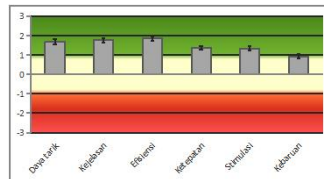
You can interpret the means of the scales. The UEQ does not produce an overall score for the user experience (you need to use the KPI extension for this). Because of the construction of the questionnaire it does make no sense to built such an overall score (for example by calculating the mean over all scales), since this value can not be interpreted properly. The values for the single items are listed to allow you to detect outliers in the evaluations. If an item shows big deviations to the evaluations of the other items of the same scale this can be a hint that the item is misinterpreted (for example, because of a special context in your evaluation) by a higher number of participants.

Values between -0.8 and 0.8 represent a more or less *neutral evaluation* of the corresponding scale, values > 0.8 represent a *positive evaluation* and values < -0.8 represent a *negative evaluation*.

The range of the scales is between -3 (horribly bad) and +3 (extremely good). But in real applications, in general, only values in a restricted range will be observed. It is due to the calculation of means over a range of different persons with different opinions and answer tendencies (for example the avoidance of extreme answer categories) extremely unlikely to observe values above +2 or below -2. Thus, even a quite good value of +1.5 for a scale looks from the purely visual standpoint on a scale range of -3 to +3 not as positive as it really is. For this reason this sheet contains two variants for the figure that depicts the scale means. Use the figure with the reduced scale -2 to +2 if you communicate the results to persons that have not much knowledge on the interpretation of this type of data and in situations where you don't want to explain in detail how building mean values and answer tendencies influence the observed data.

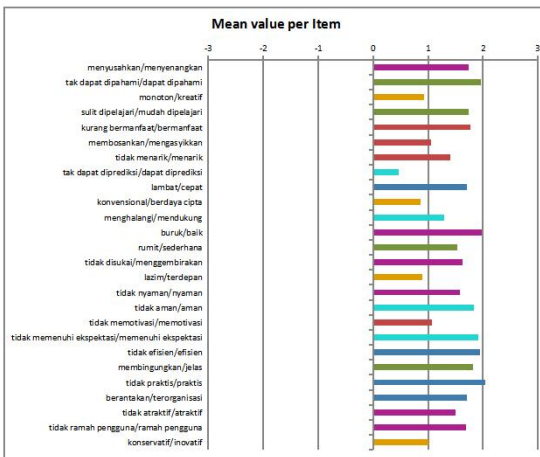
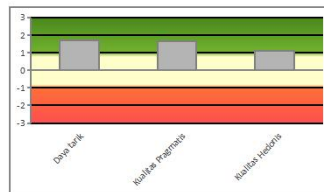
| Item | Mean | Variance | Std. Dev. | N of Valid Responses | Left | Right | Scale |
|------|------|----------|-----------|----------------------|----------------------|---------------------------|------------|
| 1 | 1.7 | 1.5 | 1.2 | 306 | menyusahkan | menyenangkan | Daya tarik |
| 2 | 2.0 | 1.5 | 1.2 | 306 | tak dapat dipahami | dapat dipahami | Kejelasan |
| 3 | 0.9 | 2.4 | 1.6 | 306 | monoton | monoton/kreatif | Kebaruan |
| 4 | 1.7 | 2.4 | 1.5 | 306 | mudah dipelajari | sulit dipelajari | Kejelasan |
| 5 | 1.8 | 2.0 | 1.4 | 306 | bermanfaat | kurang bermanfaat | Stimulasi |
| 6 | 1.1 | 1.4 | 1.2 | 306 | membosankan | mengasyikkan | Stimulasi |
| 7 | 1.4 | 1.5 | 1.2 | 306 | tidak menarik | menarik | Stimulasi |
| 8 | 0.5 | 1.5 | 1.2 | 306 | tak dapat diprediksi | dapat diprediksi | Ketepatan |
| 9 | 1.7 | 1.7 | 1.3 | 306 | cepat | lambat | Efisiensi |
| 10 | 0.9 | 2.2 | 1.5 | 306 | berdaya cipta | konvensional | Kebaruan |
| 11 | 1.3 | 1.7 | 1.3 | 306 | menghalangi | mendukung | Ketepatan |
| 12 | 2.0 | 1.7 | 1.3 | 306 | buruk | baik | Daya tarik |
| 13 | 1.5 | 1.9 | 1.4 | 306 | rumit | sedehana | Kejelasan |
| 14 | 1.6 | 1.6 | 1.3 | 306 | tidak disukai | menggembirakan | Daya tarik |
| 15 | 0.9 | 1.7 | 1.3 | 306 | lazim | terdepan | Kebaruan |
| 16 | 1.6 | 1.7 | 1.3 | 306 | tidak nyaman | nyaman | Daya tarik |
| 17 | 1.8 | 1.9 | 1.4 | 306 | aman | tidak aman | Ketepatan |
| 18 | 1.1 | 1.6 | 1.3 | 306 | memotivasi | tidak memotivasi | Stimulasi |
| 19 | 1.9 | 1.4 | 1.2 | 306 | memenuhi ekspektasi | tidak memenuhi ekspektasi | Ketepatan |
| 20 | 1.9 | 1.6 | 1.3 | 306 | efisien | tidak efisien | Efisiensi |
| 21 | 1.8 | 1.6 | 1.3 | 306 | jelas | membingungkan | Kejelasan |
| 22 | 2.0 | 1.3 | 1.1 | 306 | tidak praktis | praktis | Efisiensi |
| 23 | 1.7 | 2.4 | 1.5 | 306 | terorganisasi | berantakan | Efisiensi |
| 24 | 1.5 | 1.6 | 1.3 | 306 | atraktif | tidak atraktif | Daya tarik |
| 25 | 1.7 | 1.8 | 1.4 | 306 | ramah pengguna | tidak ramah pengguna | Daya tarik |
| 26 | 1.0 | 2.5 | 1.6 | 306 | konservatif | inovatif | Kebaruan |

| UEQ Scales (Mean and Variance) | | |
|--------------------------------|-------|------|
| Daya tarik | 1.686 | 1.09 |
| Kejelasan | 1.766 | 1.13 |
| Efisiensi | 1.848 | 1.09 |
| Ketepatan | 1.380 | 0.71 |
| Stimulasi | 1.330 | 1.01 |
| Kebaruan | 0.926 | 1.14 |



| Pragmatic and Hedonic Quality | |
|-------------------------------|------|
| Daya tarik | 1.69 |
| Kualitas Pragmatis | 1.66 |
| Kualitas Hedonis | 1.13 |

The scales of the UEQ can be grouped into pragmatic quality (Perspicuity, Efficiency, Dependability) and hedonic quality (Stimulation, Originality). Pragmatic quality describes task related quality aspects, hedonic quality the non-task related quality aspects. Below the mean of the three pragmatic and hedonic quality aspects is calculated.



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Confidence intervals for items and scales

Here the 5% confidence intervals for the scale means and the means of the single items are shown. The confidence interval is a measure for the precision of the estimation of the scale mean. The smaller the confidence interval is, the higher is the precision of the estimation and the more you can trust your results. The width of the confidence interval depends on the number of available data and on how consistently the persons judged the evaluated product. The more consistent their opinion is the smaller is the confidence interval. The work sheet *Sample_Size* helps you to decide how many data you would need to achieve a certain width of the confidence interval.

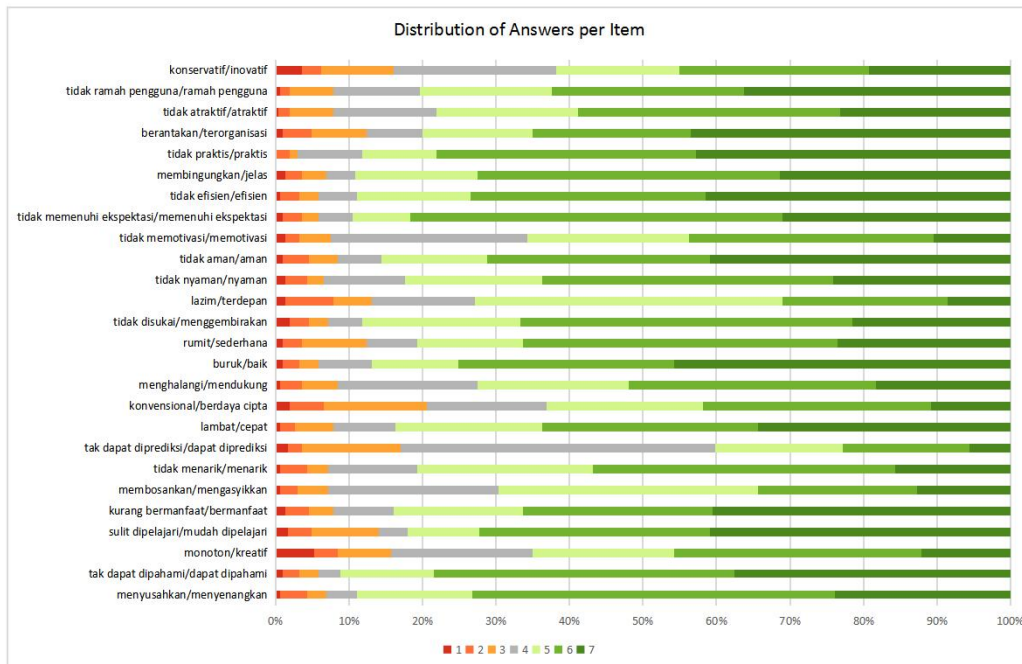
| Confidence Interval (p=0.05) per item | | | | | | |
|---------------------------------------|-------|-----------|-----|------------|---------------------|-------|
| Item | Mean | Std. Dev. | N | Confidence | Confidence interval | |
| 1 | 1,742 | 1,215 | 306 | 0,136 | 1,606 | 1,878 |
| 2 | 1,971 | 1,213 | 306 | 0,136 | 1,835 | 2,106 |
| 3 | 0,935 | 1,560 | 306 | 0,175 | 0,760 | 1,109 |
| 4 | 1,745 | 1,537 | 306 | 0,172 | 1,573 | 1,917 |
| 5 | 1,771 | 1,417 | 306 | 0,159 | 1,613 | 1,930 |
| 6 | 1,059 | 1,200 | 306 | 0,134 | 0,924 | 1,193 |
| 7 | 1,412 | 1,242 | 306 | 0,139 | 1,273 | 1,551 |
| 8 | 0,464 | 1,231 | 306 | 0,138 | 0,326 | 0,602 |
| 9 | 1,706 | 1,323 | 306 | 0,148 | 1,558 | 1,854 |
| 10 | 0,866 | 1,477 | 306 | 0,166 | 0,701 | 1,032 |
| 11 | 1,301 | 1,319 | 306 | 0,148 | 1,153 | 1,448 |
| 12 | 1,977 | 1,309 | 306 | 0,147 | 1,830 | 2,124 |
| 13 | 1,536 | 1,379 | 306 | 0,155 | 1,381 | 1,690 |
| 14 | 1,627 | 1,275 | 306 | 0,143 | 1,485 | 1,770 |
| 15 | 0,902 | 1,307 | 306 | 0,146 | 0,756 | 1,048 |
| 16 | 1,582 | 1,306 | 306 | 0,146 | 1,435 | 1,728 |
| 17 | 1,837 | 1,393 | 306 | 0,156 | 1,681 | 1,993 |
| 18 | 1,078 | 1,255 | 306 | 0,141 | 0,938 | 1,219 |
| 19 | 1,918 | 1,200 | 306 | 0,134 | 1,784 | 2,053 |
| 20 | 1,941 | 1,264 | 306 | 0,142 | 1,800 | 2,083 |
| 21 | 1,814 | 1,263 | 306 | 0,141 | 1,672 | 1,955 |
| 22 | 2,042 | 1,134 | 306 | 0,127 | 1,915 | 2,170 |
| 23 | 1,703 | 1,534 | 306 | 0,172 | 1,531 | 1,875 |
| 24 | 1,500 | 1,271 | 306 | 0,142 | 1,358 | 1,642 |
| 25 | 1,686 | 1,350 | 306 | 0,151 | 1,535 | 1,838 |
| 26 | 1,003 | 1,569 | 306 | 0,176 | 0,827 | 1,179 |

| Confidence Intervals (p=0.05) per scale | | | | | | |
|---|-------|-----------|-----|------------|---------------------|-------|
| Scale | Mean | Std. Dev. | N | Confidence | Confidence interval | |
| Daya tarik | 1,686 | 1,042 | 306 | 0,117 | 1,569 | 1,802 |
| Kejelasan | 1,766 | 1,061 | 306 | 0,119 | 1,647 | 1,885 |
| Efisiensi | 1,848 | 1,042 | 306 | 0,117 | 1,731 | 1,965 |
| Ketepatan | 1,380 | 0,842 | 306 | 0,094 | 1,286 | 1,474 |
| Stimulasi | 1,330 | 1,005 | 306 | 0,113 | 1,218 | 1,443 |
| Kebaruan | 0,926 | 1,067 | 306 | 0,120 | 0,807 | 1,046 |

Distribution of Answers per Item

Here you can see the distribution of answers to the single items. If there are items that show a polarization in the answers (many negative and many positive judgements and not much neutral judgements) may help to get deeper insights concerning aspects of the product that are experienced as quite positive by one subgroup of participants and quite negative by another subgroup.

| Nr | Item | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Scale |
|----|--|----|----|----|-----|-----|-----|-----|------------|
| 1 | menyusahkan/menyenangkan | 2 | 11 | 8 | 13 | 49 | 151 | 73 | Daya tarik |
| 2 | tak dapat dipahami/dapat dipahami | 3 | 7 | 8 | 9 | 39 | 125 | 115 | Kejelasan |
| 3 | monoton/kreatif | 16 | 10 | 22 | 59 | 59 | 103 | 37 | Kebaruan |
| 4 | sulit dipelajari/mudah dipelajari | 5 | 10 | 28 | 12 | 30 | 96 | 125 | Kejelasan |
| 5 | kurang bermanfaat/bermanfaat | 4 | 10 | 10 | 25 | 54 | 79 | 124 | Stimulasi |
| 6 | membosankan/mengasyikkan | 2 | 7 | 13 | 71 | 108 | 66 | 39 | Stimulasi |
| 7 | tidak menarik/menarik | 2 | 11 | 9 | 37 | 73 | 126 | 48 | Stimulasi |
| 8 | tak dapat diprediksi/dapat diprediksi | 5 | 6 | 41 | 131 | 53 | 53 | 17 | Ketepatan |
| 9 | lambat/cepat | 2 | 6 | 16 | 26 | 61 | 90 | 105 | Efisiensi |
| 10 | konvensional/berdaya cipta | 6 | 14 | 43 | 50 | 65 | 95 | 33 | Kebaruan |
| 11 | menghalangi/mendukung | 2 | 9 | 15 | 58 | 63 | 103 | 56 | Ketepatan |
| 12 | buruk/baik | 3 | 7 | 8 | 22 | 36 | 90 | 140 | Daya tarik |
| 13 | rumit/serdhana | 3 | 8 | 27 | 21 | 44 | 131 | 72 | Kejelasan |
| 14 | tidak disukai/menggembirakan | 6 | 8 | 8 | 14 | 66 | 138 | 66 | Daya tarik |
| 15 | lazim/terdepan | 4 | 20 | 16 | 43 | 128 | 69 | 26 | Kebaruan |
| 16 | tidak nyaman/nyaman | 4 | 9 | 7 | 34 | 57 | 121 | 74 | Daya tarik |
| 17 | tidak aman/aman | 3 | 11 | 12 | 18 | 44 | 93 | 125 | Ketepatan |
| 18 | tidak memotivasi/memotivasi | 4 | 6 | 13 | 82 | 67 | 102 | 32 | Stimulasi |
| 19 | tidak memenuhi ekspektasi/memenuhi ekspektas | 3 | 8 | 7 | 14 | 24 | 155 | 95 | Ketepatan |
| 20 | tidak efisien/efisien | 2 | 8 | 8 | 16 | 47 | 98 | 127 | Efisiensi |
| 21 | membingungkan/jelas | 4 | 7 | 10 | 12 | 51 | 126 | 96 | Kejelasan |
| 22 | tidak praktis/praktis | 0 | 6 | 3 | 27 | 31 | 108 | 131 | Efisiensi |
| 23 | berantakan/terorganisasi | 3 | 12 | 23 | 23 | 46 | 66 | 133 | Efisiensi |
| 24 | tidak atraktif/atraktif | 1 | 5 | 18 | 43 | 59 | 109 | 71 | Daya tarik |
| 25 | tidak ramah pengguna/ramah pengguna | 2 | 4 | 18 | 36 | 55 | 80 | 111 | Daya tarik |
| 26 | konservatif/inovatif | 11 | 8 | 30 | 68 | 51 | 79 | 59 | Kebaruan |



Correlations of the items per scale and reliability coefficients

Items that belong to the same scale should show in general a high correlation.

Here you can find the correlations of the items in a scale and some common coefficients, Cronbachs Alpha and Guttman's Lambda2, that are typically used to estimate reliability of a scale.

Cronbachs Alpha-Coefficient

The Alpha-Coefficient (Cronbach, 1951) is a measure for the consistency of a scale. There is no generally accepted rule how big the value of the coefficient should be. Many authors assume that a scale should show an alpha value > 0.7 to be considered as sufficiently consistent, but these suggestions are more rules-of-thumb and not based on some sound statistical facts. Thus, from a methodological standpoint such a use of a cut-off criterium is not really well-founded (see for example Schmitt, N., 1996). Especially if you have only a small sample (for example less than 50 answers) the value of the Alpha-Coefficient should be interpreted very carefully. In such cases a low Alpha can result from sampling errors and may not be an indicator for a problem with the scale.

If the value of the Alpha-Coefficient for a scale shows a massive deviation from a reasonable target value, for example 0.6 or 0.7, this can be a hint that some items of the scale are in the given context interpreted by several participants in an unexpected way. In such cases please check the single item scores and correlations between the items. This can give a hint if there is maybe a common misinterpretation of an item due to the context of the evaluation. In such cases the corresponding scale should be interpreted very carefully. The 5% confidence interval for the Alpha coefficient is calculated accordingly to Bonnett, D.B. (2002), Sample Size Requirements for Testing and Estimating Coefficient Alpha, Journal of Educational and Behavioral Statistics, 27(4), 335-340.

| Daya tarik | |
|----------------|-------------|
| Items | Correlation |
| 1, 12 | 0,55 |
| 1, 14 | 0,60 |
| 1, 16 | 0,58 |
| 1, 24 | 0,51 |
| 1, 25 | 0,48 |
| 12, 14 | 0,71 |
| 12, 16 | 0,59 |
| 12, 24 | 0,63 |
| 12, 25 | 0,59 |
| 14, 16 | 0,76 |
| 14, 24 | 0,60 |
| 14, 25 | 0,57 |
| 16, 24 | 0,42 |
| 16, 25 | 0,62 |
| 24, 25 | 0,57 |
| Average | 0,59 |
| Alpha | 0,89 |
| Conf. Int. | 0,87 |
| Alpha (5%) | 0,91 |

| Kejelasan | |
|----------------|-------------|
| Items | Correlation |
| 2, 4 | 0,51 |
| 2, 13 | 0,49 |
| 2, 21 | 0,53 |
| 4, 13 | 0,47 |
| 4, 21 | 0,55 |
| 13, 21 | 0,40 |
| Average | 0,49 |
| Alpha | 0,79 |
| Conf. Int. | 0,75 |
| Alpha (5%) | 0,83 |

| Efisiensi | |
|----------------|-------------|
| Items | Correlation |
| 9, 20 | 0,55 |
| 9, 22 | 0,38 |
| 9, 23 | 0,42 |
| 20, 22 | 0,65 |
| 20, 23 | 0,60 |
| 22, 23 | 0,43 |
| Average | 0,51 |
| Alpha | 0,80 |
| Conf. Int. | 0,76 |
| Alpha (5%) | 0,84 |

| Ketepatan | |
|----------------|-------------|
| Items | Correlation |
| 8, 11 | -0,02 |
| 8, 17 | -0,06 |
| 8, 19 | 0,00 |
| 11, 17 | 0,43 |
| 11, 19 | 0,47 |
| 17, 19 | 0,58 |
| Average | 0,23 |
| Alpha | 0,55 |
| Conf. Int. | 0,46 |
| Alpha (5%) | 0,62 |

| Stimulasi | |
|----------------|-------------|
| Items | Correlation |
| 5, 6 | 0,36 |
| 5, 7 | 0,46 |
| 5, 18 | 0,44 |
| 6, 7 | 0,80 |
| 6, 18 | 0,43 |
| 7, 18 | 0,47 |
| Average | 0,50 |
| Alpha | 0,80 |
| Conf. Int. | 0,76 |
| Alpha (5%) | 0,83 |

| Kebaruan | |
|----------------|-------------|
| Items | Correlation |
| 3, 10 | 0,53 |
| 3, 15 | 0,28 |
| 3, 26 | 0,17 |
| 10, 15 | 0,42 |
| 10, 26 | 0,41 |
| 15, 26 | 0,38 |
| Average | 0,36 |
| Alpha | 0,69 |
| Conf. Int. | 0,63 |
| Alpha (5%) | 0,75 |

Guttman's Lambda2 coefficient

Another coefficient often reported as a measure of reliability of a scale is Guttman's Lambda2 coefficient. Lambda2 is a better approximation of reliability than Cronbach's Alpha (both are a lower bound for the real reliability of a scale). The coefficient Lambda1 also computed here is mainly needed for computing Lambda2.

NOTE: Theoretically, Lambda2 is higher than Alpha, but due to some rounding errors in the computation, it can happen that the Excel-Sheet shows some violations of this!

| Daya tarik | |
|----------------|-------------|
| Lambda1 | Lambda2 |
| 0,74525664 | 0,90 |
| Items | Covar^2 |
| 1, 12 | 0,75 |
| 1, 14 | 0,86 |
| 1, 16 | 0,84 |
| 1, 24 | 0,63 |
| 1, 25 | 0,61 |
| 12, 14 | 1,38 |
| 12, 16 | 1,01 |
| 12, 24 | 1,08 |
| 12, 25 | 1,08 |
| 14, 16 | 1,59 |
| 14, 24 | 0,93 |
| 14, 25 | 0,97 |
| 16, 24 | 0,48 |
| 16, 25 | 1,19 |
| 24, 25 | 0,96 |
| Sum | 14,37 |
| Lambda2 | 0,90 |

| Kejelasan | |
|----------------|-------------|
| Lambda1 | Lambda2 |
| 0,59333004 | 0,79 |
| Items | Covar^2 |
| 2, 4 | 0,90 |
| 2, 13 | 0,68 |
| 2, 21 | 0,66 |
| 4, 13 | 0,99 |
| 4, 21 | 1,14 |
| 13, 21 | 0,49 |
| Sum | 4,86 |
| Lambda2 | 0,79 |

| Efisiensi | |
|----------------|-------------|
| Lambda1 | Lambda2 |
| 0,59802304 | 0,80 |
| Items | Covar^2 |
| 9, 20 | 0,84 |
| 9, 22 | 0,33 |
| 9, 23 | 0,73 |
| 20, 22 | 0,87 |
| 20, 23 | 1,34 |
| 22, 23 | 0,55 |
| Sum | 4,66 |
| Lambda2 | 0,80 |

| Ketepatan | |
|----------------|-------------|
| Lambda1 | Lambda2 |
| 0,41531547 | 0,63 |
| Items | Covar^2 |
| 8, 11 | 0,00 |
| 8, 17 | 0,01 |
| 8, 19 | 0,00 |
| 11, 17 | 0,63 |
| 11, 19 | 0,54 |
| 17, 19 | 0,95 |
| Sum | 2,17 |
| Lambda2 | 0,63 |

| #N/A | |
|----------------|-------------|
| Lambda1 | Lambda2 |
| 0,59364059 | 0,80 |
| Items | Covar^2 |
| 5, 6 | 0,38 |
| 5, 7 | 0,65 |
| 5, 18 | 0,62 |
| 6, 7 | 1,42 |
| 6, 18 | 0,41 |
| 7, 18 | 0,54 |
| Sum | 4,02 |
| Lambda2 | 0,80 |

| Kebaruan | |
|----------------|-------------|
| Lambda1 | Lambda2 |
| 0,5173781 | 0,70 |
| Items | Covar^2 |
| 3, 10 | 1,47 |
| 3, 15 | 0,32 |
| 3, 26 | 0,16 |
| 10, 15 | 0,64 |
| 10, 26 | 0,89 |
| 15, 26 | 0,59 |
| Sum | 4,07 |
| Lambda2 | 0,70 |

Benchmark

The measured scale means are set in relation to existing values from a benchmark data set. This data set contains data from 21175 persons from 468 studies concerning different products (business software, web pages, web shops, social networks).

The comparison of the results for the evaluated product with the data in the benchmark allows conclusions about the relative quality of the evaluated product compared to other products.

Please help to increase the data basis for the benchmark! If you use the UEQ to evaluate products it would be quite helpful for us if you will share information concerning the type of product, the number of participants in your study and the scale means. We will of course handle these information absolutely confidential and will use it solely to improve the benchmark.

| Scale | Mean | Comparison to benchmark | Interpretation |
|------------|------|-------------------------|---|
| Daya tarik | 1,69 | Good | 10% of results better, 75% of results worse |
| Kejelasan | 1,77 | Good | 10% of results better, 75% of results worse |
| Efisiensi | 1,85 | Good | 10% of results better, 75% of results worse |
| Ketepatan | 1,38 | Above Average | 25% of results better, 50% of results worse |
| Stimulasi | 1,33 | Above Average | 25% of results better, 50% of results worse |
| Kebaruan | 0,93 | Above Average | 25% of results better, 50% of results worse |

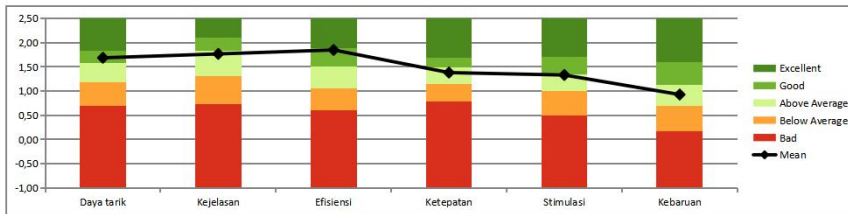


Table to create the benchmark graph (purely technical, please ignore)

| Scale | Lower Border | Bad | Below Average | Above Average | Good | Excellent | Mean |
|------------|--------------|------|---------------|---------------|------|-----------|------|
| Daya tarik | -1,00 | 0,69 | 0,49 | 0,4 | 0,26 | 0,66 | 1,69 |
| Kejelasan | -1,00 | 0,72 | 0,58 | 0,53 | 0,27 | 0,5 | 1,77 |
| Efisiensi | -1,00 | 0,6 | 0,45 | 0,45 | 0,38 | 0,62 | 1,85 |
| Ketepatan | -1,00 | 0,78 | 0,36 | 0,34 | 0,21 | 0,81 | 1,38 |
| Stimulasi | -1,00 | 0,5 | 0,5 | 0,35 | 0,35 | 0,8 | 1,33 |
| Kebaruan | -1,00 | 0,16 | 0,54 | 0,42 | 0,48 | 0,9 | 0,93 |

Table with 10 columns and 1000 rows. Each cell contains the text 'REF' repeated multiple times, forming a dense grid of the word.

Table with 10 columns and 1000 rows. Each cell contains the text 'WREF' repeated multiple times, forming a dense grid of the word.

Sample size to reach a certain precision concerning the estimated scale means

If you have not many data points the error bars for the scale means in the Results Tab can be quite big. The error bars show the area (confidence interval) in which the true value of the scale mean should be located with a 95% probability. Thus, big error bars stand for a not very precise measurement.

A natural question is thus to ask, how many person you need (i.e. how big your sample should be) if you want to measure the scale means with a certain precision. This tab tries to answer this question.

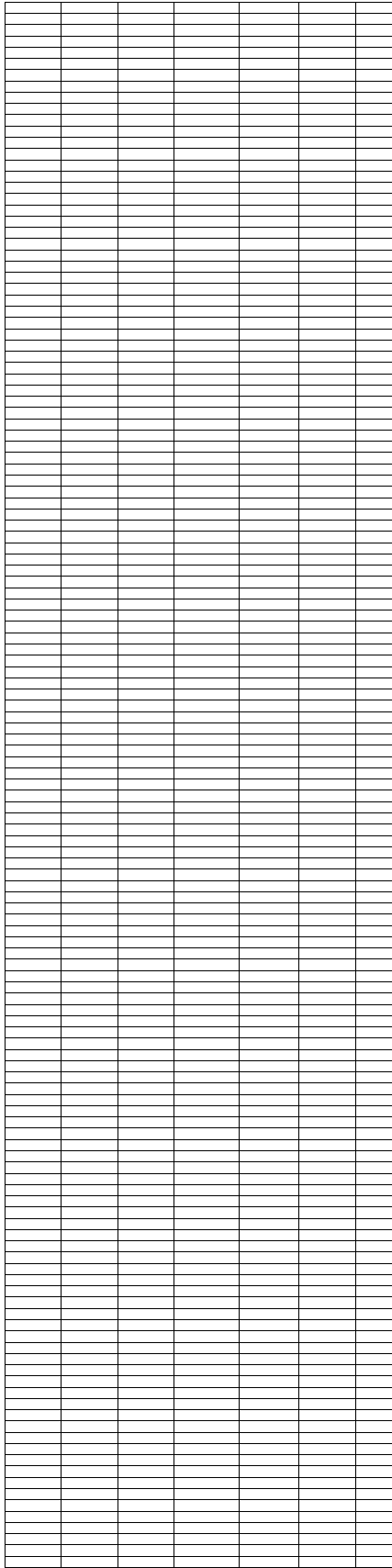
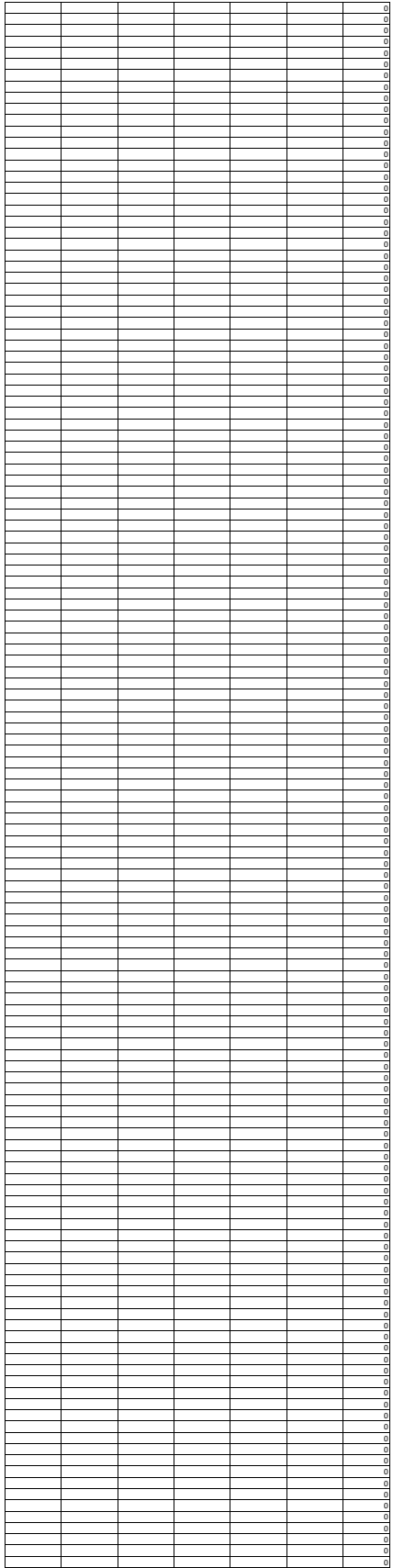
For a given precision E (deviation between true scale mean in the population and the estimated scale mean from the sample) the required sample size depends on the standard deviation of the scale value in the population (the smaller this is the higher is the agreement between different persons and thus the less persons you need to ask) and the chance (error probability) P you still accept that the true scale mean is outside the area described by the error bars (i.e. it will be with a probability 1-P inside the confidence interval).

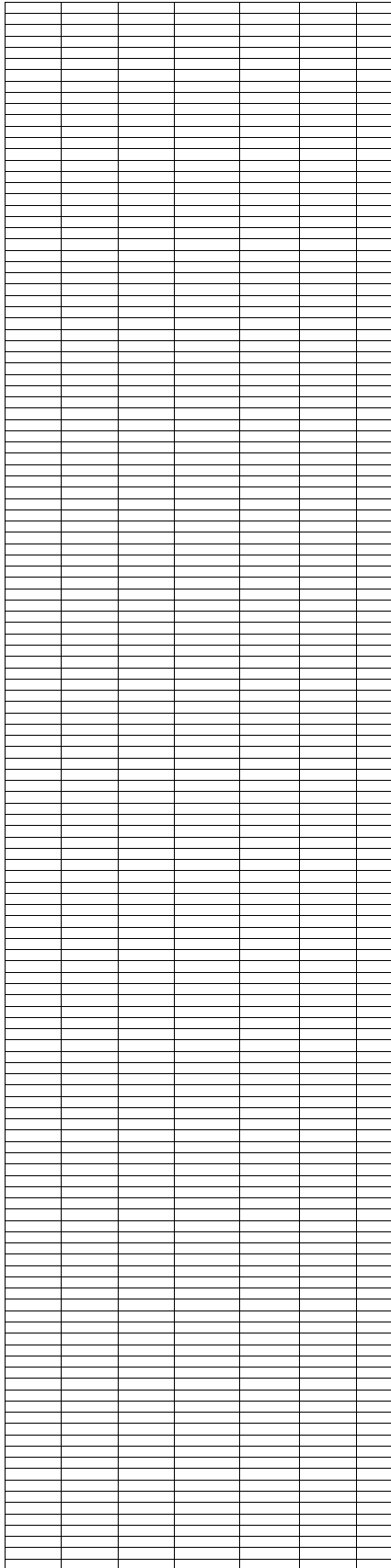
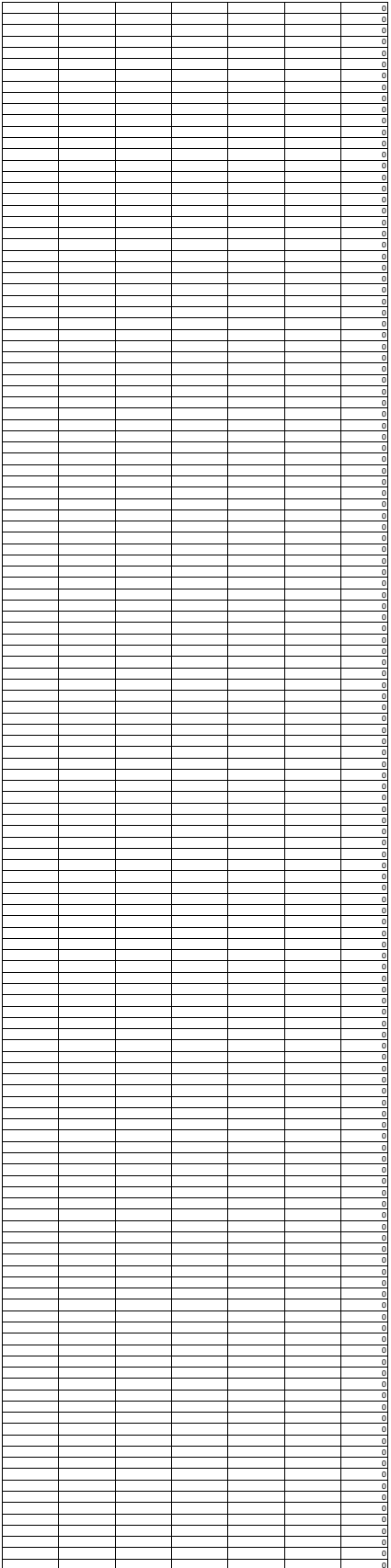
Of course the standard deviation of the scale value in the population is not known. For the data in this tab we estimate this value from the standard deviation of the already entered data. Thus, if you enter more data the estimation of this value and thus the values in the table below will change!!

The following table shows for typical values of E and P the required sample size. Please note that these are just rough estimations to give you an idea on how many data you need to achieve an accurate measurement!

| Scale | Standard Deviation |
|------------|--------------------|
| Daya tarik | 1,04 |
| Kejelasan | 1,06 |
| Efisiensi | 1,04 |
| Ketepatan | 0,84 |
| Stimulasi | 1,00 |
| Kebaruan | 1,07 |

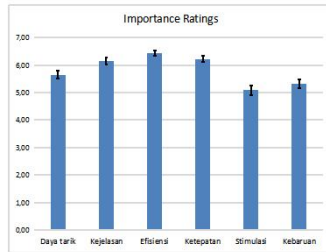
| Condition | Daya tarik | Kejelasan | Efisiensi | Ketepatan | Stimulasi | Kebaruan |
|--------------------------------|------------|-----------|-----------|-----------|-----------|----------|
| Precision=0.5, Err.Prob.=0.1 | 12 | 12 | 12 | 8 | 11 | 12 |
| Precision=0.5, Err.Prob.=0.05 | 17 | 17 | 17 | 11 | 16 | 17 |
| Precision=0.5, Err.Prob.=0.01 | 29 | 30 | 29 | 19 | 27 | 30 |
| Precision=0.25, Err.Prob.=0.1 | 47 | 49 | 47 | 31 | 44 | 50 |
| Precision=0.25, Err.Prob.=0.05 | 67 | 69 | 67 | 44 | 62 | 70 |
| Precision=0.25, Err.Prob.=0.01 | 116 | 120 | 116 | 76 | 107 | 121 |
| Precision=0.1, Err.Prob.=0.1 | 296 | 307 | 296 | 193 | 275 | 310 |
| Precision=0.1, Err.Prob.=0.05 | 417 | 433 | 417 | 272 | 388 | 437 |
| Precision=0.1, Err.Prob.=0.01 | 723 | 750 | 723 | 472 | 672 | 758 |





Importance Ratings: Mean and Standard Deviation

| Skala | Mean | Std. Dev. | N | Confidence | Confidence Interval |
|------------|------|-----------|-----|------------|---------------------|
| Daya tarik | 5,64 | 1,21 | 255 | 0,15 | 5,49 5,79 |
| Kejelasan | 6,15 | 1,03 | 255 | 0,13 | 6,03 6,27 |
| Efisiensi | 6,44 | 0,75 | 255 | 0,10 | 6,34 6,54 |
| Ketepatan | 6,22 | 0,94 | 255 | 0,12 | 6,11 6,34 |
| Stimulasi | 5,09 | 1,43 | 255 | 0,17 | 4,91 5,26 |
| Kebaruan | 5,32 | 1,24 | 255 | 0,15 | 5,17 5,47 |



| Language | L1 | R1 | L2 | R2 |
|------------|---------------|-------------------------------------|-----------------------|---------------------|
| German | un erfreulich | erfreulich | unverständlich | verständlich |
| English | annoying | enjoyable | not understandable | understandable |
| Spanish | desagradable | agradable | no entendible | entendible |
| Portuguese | Desagradável | Agradável | Incompreensível | Compreensível |
| Turkish | can sıkıcı | sevindirici | anlaşılmaz | anlaşılır |
| French | Agaçant | Agréable | Incompréhensible | Compréhensible |
| Italian | incresioso | gradito | incomprensibile | comprensibile |
| Russian | неприятный | д о с т а в л я е т удовольствие | непонятный | понятный |
| Chinese | 令人不快的 | 令人愉快的 | 费解的 | 易懂的 |
| Japanese | 楽しくない | 楽しい | わかりにくい | わかりやすい |
| Indonesian | menyusahkan | menyenangkan | tak dapat dipahami | dapat dipahami |
| Dutch | onplezierig | plezierig | onbegrijpelijk | begrijpelijk |
| Estonian | vastumeelne | rõõmupakkuv | arusaamatu | arusaadav |
| Slovene | nerazveseljiv | razveseljiv | nerazumljiv | razumljiv |
| Swedish | Irriterande | Njutbar | Obegriplig | Begriplig |
| Greek | ενοχλητικό | απολαυστικό | δυσνόητο | κατανοητό |
| Polish | irytujący | przyjemny | niezrozumiały | zrozumiały |
| Hindi | कष्टप्रद | मनोरंजक | समझ में आता है | समझ में नहीं आता है |
| Bulgarian | дразнеш | приятен | неразбираем | разбираем |
| Czech | otravný | příjemný | nepochopitelný | pochopitelný |
| Malay | menjengkelkan | menyeronokkan | sukar difahami | mudah difahami |
| Persian | آزاردهنده | رضایت بخش | غیرقابل فهم | قابل فهم |
| Thai | น่ารำคาญ | น่าสนุก | เข้าใจยาก | เข้าใจง่าย |

| | | | | |
|-----------|--------------------|-------------|--------------------------------------|---------------------------|
| Danish | kedeligt | fornøjeligt | uforståelige | forståelige |
| Norwegian | kjedelig | fornøyetlig | uforståelig | forståelig |
| Finnish | ärsyttävä | nautittava | vaikeasti ymmärrettävää | helposti ymmärrettävää |
| Hungarian | idegesítő | élvezetes | érthetetlen | érthető |
| Croatian | dosadan | zanimljiv | nerazumljivi | razumljivi |
| Bosnian | dosadan | zabavan | nerazumljivi | razumljivi |
| Hebrew | מבדיל | מנהנה | איננו מבינים | מבינים |
| Arabic | | مزعج | ممتع | غير مفهوم |
| Bengali | বিরক্তিকর | উপভোগ্য | বোধগম্য নয় | বোধগম্য |
| Kannada | ಕಿರಿಕಿರಿ | ಕಿರಿಕಿರಿ | ಅರ್ಥವಾಗದ | ಅರ್ಥವಾಗದ |
| Marathi | त्रासदायक | आनंददायक | समजू शकत नाही | समजण्यासारखा |
| Tamil | எரிச்சலூட்டு ம் | இன்பம் | புரிந்து கொள்ள முடியவில் லை | புரிகிறது |
| Slovak | obťažujúci | pútavý | nepochopiteľný | pochopiteľný |

| L3 | R3 | L4 | R4 | L5 |
|----------------|-------------------|------------------------------|------------------------------|---------------------------|
| kreativ | phantasielos | leicht zu lernen | schwer zu lernen | wertvoll |
| creative | dull | easy to learn | difficult to learn | valuable |
| creativo | sin imaginacion | facil de aprender | dificil de aprender | valioso |
| Criativo | Sem criatividade | De F á cil aprendizagem | De dif í cil aprendizagem | Valioso |
| yaratıcı | yaratıcı olmayan | kolay öğrenilir | öğrenmesi zor | değerli |
| Moderne | Sans fantaisie | Appropriation simple | Appropriation compliquée | Apporte de la valeur |
| creativo | privo di fantasia | facile da capire | difficile da capire | di grande valore |
| креативный | неизобретательный | легко освоить | трудно освоить | создает новые ценности |
| 富创造力的 | 平淡无奇的 | 容易学会的 | 难学会的 | 高品质的 |
| 創造的 | 創造的でない | 覚えやすい | 覚えにくい | 価値がある |
| kreatif | monoton | mudah dipelajari | sulit dipelajari | bermanfaat |
| creatief | saai | makkelijk te leren | moeilijk te leren | waardevol |
| loominguline | tavaline | kerge kasutama õppida | raske kasutama õppida | väärtuslik |
| kreativen | brez fantazije | enostaven učenje | za težak za učenje | osvežilen |
| Kreativ | Tråkig | Lätt att lära sig | Svår att lära sig | Värdefull |
| δημιουργικό | αναποτελεσματικό | εύκολο στην μάθηση | δύσκολο στην μάθηση | πολύτιμο |
| kreatywny | nudny | łatwy do nauki | trudny do nauki | wartościowy |
| रचनात्मक | सुस्त | जानने के लिए मुश्किल | जानने के लिए आसान | मूल्यवान |
| творчески | скучен | лесен за научаване | труден за научаване | стойностен |
| tvůrčí | nezáživný | jednoduch ý na naučení | obtížný na naučení | hodnotný |
| ada kreativiti | tidak kreatif | bersifat mudah dipelajari | sukar dipelajari | bermutu |
| سازنده/خلاق | بیهوده | یادگیری آسان | یادگیری سخت | ارزشمند |
| สร้างสรรค | ราบเรียบ | เรียนรู้ง่าย | เรียนรู้งาก | มีคุณค่า |

kreativ kedelig nemme at lære svære at lære værdifulde

kreativ kjedelig lett å lære vanskelig å lære verdifullt

luova tylsä helposti opittavaa vaikeasti opittavaa arvokasta

kreatív egyhangú k ö nnyen nehezen értékes
elsajátítható elsajátítható

kreativna glupa laki za naučiti složeni za naučiti vrijedni

kreativni dosadni laki za učenje teški za učenje vredni

יצירתיים משיממים הדימלל הקל הדימלל הקשימ הדימלל רב ערך

إبداعية مبتدلة سهل التعلم صعب التعلم قِيم

सृष्टिशील निष्प्रभ शेखासहज शेखाकठिन मूल्यवान्

சிறியாசீலதே சிறியாசீலதே சலியலசுலத சலியலசுலத தீலீலாலவ

सर्जनशील नीरस शिकणे सोपे शिकणे कठीण मूल्यवान

ஆ க் க ப் மந்தமான படிப்பதற்கு க ற் ப த ற் கு மதிப்பு மிக்க
பூர்வமான சுலபம் கடினம்

nápaditý tuctový intuitivny neintuitivny hodnotný

| R5 | L6 | R6 | L7 | R7 |
|-----------------------|-------------|----------------|---------------------|---------------|
| minderwertig | langweilig | spannend | uninteressant | interessant |
| inferior | boring | exciting | not interesting | interesting |
| de poco valor | aburrido | emocionante | no interesante | interesante |
| Sem valor | Aborrecido | Excitante | Desinteressante | Interessante |
| adi | sıkıcı | heyecan verici | ilginç olmayan | ilginç |
| Peu de valeur ajoutée | Ennuyeux | Captivant | Inintéressant | Intéressant |
| di poco valore | noioso | appassionante | non interessante | interessante |
| посредственный | скучный | захватывающий | неинтересный | интересный |
| 低劣的 | 乏味的 | 带劲的 | 无趣的 | 有趣的 |
| 価値がない | 退屈だ | エキサイティングだ | おもしろくない | おもしろい |
| kurang bermanfaat | membosankan | mengasyikkan | tidak menarik | menarik |
| inferieur | vervelend | spannend | oninteressant | interessant |
| väärtusetu | igav | põnev | ebahuvitav | huvitav |
| uspavajoč | dolgočasen | napet | nezanimiv | zanimiv |
| Värdelös | Tråkig | Spännande | Ointressant | Intressant |
| υποδέεστερο | βαρετό | συναρπαστικό | αδιάφορο | ενδιαφέρον |
| gorszy | nudny | ekscytujący | nieinteresujący | interesujący |
| घटिया | उबाऊ | दिलचस्प | दिलचस्प नहीं | दिलचस्प |
| посредствен | скучен | вълнуващ | безинтересен | интересен |
| poďradný | nudný | vzrušující | nezajímavý | zajímavý |
| kurang bermutu | membosankan | menyeronokkan | tidak menarik minat | menarik minat |
| نامطلوب | خسته کننده | شورانگيز | عدم جذابيت | جذاب |
| ไร้คุณค่า | น่าเบื่อ | น่าตื่นเต้น | ไม่น่าสนใจ | น่าสนใจ |

| | | | | |
|-------------------|---------------|---------------|-------------------|---------------|
| ringe | kedelige | spændende | uinteressante | interessante |
| mindre verdifullt | kjedelig | spennende | uinteressant | interessant |
| vähäarvoista | pitkäveteistä | jännittävää | yksitoikkoista | kiinnostavaa |
| jelentéktelen | unalmas | izgalmas | nem érdekes | érdekes |
| neodgovarajući | dosadni | uzbudljivi | nezanimljivi | zanimljivi |
| bezvredni | dosadni | uzbudljivi | nezanimljivi | zanimljivi |
| גנתים | משממים | מביהילים | לנינינעם | נינינעם |
| | متدني | ممل | غير مثير للاهتمام | مثير للاهتمام |
| নিকৃষ্ট | একঘেয়ে | উত্তেজনাপূর্ণ | আকর্ষণীয় নয় | মজাদার |
| ಬೆಲೆಬಾಳುವ | ನೀರಸವಾದ | ನೀರಸವಾದ | ಕುತೂಹಲವಲ್ಲ | ಕುತೂಹಲವಲ್ಲ |
| कनिष्ठ | कंटाळवाणा | बाहेर पडत आहे | मनोरंजक नाही | मनोरंजक |
| தாழ்வான | சலிப்பான | ஆர்வமான | சுவாரஸ்யம் இல்லை | சுவாரஸ்யம் |
| menejcenný | nudný | vzrušující | nezaujímavý | zaujímavý |

| L8 | R8 | L9 | R9 | L10 |
|----------------------|-------------------|---------|-----------|------------------------|
| unberechenbar | voraussagbar | schnell | langsam | originell |
| unpredictable | predictable | fast | slow | inventive |
| impredecible | predecible | rapido | lento | original |
| Imprevisível | Previsível | Rápido | Lento | Original |
| tahmin edilemeyen | tahmin edilebilir | hızlı | yavaş | özgün |
| Imprévisible | Prévisible | Rapide | Lent | Original |
| imprevedibile | prevedibile | veloce | lento | originale |
| непредсказуемый | прогнозируемый | быстрый | медленный | изобретательный |
| 无法预测的 | 可预见的 | 快的 | 慢的 | 独创的 |
| 予想がつかない | 予想がつきやすい | 速い | 遅い | 独特だ |
| tak dapat diprediksi | dapat diprediksi | cepat | lambat | berdaya cipta |
| onvoorspelbaar | voorspelbaar | snel | langzaam | origineel |
| ootamatu | ennustatav | kiire | aeglane | leidlik |
| nepredvidljiv | predvidljiv | hiter | počasen | nov |
| Oföretsägbar | Företsägbar | Snabb | Långsam | Uppfinningsrik |
| απρόβλεπτο | προβλέψιμο | γρήγορο | αργό | εφευρετικό |
| nieprzewidywalny | przewidywalny | szybki | wolny | pomysłowy |
| अप्रत्याशित | उम्मीद के मुताबिक | तेज | धीमी | आविष्कारशील |
| непредсказуем | предсказуем | бърз | бавен | идеен |
| nepředvídatelný | předvídatelný | rychlý | pomalý | vynalézavý |
| tidak diramalkan | boleh diramalkan | cepat | perlahan | terdapat rekaan baharu |
| غير قابل پیش بینی | قابل پیش بینی | سريع | آهسته | نوآوری/مبتکر |
| ทำนายไม่ได้ | ทำนายได้ | รวดเร็ว | เชื่องช้า | ช่างประดิษฐ์ |

| | | | | |
|-----------------------------------|---------------------------|---------|-----------------------|------------------------------|
| uforudsigelige | forudsigelige | hurtigt | langsomt | opfindsom |
| uforutsigbare | forutsigbare | raskt | tregt | oppfinnsom |
| arvaamatonta | ennakoitavaa | nopea | hidas | kekseliäs |
| kiszámíthatatlanok | kiszámíthatók | gyors | lassú | ötletes |
| nepredvidljive | predvidljive | brz | spor | inventivna |
| nepredvidljivi | predvidljivi | brz | spor | domišljati |
| תיווצפ וניא | צפוי ת | מהיר | איטי | פירצ' תר |
| غير متوقعة | متوقعة | سريع | بطيء | مستحدثة |
| অনিশ্চিত | অনুমানযোগ্য | দ্রুত | ধীর | উদ্ভাবক |
| ಊ ಹಿ ಸ ಲು ಸಾಧನಾದಾಗ | ಊ ಹಿ ಸ ಲು ಸಾಧನಾದಾಗ | ವೇಗ | ವೇಗ | ಹೊಸದಾಗಿ ಕಂಡುಹಿಡಿದಂತೆ ಹ |
| अंदाजकरतायेतनाही | भविष्यवाणीकेलीजा ऊशकते | जलद | धीमा | शोधक |
| ಫು ಕಿ ಕ್ ಕ ಢು ಡಿ ಯ ವಿ ಲ್ ಃಲ | ಫು ಕಿ ಕ್ ಕ ಕ್ ಕೂ ಡಿ ಯ | வேகமாக | நಿ தா ன ம் மெதுவாக | / கண்டுபிடிப்பு |
| nepredvídateľný | predvídateľný | rýchly | pomalý | moderný |

| R10 | L11 | R11 | L12 | R12 |
|--------------------------|---------------------|--------------------------|---------|------------|
| konventionell | behindernd | unterstützend | gut | schlecht |
| conventional | obstructive | supportive | good | bad |
| convencional | obstructivo | impulsor de apoyo | bueno | malo |
| Convencional | Obstrutivo | Condutor | Bom | Mau |
| geleneksel | engelleyici | destekleyici | iyi | kötü |
| Conventionnel | Rigide | Facilitant | Bien | Médiocre |
| convenzionale | ostruttiva | di supporto | bene | male |
| консервативный | мешающий | помогающий | хороший | плохой |
| 常规的 | 碍手碍脚的 | 能提供辅助的 | 好的 | 差的 |
| 従来どおり | 妨げになる | 助けられる | 良い | 悪い |
| konvensional | menghalangi | mendukung | baik | buruk |
| conventioneel | belemmerend | ondersteunend | goed | slecht |
| konservatiivne | takistav | abistav | hea | halb |
| star | se ne da upravljati | se z lahkoto upravlja | dober | slab |
| Fantasilös | Hindrande | Stödjande | Bra | Dålig |
| συμβατικό | παρελκυστικό | υποστηρικτικό | καλό | κακό |
| konwencjonalny | przeszkadzający | wspierający | dobry | zły |
| परम्परागत | प्रतिरोधी | सहायक | अच्छा | बुरा |
| конвенционален | възпрепятстващ | помагащ | добър | лош |
| obvyklý | bránící | podporující | dobrý | špatný |
| berdasarkan kebiasaan | menghalang | menyokong | baik | tidak baik |
| مرسوم/سنتی | مختل کننده | پشتیبان | خوب | بد |
| ตามแบบแผน | ขัดขวาง | สนับสนุน | ดี | แย่ |

traditionsbunden hindrende understøttende godt dårligt

tradisjonell hindrende støttende bra dårlig

perinteinen vaikeuttavaa tukevaa hyvä huono

szokványos hátráltatók támogatók jó rossz

konvencionalna ometajuće korisne dobar loš

uobičajeni ometajući od pomoći dobar loš

שגוריים מובילת תומכת טוב גרוע

تقليدية

عائقة

داعمة

جيد

سيء

গতানুগতিক প্রতিবন্ধক সহায়ক ভালো খারাপ

ಹೊಸದಾಗಿ

ಕಂಡುಹಿಡಿದಂತೆ ಪತ್ರಿಕೋದಿಸುವ ಪತ್ರಿಕೋದಿಸುವ ಒಳ್ಳೆಯ ಒಳ್ಳೆಯ

पारंपारिक अडवणूक करणारा आधार देणारा चांगले वाईट

வழக்கமான த செய்யும் டை ஆதரவு நல்ல கெட்ட

tradičný obmedzujúci podporujúci dobrý zlý

| L13 | R13 | L14 | R14 | L15 | |
|---------------|------------|------------------|----------------|----------------|--------|
| kompliziert | einfach | abstoßend | anziehend | herkömmlich | |
| complicated | easy | unlikable | pleasing | usual | |
| complicado | facil | repeler | atraer | convencional | |
| Complicado | Fácil | Desinteressante | Atrativo | Comum | |
| karmaşık | sade | itici | çekici | alışıldık | |
| Complicqué | Simple | Repoussant | Attractif | Habituel | |
| complicato | facile | repellente | attraente | usuale | |
| сложный | простой | отталкивающий | заманчивый | обыденный | |
| 复杂的 | 简单的 | 讨厌的 | 迷人的 | 传统的 | |
| 複雜 | 簡單 | 嫌いだ | 好きだ | 普通 | |
| rumit | sederhana | tidak disukai | menggembirakan | lazim | |
| complex | eenvoudig | afstotend | aantrekkelijk | gebruikelijk | |
| keeruline | lihtne | eemaletõukav | ligitõmbav | tavaline | |
| komplikiran | enostaven | odbijajoč | privlačen | zastarel | |
| Komplicerad | Enkel | Möter inte behov | Möter behov | Bakåtsträvande | |
| περίπλοκο | εύκολο | αντιπαθητικό | συμπαθητικό | συνηθισμένο | |
| skomplikowany | łatwy | nieprzyjemny | przyjemny | zwykły | |
| जटिल | आसान | नापसंद | मनभावन | हमेशा की तरह | |
| сложен | лесен | неприятен | приятен | обикновен | |
| složitý | jednoduchý | odpudivý | přitažlivý | tradiční | |
| menyulitkan | mudah | tidak disukai | disukai | biasa | |
| | پیچیده | آسان | ناخوشایند | خوشایند | معمولی |
| ซับซ้อน | เรียบง่าย | ไม่น่าชอบใจ | น่าชื่นชอบใจ | ดูทั่วไป | |

| | | | | | |
|---------------|-------------|---------------------|-----------------------|--------------|----------|
| indviklede | nemme | frastødende | tiltalende | sædvanlig | |
| komplisert | lett | frastøtende | tiltalende | vanlig | |
| monimutkaista | helppoa | vastenmielinen | houkutteleva | tavanomainen | |
| bonyolult | könnyű | visszataszító | vonzó | átlagos | |
| komplikirani | jednostavni | odbojna | privlačan | uobičajena | |
| složeni | jednostavni | odbojna | privlačno | svakodnevni | |
| מובנים | קלים | לא מובנים | יפה | רגילים | |
| | معقد | سهل | غير جذابة | جذابه | اعتيادية |
| জটিল | সহজ | প্রত্যাখ্যান | আবেদন | সাধারণ | |
| ಕಿಞ್ಞಕರ | ಕಿಞ್ಞಕರ | ಆಕರ್ಷಣೀಯವಾ ಗಿಲ್ಲ | ಆಕರ್ಷಣೀಯವಾ ಗಿಲ್ಲ | ಸಾಮಾನ್ಯ | |
| बिकट | सोपे | आकर्षक नाही | आकर्षक | नेहमीच्या | |
| சிக்கலான | சுலபம் | நிராகரித்து | கவற்ச்சியூட்டு கிற | சாதாரணமான | |
| zložitý | jednoduchý | odpuďzující | potešující | bežný | |

| R15 | L16 | R16 | L17 | R17 |
|---------------------|--------------------|--------------|-------------|----------------|
| neuartig | unangenehm | angenehm | sicher | unsicher |
| leading edge | unpleasant | pleasant | secure | not secure |
| novedoso | incomodo | comodo | seguro | inseguro |
| Vanguardista | Incómodo | Cómodo | Seguro | Inseguro |
| eşi görülmedik | keyifsiz | keyifli | güvenli | güvensiz |
| Avant-gardiste | Désagréable | Agréable | Sécurisant | Insécurisant |
| moderno | sgradevole | piacevole | sicuro | insicuro |
| передовой | неприятный | приятный | надежный | ненадежный |
| 新颖的 | 令人难受的 | 适意的 | 稳当的 | 靠不住的 |
| 斬新的 | 嬉しくない | 嬉しい | 安全だ | 安全でない |
| terdepan | tidak nyaman | nyaman | aman | tidak aman |
| nieuw | onaangenaam | aangenaam | vertrouwd | niet vertrouwd |
| uuenduslik | ebameeldiv | meeldiv | turvaline | ebaturvaline |
| modern | neprijeten | prijeten | napovedljiv | nenapovedljiv |
| I framkant | Inte tilltalande | Tilltalande | Säker | Inte säker |
| πρωτοπόρο | δυσάρεστο | ευχάριστο | ασφαλές | ανασφαλές |
| skrajny | niemiły | miły | bezpieczny | niebezpieczny |
| अग्रणी धार | अप्रिय | सुखद | सुरक्षित | सुरक्षित नहीं |
| иновативен | противен | приятен | сигурен | несигурен |
| moderní | protivný | milý | jistý | nejistý |
| mempunyai kelebihan | tidak menyenangkan | menyenangkan | terjamin | tidak terjamin |
| پیشرو در فناوری | مطلوب | نامطلوب | امن | نا امن |
| ดูชั้นนำ | ไม่น่าชม | น่าชื่นชม | ปลอดภัย | ไม่ปลอดภัย |

| | | | | |
|---------------------|-------------------|-------------|---------------|----------------------|
| avanceret | ubehageligt | behageligt | sikre | usikre |
| ledende | lite tiltalende | tiltalende | sikre | ikke sikre |
| huippulaatuinen | epämiellyttävä | miellyttävä | turvallista | ei turvallista |
| élvonalban lévő | kellemetlen | kellemetlen | biztonságosak | nem biztonságosak |
| predvodnička | neprijatan | prijatan | sigurne | nesigurne |
| vrhunski | neprijatan | prijatan | bezbedni | nebezbedni |
| בגדוד הנח"מ | למען אל | למען | בטוחות | אין בטוחות |
| استشافية | غير مريح | مريح | مضمونة | غير مضمونة |
| নেতৃস্থানীয় | অপ্রীতিকর | আনন্দদায়ক | নিরাপদ | নিরাপদ নয় |
| ಸಹಾಯನೈ | ಅಹಿತವಾದ | ಅಹಿತವಾದ | ಸುರಕ್ಷಿತ | ಸುರಕ್ಷಿತ |
| पुढचे टोक | अप्रिय | आनंददायी | सुरक्षित | सुरक्षित नाही |
| முன்னணி விளிம்பு | விரும்பத் தகாத | இனிமையான | பாதுகாப்பு | பாதுகாப்பு இல்லை |
| špičkový | nepříjemný | příjemný | spolehlivý | nespolehlivý |

| L18 | R18 | L19 | R19 | L20 |
|---------------|------------------|--------------------------------|--------------------------------------|----------------|
| aktivierend | einschläfernd | erwartungskonform | nicht erwartungskonform | ineffizient |
| motivating | demotivating | meets expectations | does not meet expectations | inefficient |
| activante | adormecedor | cubre expectativas | no cubre expectativas | ineficiente |
| Motivante | Desmotivante | Atende expectativas | as N ã o atende as expectativas | Ineficiente |
| canlandırıcı | uyutucu | beklentilere uygun | beklentileri karşılayamayan | verimsiz |
| Stimulant | Soporifique | R é pond aux attentes | Ne répond pas aux attentes | Inefficace |
| attivante | soporifero | aspettativo | non aspettativo | inefficiente |
| увлекательный | однообразный | соответствует ожиданиям | не соответствует ожиданиям | неэффективный |
| 令人兴奋的 | 令人昏昏欲睡的 | 符合预期的 | 不合期望的 | 低效的 |
| モチベーションを高める | モチベーションを下げる | 期待に合う | 期待に合わない | 効率が悪い |
| memotivasi | tidak memotivasi | memenuhi ekspektasi | tidak memenuhi ekspektasi | tidak efisien |
| motiverend | demotiverend | volgens verwachtingen | niet volgens verwachtingen | inefficiënt |
| motiveeriv | vähemotiveeriv | vastab ootustele | ei vasta ootustele | ebaefektiivne |
| raznolik | enoličen | zanesljiv | nezanesljiv | ni učinkovit |
| Motiverande | Omotiverande | M ö ter förväntningar | M ö ter inte förväntningar | Ineffektiv |
| ενθαρρυντικό | αποθαρρυντικό | ανταποκρίνεται στις προσδοκίες | δ ε ν ανταποκρίνεται στις προσδοκίες | ανεπαρκές |
| motywujący | demotywujący | spe ł nia oczekiwania | nie spe ł nia oczekiwania | nieefektywny |
| प्रेरित | प्रेरणाहीन | अपेक्षाओं को पूरा करता | अपेक्षाओं को पूरा नहीं करता | अक्षम |
| мотивиращ | демотивиращ | отговаря на очакванията | не отговаря на очакванията | неефикасен |
| motivující | demotivující | spl ňuje očekáváníí | nespl ň uje očekáváníí | neefektivní |
| mendorong | tidak mendorong | memenuhi jangkaan | tidak memenuhi jangkaan | tidak berkesan |
| ایجاد انگیزه | عدم ایجاد انگیزه | مطابق انتظار | عدم مطابقت با انتظار | عدم کفایت |
| เพิ่มแรงจูงใจ | ลดแรงจูงใจ | ตรงตามที่คาดหวัง | ไม่ตรงตามที่คาดหวัง | ไร้ประสิทธิภาพ |

| | | | | | |
|--------------------|---------------------|---------------------------------|-----------------------------------|------------------|-----------|
| motiverende | demotiverende | p å h ø jde med forventningerne | ikke på højde med forventningerne | ineffektivt | |
| motiverende | demotiverende | oppfyller forventningene | oppfyller ikke forventningene | ineffektivt | |
| motivoivaa | ei-innostavaa | odotuksiani vastaavaa | odotuksiani vastaamatonta | tehoton | |
| motiváló | demotiváló | megfelelnek elvárásoknak | az elvárásoknak | nem hatékony | |
| motivirajući | demotivirajući | ne ispunjavaju očekivanja | ne ispunjavaju očekivanja | neučinkovit | |
| motivišúci | sputavajući | ne ispunjavaju očekivanja | ne ispunjavaju očekivanja | neefikasan | |
| מלמדים ומעודדים | מלמדים ומעודדים | לומדים ומעודדים | לומדים ומעודדים | לעיתים לא | |
| | مشجّع | غير مُشجّع | لا تفي بالتوقعات | لا تفي بالتوقعات | غير فعّال |
| অনুপ্রেরণাদায়ক | অনুপ্রেরণাদায়ক নয় | প্রত্যাশাপূরণকরে না | প্রত্যাশাপূরণকরে না | অকার্যকর | |
| ಪ್ರೇರಣಾವಾಗಿರು ವುದು | ಪ್ರೇರಣಾವಾಗಿರು ವುದು | ನಿರೀಕ್ಷೆಯಂತೆ ನಡೆಯದ | ನಿರೀಕ್ಷೆಯಂತೆ ನಡೆಯದ | ದಕ್ಷವಲ್ಲ | |
| प्रेरणादायक | अप्रेरणादायक | अपेक्षा पूर्ण करत नाही | अपेक्षा पूर्ण करत नाही | अकार्यक्षम | |
| ஊக்குவிக்கும் | ஊக்குவிக்காத | எதிர்பார்ப்புகள் செய்யவில்லை | எதிர்பார்ப்புகள் செய்யவில்லை | கிறனற்ற | |
| motivujúci | demotivujúci | sp ĩ ň aj ú ci oĉakávania | nesp ĩ ň aj ú ci oĉakávania | neefektívny | |

| R20 | L21 | R21 | L22 | R22 | |
|---------------|----------------|------------------|-------------------|---------------|----------|
| effizient | übersichtlich | verwirrend | unpragmatisch | pragmatisch | |
| efficient | clear | confusing | impractical | practical | |
| eficiente | claro | confuso | no pragmatico | pragmatico | |
| Eficiente | Evidente | Confuso | Impraticável | Prático | |
| verimli | açık | kafa karıştırıcı | yararsız | yararlı | |
| Efficace | Clair | Déroutant | Non pragmatique | Pragmatique | |
| efficiente | chiaro | confuso | non pragmatico | pragmatico | |
| эффективный | наглядный | запутанный | непрактичный | практичный | |
| 高效的 | 一目了然的 | 令人眼花缭乱的 | 不实用的 | 实用的 | |
| 効率が良い | すっきりしている | ごちゃごちゃしている | 実用的でない | 実用的だ | |
| efisien | jelas | membingungkan | tidak praktis | praktis | |
| efficiënt | overzichtelijk | verwarrend | onpraktisch | praktisch | |
| efektiivne | selge | ebamäärane | ebapraktiline | praktiline | |
| účinkovit | pregleden | ustvarja zmedo | deluje zaticajóče | deluje tekoče | |
| Effektiv | Tydlig | Förvirrande | Opraktisk | Praktisk | |
| επαρκές | σαφές | μπερδεμένο | μη πρακτικό | πρακτικό | |
| efektywny | przejrzysty | zagmatwany | niepraktyczny | praktyczny | |
| कुशल | स्पष्ट | भ्रमित | अव्यावहारिक | व्यावहारिक | |
| ефикасен | ясен | объркващ | непрактичен | практичен | |
| efektivní | jasný | matoucí | nepraktický | praktický | |
| berkesan | jelas | mengelirukan | tidak praktik | praktik | |
| | مكفی | واضح | گیج کننده/مبهم | غیرکا ربردی | کا ربردی |
| มีประสิทธิภาพ | ชัดเจน | สับสน | ปฏิบัติยาก | ปฏิบัติง่าย | |

| | | | | | |
|------------|----------|-------------------------|--------------------|-------------------|------|
| ydedygtigt | tydelige | forvirrende | upraktisk | praktisk | |
| effektivt | tydelig | forvirrende | upraktisk | praktisk | |
| tehokas | selkeätä | sekavaa | epäkäytännöllinen | käytännöllinen | |
| hatékony | világos | nehezen értelmezhető | nem praktikus | praktikus | |
| učinkovit | jasni | zbunjujući | nepraktičan | praktičan | |
| efikasan | jasni | zbunjujući | nepraktičan | praktičan | |
| ליעי | ברורים | מבלבלים | לא שימושי | שימושי | |
| | فَعَّال | واضح | مُرِك | غير عملي | عملي |
| कार्यकर | स्पष्ट | विभ्रान्तिकर | अवाञ्छव | वाञ्छव | |
| ದಕ್ಷವಲ್ಲದ | ಸಫ್ಲಃ | ಸಫ್ಲಃ | ವಾಸವ್ಲವಲ್ಲದ | ವಾಸವ್ಲವಲ್ಲದ | |
| कार्यक्षम | स्पष्ट | गोंधळात टाकणारे | अव्यवहार्य | व्यावहारिक | |
| திறன் | தெளிவு | குழப்பமான | சாத்தியமற்ற தாக | சாத்தியமாகு ம் | |
| efektivny | jasný | mätúci | nepraktický | praktický | |

| L23 | R23 | L24 | R24 | L25 |
|----------------|---------------|----------------|------------------|---------------------------|
| aufgeräumt | überladen | attraktiv | unattraktiv | sympathisch |
| organized | cluttered | attractive | unattractive | friendly |
| ordenado | sobrecargado | atractivo | feo | simpatico |
| Organizado | Desorganizado | Atraente | Feio | Simpático |
| derli toplu | dağınık | cazibeli | cazibesiz | sempatik |
| Sobre | Surchargé | Attrayant | Rébarbatif | Sympathique |
| ordinato | sovraccarico | attraattivo | non attraattivo | simpatico |
| организованный | перегруженный | красивый | отвратительный | доброжелательный |
| 井然有序的 | 杂乱无章的 | 吸引人的 | 无吸引力的 | 引起好感的 |
| 整理されている | 整理されていない | 魅力がある | 魅力がない | 感じがいい |
| terorganisasi | berantakan | atraktif | tidak atraktif | ramah pengguna |
| ordelijk | rommelig | aantrekkelijk | onaantrekkelijk | aardig |
| organiseeritud | ülekoormatud | atraktiivne | ebaatraktiivne | sümpaatne |
| prostoren | prenatran | lep | grd | simpatičen |
| Strukturerad | Rörig | Estetisk | Oestetisk | Användbar |
| οργανωμένο | ανοργάνωτο | ελκυστικό | απωθητικό | φιλικό |
| zorganizowany | zagracony | atrakcyjny | nieatrakcyjny | przyjazny |
| संगठित | अव्यवस्थित | आकर्षक | अनाकर्षक | अनुकूल |
| подреден | разхвърлян | привлекателен | непривлекателен | л е с е н з а ползване |
| uspořádaný | roztříštěný | pěkný | ošklivý | sympatický |
| teratur | serabut | menarik | tidak menarik | senang digunakan |
| سازماندهی شده | بهم ریخته | جلب توجه کننده | جلب توجه نمی کند | مساعد |
| ดูเป็นระเบียบ | ดูวุ่นวาย | ดึงดูดใจ | ไม่ดึงดูดใจ | ดูเป็นมิตร |

| | | | | | |
|-------------------|--------------|-------------------|-------------------------------|-----------------|------|
| organiseret | rodet | attraktive | unattraktive | venligt | |
| organisert | rotete | attraktive | skjemmende | vennlig | |
| järjestelmällinen | sekainen | viehättävä | epämiellyttävä | käyttökelpoinen | |
| jól szervezett | szervezetlen | szép | nem szép | barátságos | |
| organiziran | neuredan | privlačno | neprivlačno | prijateljski | |
| organizovan | natrpan | privlačan | neprivlačan | ugodan | |
| מארגן | מסובל | יציג | יציג לא | ידידותי | |
| | منظم | مبغث | جذاب | غير جذاب | ودود |
| संगठित | एलोमेलो | आकर्षणिय | अनाकर्षणिय | बहुत्वपूर्ण | |
| ವಜ್ರಸಿಕ್ತವಾದ | ವಜ್ರಸಿಕ್ತವಾದ | ಆಕರ್ಷಕವಾಗಿದೆ | ಆಕರ್ಷಕವಾಗಿದೆ | ಸ್ನೇಹಪರವಾದ | |
| संघटित | गोंधळलेले | आकर्षक | आवडत नाही | मित्रत्वाचा | |
| ஏற்பாடு | இரைச்சலான | கவற்ச்சிகர மான | கவற்ச்சியற்ற நட்பாக தாக | நட்பாக | |
| prehľadný | neprehľadný | príťažlivý | nepríťažlivý | sympatický | |

| | | | | | |
|----------------------|------------------|---------------|-------------------|-------------------|--------|
| R25 | L26 | R26 | Attractiveness | Perspicuity | |
| unsympathisch | konservativ | innovativ | Attraktivität | Durchschaubarkeit | |
| unfriendly | conservative | innovative | Attractiveness | Perspicuity | |
| antipatico | conservador | innovador | Atracción | Transparencia | |
| Antipático | Conservador | Inovador | Atractividade | Transparência | |
| sempatik olmayan | tutucu | yenilikçi | Çekicilik | Anlaşılrlık | |
| Inamical | Conservateur | Innovant | Attraction | Compréhensibilité | |
| antipatico | conservativo | innovativo | Attrattività | Apprendibilità | |
| недоброжелательный | непримечательный | инновационный | привлекательность | ясность | |
| 令人反感的 | 保守的 | 创新的 | 吸引力 | 明晰 | |
| 感じが悪い | 保守的 | 革新的 | 見栄え | 明快さ | |
| tidak ramah pengguna | konservatif | inovatif | Daya tarik | Kejelasan | |
| onaardig | conservatief | innovatief | Aantrekkelijkheid | Transparantie | |
| ebasümpaatne | konservatiivne | uuenduslik | Atraktiivsus | Arusaadavus | |
| nesimpatičen | nevpadljiv | vpadljiv | Atraktivnost | Preglednost | |
| Inte användbar | Konservativ | Innovativ | Attraktivitet | Tydlighet | |
| εχθρικό | συντηρητικό | καινοτόμο | ελκυστικότητα | Ευκρίνεια | |
| nieprzyjazny | konserwatywny | innowacyjny | Atrakcyjność | Przejrzystość | |
| प्रतिकूल | रूढ़िवादी | नवीन | आकर्षण | स्पष्टता | |
| труден за ползване | консервативен | новаторски | Атрактивност | Лесен за учене | |
| nesympatický | konzervativní | inovativní | Atraktivita | Přehlednost | |
| sukar digunakan | konservatif | inovatif | Daya Tarikan | Kejelasan | |
| | نامساعد | محافظة کارانه | ذوآورانہ | جذابیت | شفافیت |
| ดูไม่เป็นมิตร | อนุรักษ์นิยม | เป็นนวัตกรรม | ความน่าดึงดูดใจ | ความชัดเจน | |

| | | | | | |
|------------------|---------------|----------------|-------------------|-----------------|--------|
| uvenligt | konservativ | innovative | Tiltrækningskraft | Klarhed | |
| uvennlig | ledende | innovativ | Attraktivitet | Klarhet | |
| vahingollinen | vanhoillinen | innovatiivinen | Miellyttävyyt | Selkeys | |
| barátságatlan | konzervatív | innovatív | Kellem | Áttekinthetőség | |
| neprijateljski | konzervativna | inovativna | Privlačnost | Razumljivost | |
| neugodan | konzervativni | inovativni | Privlačnost | Razumljivost | |
| יְתוּדִים אֵל | שמרניים | מיינסד | תוביב'קטרא | תורה | |
| | غير ودود | محافظة | ابتكارية | الاجاذبية | الوضوح |
| বন্ধুত্বসুলভ নয় | রক্ষণশীল | উদ্ভাবনী | আকর্ষণীয়তা | সুস্পষ্টতা | |
| ಸೆಕ್ಷಹಪರವಾದ | ಪುರಾತನ | ಪುರಾತನ | ಆಕರ್ಷಕವಾದ | ಪಾರದರ್ಶಕತೆ | |
| अ मित्रत्वाचा | पुराणमतवादी | नाविन्यपूर्ण | आकर्षण | सुस्पष्टता | |
| அன்பில்லாத | பழமையான | புதுமையான | கவர்ச்சி | தெளிவு குறித்த | |
| nesympatický | konzervativny | inovativny | Atraktivnost | Učebnost | |

| | | | |
|--------------------|------------------|-------------------|-------------------|
| Efficiency | Dependability | Stimulation | Novelty |
| Effizienz | Steuerbarkeit | Stimulation | Originalität |
| Efficiency | Dependability | Stimulation | Novelty |
| Eficiencia | Controlabilidad | Estimulación | Novedad |
| Eficiência | Controlo | Estimulação | Inovação |
| Verimlilik | Güvenilirlik | Canlılık | Yenilikçilik |
| Efficacité | Contrôlabilité | Stimulation | Originalité |
| Efficiencia | Controllabilità | Stimolazione | Originalità |
| эффeктивность | надежность | стимуляция | новинка |
| 效率 | 可靠性 | 促進 | 新奇 |
| 効率 | 信賴性 | 刺激 | ノベルティ |
| Efisiensi | Ketepatan | Stimulasi | Kebaruan |
| Efficiëntie | Bestuurbaarheid | Stimulatie | Originaliteit |
| Tõhusus | Usaldusväarsus | Stimuleerimine | Uudsus |
| Učinkovitost | Vodljivost | Stimulativnost | Originalnost |
| Effektivitet | Pålitlighet | Stimulering | Aktualitet |
| Αποδοτικότητα | Αξιολπιστία | Διέγερση | Καινοτομία |
| Efektywność | Zależność | Poziom stymulacji | Oryginalność |
| दक्षता | विश्वसनीय | उत्तेजना | नवीनता |
| Эфикасность | Контролируемость | Стимуляция | Новаторство |
| Účinnost | Spolehlivost | Stimulace | Originalita |
| Kecekanan | Kebergantungan | Pendorongan | Terdapat kebaruan |
| | کارایی | قابلیت اطمینان | انگیزش |
| | نوآوری | | |
| อย่างมีประสิทธิภาพ | ความคุม | การกระตุ้น | ความแปลก |

Ydeevne Pålidelighed Stimulering Nyhedsværdi

Effektivitet Pålitelighet Motivasjon Nyhet

Tehokkuus Toimintavarmuus Kannustavuus Uutuus

Hatékonyság Megbízhatóság Ösztönzés Újszerűség

Učinkovitost Pouzdanost Stimulacija Novina

Efikasnost Pouzdanost Stimulacija Novina

תוליע מנהיגות תמריץ חדשות

الكفاءة القابلية للتحمّس التحريك الحداثة

दक्षता निर्भरता উদ্दीপনা नूतनत्व

ದಕ್ಷತೆ ಆಸರೆಯಾಗಿರುವುದು ಉತ್ಪ್ರೇಜನ ಹೊಸತನ

कार्यक्षमता अवलंबित्व उत्तेजन नवलाईचीगोष्ट

திறன் (திறமை) சார்ந்திருக்கும் தூண்டுதல் புதுமை

Účinnosť Ovládateľnosť Stimulácia Novinkou

| | |
|--|--|
| Pragmatic Quality | Hedonic Quality |
| Pragmatische Qualität | Hedonische Qualität |
| Pragmatic Quality | Hedonic Quality |
| Calidad Pragmática | Calidad Hedónico |
| Qualidade Pragmática | Qualidade Hedônica |
| Pragmatik Kalite | Hedonik Kalite |
| Qualité Pragmatique | Qualité Hédonique |
| Qualità Pragmatico | Qualità eEonica |
| Прагматический качества | гедонистической качества |
| 务实的品质 | 享乐质量 |
| 実用的な品質 | ヘドニック品質 |
| Kualitas Pragmatis | Kualitas Hedonis |
| Pragmatische Kwaliteit | Hedonistische Kwaliteit |
| Pragmaatiline kvaliteet (tarbekvaliteet) | Hedooniline kvaliteet (hinnang meeldivuse järgi) |
| pragmati č kakovosti | no hedonsko kakovosti |
| Pragmatiska kvaliteter | Hedoniska kvaliteter |
| πραλιστική ποιότητα | ηδονική ποιότητα |
| Pragmatyczne jakości | Hedoniczna jakości |
| व्यावहारिक गुणवत्ता | सुखात्मक गुणवत्ता |
| п р а г м а т и ч е н качество | х е д о н и с т и ч н а качество |
| Pragmatická kvalita | Hédonická kvalita |
| Kualiti yang berguna | Kualiti Kesenangan |
| کیفیت استفاده | کیفیت طراحی |
| คุณภาพในทางปฏิบัติ | คุณภาพความ เพลิดเพลิน |

Pragmatic Quality Hedonic Quality

Pragmatic Quality Hedonic Quality

Pragmatic Quality Hedonic Quality

Pragmatic Quality Hedonic Quality

Pragmatic Quality Hedonic Quality

Pragmatic Quality Hedonic Quality

Pragmatic Quality Hedonic Quality

Pragmatic Quality Hedonic Quality

Pragmatic Quality Hedonic Quality

Pragmatic Quality Hedonic Quality

Pragmatic Quality Hedonic Quality

Pragmatic Quality Hedonic Quality

Pragmatická kvalita Hedonická kvalita