

# Chatbot Usability Questionnaire

## Usage Guide

Thank you for downloading the Chatbot Usability Questionnaire, a new bespoke tool for measuring chatbot usability.

**Please read these instructions carefully before using the questionnaire.**

The CUQ consists of sixteen balanced questions related to different aspects of chatbot usability. Eight of these relate to positive aspects of chatbot usability, and eight relate to negative aspects. Scores are calculated out of 100. See the **Calculation** section of this guide for information on how to calculate CUQ scores.

This questionnaire may be administered in printed form, however for convenience you are free to digitise the questionnaire if you wish to use a web-based survey platform such as Qualtrics. You should consult the user guide for your chosen platform to determine the best way to do this.

### How to use the CUQ

All sixteen questions are scored using a five-point Likert-type scale. Odd-numbered questions relate to positive aspects of the chatbot, and even-numbered questions relate to negative aspects. Respondents should read each item carefully and decide the extent to which they agree with the statement. Respondents should then indicate their level of agreement by placing a tick (✓) or a cross (✗) in the circle that best matches how they feel about the statement.

#### Example

	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
The chatbot's personality was realistic and engaging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

In the example above the respondent strongly agreed with the statement *The chatbot's personality was realistic and engaging*, therefore they marked circle number 5 (Strongly Agree).

## CHATBOT USABILITY QUESTIONNAIRE

*Please complete this questionnaire by reading each statement carefully and placing a tick (✓) or a cross (✗) in the circle that best matches how you feel about the statement. Remember that there are no right or wrong answers!*

	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
The chatbot's personality was realistic and engaging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The chatbot seemed too robotic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The chatbot was welcoming during initial setup	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The chatbot seemed very unfriendly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The chatbot explained its scope and purpose well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The chatbot gave no indication as to its purpose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The chatbot was easy to navigate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It would be easy to get confused when using the chatbot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The chatbot understood me well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The chatbot failed to recognise a lot of my inputs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chatbot responses were useful, appropriate and informative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chatbot responses were irrelevant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The chatbot coped well with any errors or mistakes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The chatbot seemed unable to handle any errors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The chatbot was very easy to use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The chatbot was very complex	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Score Calculation

**NOTE:** For best results it is recommended that the CUQ Calculation Tool (available from the CUQ website) be used to calculate CUQ scores. However, should you wish to do this manually, please follow the instructions below (see page 4 for a worked example).

1. For each question, assign a score from 1 to 5 based on the level of agreement with the statement in the question (i.e. “Strongly agree” is worth 5 points, “Neutral” is worth 3 points, “Strongly disagree” is worth 1 point)
2. Calculate the sum of all the **odd-numbered** (positive) questions.
3. Calculate the sum of all the **even-numbered** (negative) questions.
4. Subtract 8 from the score you got at *step 2*.
5. Subtract the score you got at *step 3* from 40.
6. Add the scores you got at *steps 4 and 5*. You should now have a score out of 64.
7. Divide the score you got at *step 6* by 64 and multiply the answer by 100. This will give you a CUQ score out of 100.

Assuming you will be testing with multiple participants, you may wish to calculate the mean CUQ score, find the median score, and so on. This may be accomplished using the CUQ Calculation Tool or may be done manually using a spreadsheet package such as Microsoft Excel.

### Example

1. Assume the CUQ questions have been scored as follows:

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Score	4	4	5	1	4	4	5	1	4	1	4	1	3	2	5	1

2. Calculate the sum of all the **odd-numbered** questions:

$$4 + 5 + 4 + 5 + 4 + 4 + 3 + 5 = 34$$

3. Calculate the sum of all the **even-numbered** questions:

$$4 + 1 + 4 + 1 + 1 + 1 + 2 + 1 = 15$$

4. Subtract 8 from (2):

$$34 - 8 = 26$$

5. Subtract (3) from 40:

$$40 - 15 = 25$$

6. Add (4) and (5):

$$26 + 25 = 51 \text{ (out of 64)}$$

7. Convert (6) to a score out of 100:

$$(51 / 64) * 100 = 79.7$$