

# Question Types—Three types of questions

## 1. Questions for testing skills (tag: skills)

E.g., What is the mean of the “height” in the table?

- A. 33.8
- B. 30.1
- C. 35
- D. 48
- E. I don’t know

## 2. Questions for transaction and self-assessment (tag: TS)

E.g., Do you agree that you are proficient in Python

- A. Strongly disagree. (I never heard of it)
- B. Disagree. I have heard of it, only know it is a programming language
- C. Undecided. I took Python related class, but never used it before
- D. Agree. I have experience of using Python to perform tasks
- E. Strongly agree. I am a Python expert

Given R and Python, which programming language do you prefer to answer the following questions?

- A. R
- B. Python

## 3. Questions for demographic information (tag: Demo)

E.g., How many times have you used open government data (civic data)?

- A. I have never used it before
- B. 1-5 times
- C. 6-10 times
- D. 15 times above

# The Rules for Asking Questions

The order of presenting the questions based on the five pivots

1. Basic OGD knowledge
2. Information literacy
3. Computational thinking
4. Data communication
5. Computational skill

A	B	C
Basic OGD knowledge	Basic context of OGD	Existence of the civic data
		The concept of OGD
		Ethic use of OGD
	Basic Data knowledge for OGD	The file formats of OGD
		The types of OGD
information literacy	Find	Find
	Scrutinize	Scrutinize
	Understand	Understand
	Schematizing	Schematizing

A	B	C
Computational skills	statistics/Numeracy	Basic statistics
		Correlation
	programming	SQL
		Python
		R
	tool	ArcGIS-QGIS
		Excel

Asking self-assessment questions for each knowledge or skill points in column C

E.g., Do you agree that you know exactly about the concept of open government data

- A. Strongly disagree. (I never heard of it)
- B. Disagree. I have heard of it, but do not know the concept
- C. Undecided. I feel like I know it but I'm not sure
- D. Agree. I heard people talk about it, I can describe the concept in some ways
- E. Strongly agree. I know exactly the concept of open government data

E.g., Do you agree that you are proficient in Python

- A. Strongly disagree. (I never heard of it)
- B. Disagree. I have heard of it, only know it is a programming language
- C. Undecided. I took Python related class, but never used it before
- D. Agree. I have experience of using Python to perform tasks
- E. Strongly agree. I am a Python expert

**Rules: for the questions except for the questions in “Programming,” no matter what the answers are, the next step needs to present the corresponding “skill” questions.**

**Regarding “Programming”, the question order and rules are:**

Self-assessment question for SQL, if the answer is “D” or “E”, then present the corresponding “skill” questions, and then start “R and Python” questions. If the answer is not “D” or “E”, directly jumps to “R and Python” questions.

1. Do you agree that you are proficient in SQL

- A. Strongly disagree. (I never heard of it)
- B. Disagree. I have heard of it, only know it is a programming language
- C. Undecided. I took Python related class, but never used it before
- D. Agree. I have experience of using Python to perform tasks
- E. Strongly agree. I am a SQL expert

2. Do you agree that you are proficient in Python

- A. Strongly disagree. (I never heard of it)
- B. Disagree. I have heard of it, only know it is a programming language
- C. Undecided. I took Python related class, but never used it before
- D. Agree. I have experience of using Python to perform tasks
- E. Strongly agree. I am a Python expert

3. Do you agree that you are proficient in R

- A. Strongly disagree. (I never heard of it)
- B. Disagree. I have heard of it, only know it is a programming language
- C. Undecided. I took Python related class, but never used it before
- D. Agree. I have experience of using Python to perform tasks
- E. Strongly agree. I am a R expert

Self-assessment question for R and Python

- If both answers are not “D” or “E”, then the quiz is over. Show the “Result” interface.
- If both answers are both “D” or “E”, then there will be a follow-up question that “Given R and Python, which programming language do you prefer to answer the following questions?” and present the corresponding “skill” questions based on the answer from this question.
- If only one of the answer is “D” or “E”, then present the corresponding “skill” questions, like the way for “SQL.”

# Overall Score

To compute the Overall Score of OGD literacy, the evaluation model will need the following data. Put the data into following the evaluation model ([I will give the model later](#)), the model will generate an overall score.

UID	Q1	Q2	Q3	...	...	...	The last question
U-0001	2	2	4	2	2	2	4

Table: the example of required data for computing the Overall Score

[Note: please only import the questions with “skill” tag to the evaluation model.](#)

In the groups of questions in computational skills, if a user doesn’t get a chance to take the programming quiz, then all the corresponding questions will be given score 0.

## The score for each of the five pivots

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