# Evaluation of data visualization technique

### Series 1

|  |  |
| --- | --- |
| **Graph type:** | Bar graph |
| **Number of graphs:** | 2 |
| **Subject of graphs:** | Average on-demand stimulations per hour of the day |
| **Scenario:** | The user wishes to better understand their use of the on-demand stimulation function of the UCon device. After a week of use, the user is presented with the following graph of their average daily use of the on-demand stimulation. |
| **Graph-specific questions:** | 1. What data does the graph show? 2. When did you use the on-demand stimulation the most? 3. How many stimulations did you have on average at (pick 2 times at random)  |  |  | | --- | --- | | **Time** | **Correct answer** | | 7 | 1 | | 9 | 2 | | 11 | 0 | | 15 | 0 | | 17 | 4 | | 19 | 1 | | 21 | 3 | |
| **Series questions:** | 1. When looking at the graphs side-by-side, what are your initial thoughts? 2. Which graph is the easiest for you to read? 3. Which graph do you prefer? 4. Do you think that having access to this graph would influence your use of the UCon device? |
| **Notes and observations** |  |

### Series 2

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| --- | --- |
| **Graph type:** | Bar/line graph combination or double bar graph |
| **Number of graphs:** | 2 |
| **Subject of graphs:** | Average on-demand stimulations per hour of the day with accidents |
| **Scenario:** | The user wishes to better understand their use of the on-demand stimulation function of the UCon device and how it affects the number of accidents they have. After a week of use, the user is presented with the following graph of their average daily use of the on-demand stimulation combined with the noted number of accidents they recorded in the app. |
| **Graph-specific questions:** | 1. What data does the graph show? 2. When did you use the on-demand stimulation the most? (15, 6 stims) 3. When did you have the most accidents? (8, 3 accidents) 4. How many stimulations and accidents did you have on average at (pick 1 randomly)?  |  |  |  | | --- | --- | --- | | **Time** | **Stim** | **Accident** | | 5 | 0 | 1 | | 7 | 1 | 0 | | 8 | 0 | 3 | | 12 | 4 | 1 | | 14 | 3 | 2 | | 17 | 4 | 1 | | 21 | 3 | 0 | | 23 | 0 | 1 | |
| **Series questions:** | 1. What are your initial thoughts looking at this graph? 2. Which graph is the easiest for you to read? 3. Which graph do you prefer? 4. Do you think that having access to this graph would influence your use of the UCon device? |
| **Notes and observations** |  |

### Series 3

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| **Graph type:** | Pie chart |
| **Number of graphs:** | 3 groups of 2 |
| **Subject of graphs:** | Number of accidents per week for week 1 and week 4 |
| **Scenario:** | You have been keeping a bladder diary for the last four weeks with a focus on how many accidents you had each day. You are now comparing the first week with the current week. |
| **Graph-specific questions:** | 1. What data do the charts show? 2. Did you have more accidents in week 1 or in week 4 (week 1) |
| **Series questions:** | 1. What are your initial thoughts looking at these graphs? 2. Which graph is the easiest for you to read? 3. Which graph do you prefer? 4. Do you think that having access to these graphs would influence your use of the UCon device? |
| **Notes and observations** |  |

### Series 4

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| --- | --- |
| **Graph type:** | Line graph/scatter plot |
| **Number of graphs:** | 3 |
| **Subject of graphs:** | Average daily evaluation for each day of the week |
| **Scenario:** | You have been making a daily evaluation every night for several weeks. A score of 3 means that you had a good day, a score of 2 means you had a neutral day, and a score of 1 means you had a bad day. You are now looking at your daily score for each day of the week for the first week and the fourth week. |
| **Graph-specific questions:** | 1. What data does the graph show? 2. Has your scoring improved, remained the same, or gotten worse? (Improved) 3. What score did you have for week 1 for (pick 1 at random)  |  |  | | --- | --- | | Day | Score | | Monday | 2 | | Tuesday | 1 | | Wednesday | 2 | | Thursday | 3 | | Friday | 1 | | Saturday | 3 | | Sunday | 2 | |
| **Series questions:** | 1. What are your initial thoughts looking at these graphs? 2. Which graph is the easiest for you to read? 3. Which graph do you prefer?   Do you think that having access to these graphs would influence your use of the UCon device? |
| **Notes and observations** |  |

### Series 5

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| --- | --- |
| **Graph type:** | Data tables |
| **Number of tables:** | 3 |
| **Subject of graphs:** | Total number of accidents and on-demand stimulations for week 1 and week 4, the average daily score for week 1 and week 4, as well as the change in each value from week 1 to week 4. |
| **Scenario:** | You have used the UCon and app for the last four weeks, logging any accidents you have as well as a daily evaluation for each day. You are now looking how your use of UCon and your condition have changed from week 1 to week 4. |
| **Table-specific questions:** | 1. What table does the table show? 2. What was your (pick 1 at random) for week 1?  |  |  | | --- | --- | | **Subject** | **Value** | | Accidents | 7 | | On-demand stimulations | 8 | | Average daily score | 1.9 |  1. Did your (pick 1 at random) rise, remain the same, or fall?  |  |  | | --- | --- | | **Subject** | **Result** | | Number of Accidents | Fell | | Number of on-demand stimulations | Rose | | Average daily score | Rose | |
| **Series questions:** | 1. What are your initial thoughts looking at these tables? 2. Which table is the easiest for you to read? 3. Which table du you prefer? 4. Which difference demonstration method did you prefer? 5. Do you think that having access to these tables would influence your use of the UCon device? |
| **Notes and observations** |  |

Any further comments or questions regarding data visualization?

# Final thoughts

Here the user was asked if they had any additional thoughts, comments, or questions regarding data evaluation and evaluation of prototypes.