

Interviewer notes first user study

Participant M1

Dragging

- Knew he needed to hover over the top of the bar to see if it was draggable, but thought less tech savvy persons would need more hints

Hints

- No hints would be too hard
- Total cases is good but needs a counter while estimating
- Giving some bars would help
- The more hints, the better

Starting height

- Good
- Starting at the average could possibly help => “this one will be higher, this one will be lower”

Speed

- Felt too slow. Would prefer to see them all animated at once with the interactivity at the end
- Bars with higher errors should take longer than correct guesses.
- An option to skip would already be better, but is ofcourse an extra click

Ordering

- Left to right is better. Other options sound more confusing

Pauzes

- No, can see everything at the end

Comparison with baseline

- Thought error line was useless, didn't use it to answer questions
- Likes the 2 bars to compare with own guess, but agrees it makes it harder to remember the correct data / trendline

Colors

- Answered correct with correct explanation
- Prefers red and green over any other option

Info on the chart

- Current is good

Info as text

- Didn't immediately see the textual feedback
- Did not find the info (size of error) useful (unless questions were asked about it later)
- Would not really add any extra info
- He would not like the comparison with other people, but thought other people might. But not if it told you how bad you did

Dataset

- Good, relevant
- Was surprised by the results, feels like he learned something
- Would like to see references later in article about specific things he estimated

General opinions

- Generally liked the visualisation
- Would want to use it again

Participant M2

Dragging

- Was not immediately clear, only after hovering. Knew that something needed to be done, but wasn't sure what. Solution: explaining in text + with visuals like 'tutorial animations' or a pointer on the bar

Hints

- Total cases was good but needs a counter
- Agreed that all the other hints could be good, because he thought: the more hints, the easier, the better

Starting height

- Starting at the average could *maybe* help

Speed

- Thought speed was good, but could thought some people might like it a little faster
- Would not use option to skip, but again thought some people would like this option

Ordering

- Left to right was good, logical in combination with ordinal x-axis
- Did not have opinions on other orders
- Proposed to first give all underestimates and then overestimates

Pauzes

- No, can see everything at the end

Comparison with baseline

- Line is not clear
- 1 bar is better

Colors

- When asked to find his best guess, he immediately went to a green bar, even though a red one had a smaller arrow. Afterwards was correct with the worst guess
- Proposed to add a little shading over the green arrow part
- After giving the wrong answer before, has a very strong opinion that 1 color is better, because all the needed info is in the arrow anyway

Info on the chart

- Current is good

Info as text

- Took long to realise there was text on hover
- Didn't mind textual feedback, but didn't love it either
 - Would use 'X cases too low' instead of 'X cases higher'
- Was not a fan of any of the other options
- Comparison with other people would add a fun factor -> good

Dataset

- Found data interesting
- Was confident about the trendline (even though very wrong) but not about the actual numbers
- Wanted to know why he made these errors -> explain the data

General opinions

- Was fun and would like to see it used in online articles
- Adding a 'just show me everything' button would be good to have in an actual article, so you can only use it when you are in the mood

Participant F1

Dragging

- Had some trouble getting started with dragging the bars, but after realising how it worked everything went smoothly

Hints

- Total cases was good but wanted a counter
- Liked other options but preferably in combination with current hint, the more information when guessing the better

Starting height

- Would not change anything

Speed

- Good, definitely not faster
- Would not use option to skip

Ordering

- Left to right is good because it's the direction she uses to read
- Doesn't like other options because wants to keep it exciting when going to the next bar ("Is the next one going to be good or bad?")

Pauzes

- Would not change anything

Comparison with baseline

- Didn't use error lines in baseline version, but preferred 2 bars to compare
- Agreed it was better for remembering correct data

Colors

- When asked to find her best guess, she immediately went to a green bar, even though a red one had a smaller arrow. After thinking about it longer, she realised her mistake.
- Associates red with bad and green with good, so expects this in the results
- Would prefer one color, all info is already in the arrows
- Would prefer blue yellow over red green, but not over 1 color

Info on the chart

- Would not change anything

Info as text

- Didn't mind it, but could work without them
- Other options could possibly be useful

Dataset

- Absolute cases a little strange, would prefer cases per 100k or something like that
- Was otherwise good, relevant, learned something

General opinions

- Liked it a lot, would like to use it again

Participant M3

Dragging

- Didn't have problems figuring it out, but still would like more visual information on how to drag the bars

Hints

- Only useful if it includes a total counter
- Liked idea of line at the average
- More hints the better

Starting height

- Good
- Liked idea of starting at the average (and just like the hint, keep a line there)

Speed

- Could think about each bar, perfect
- Would not use option to skip, but expects other people might

Ordering

- Current is only good and logical option

Pauzes

- Never wanted to pause
- Enough time after animation

Comparison with baseline

- Not a fan of the baseline, negative numbers look bad, confusing, lost trend
- Agreed he would remember the incorrect data

Colors

- Answered correct with correct explanation
- Would personally not prefer other colors, but might consider them for colorblind people
- 1 color would also be ok, all info is already in the visualisation, but less good

Info on the chart

- Good

Info as text

- Didn't immediately see the hover instruction
- Liked current text and all other options
- Wanted to see them all summarised in a table, for people who were very interested in the results
- Also really liked the idea of comparing results with how other people performed

Dataset

- When first guessing, had deaths in mind -> guesses were very far off
- Not clear enough, even though admitted it was shown clearly
- Not super interesting, but not bad
- Number of deaths would be better
- Was quite uncertain over estimates
- After seeing the results, he made assumptions about what would be the explanation for his errors, so he would want to read about if these assumptions are correct

General opinions

- Would really like to use it again, but worries about mobile implementation

Participant F2

Dragging

- Wasn't immediately clear, even after rereading instruction still had trouble

Hints

- Hints are needed!
- Current hint is best but needs counter

Starting height

- Current is good
- Average also ok

Speed

- Good, definitely not slower

Ordering

- Current is only logical option

Pauses

- Not needed, time after animation is enough

Comparison with baseline

- Too much bars in baseline, too crowded
- Prefers our visualisation

Colors

- Answered questions correctly
- Didn't see the need for 2 colors, 1 neutral color would be best
- Would prefer the bars to not be gray, but more colorful

Info on the chart

- Would also like to see the % of the total number of cases, but only for this specific dataset

Info as text

- Didn't realise you could hover until pointed out by interviewer, but said she didn't feel like she was missing something
- Didn't find the current text useful, but this was because she didn't think the dataset was very useful in general
- Would like to see info that is useful very specifically for each dataset, like for example percentage of total for covid cases
- Would only like comparison with other people if the results were positive

Dataset

- When first guessing, had deaths in mind -> guesses were very far off
 - Not clear enough, even though she admitted it was shown clearly. Had not really read Y-axis
 - Would specifically add that the data is not about deaths
- Didn't feel like the data was useful. Absolute covid cases don't say much, wants to see percentages

General opinions

- Prefers this over static charts
- But would need to work for mobile