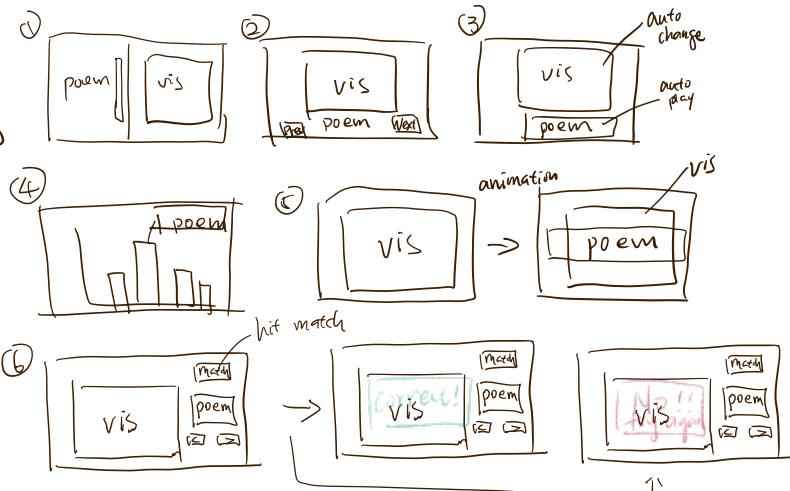


SHEET 1 - Brainstorm

Ideas

- ① poem on the left, vis on the right
 → when scrolling down, the vis changes automatically (50% 50% share)
- ② emphasize on the vis, poem in small fonts
- ③ Like a video, automatically play the vis
- ④ no fixed poem place on the vis
- ⑤ poem on vis, like an animation
- ⑥ matching game visualization



specific dataset ideas

Dataset #1 - GDI & years of school

- bar chart of years of schooling (female vs male)
 sorted by GDI differences
- line graph of years of schooling + GDI
- bubbles

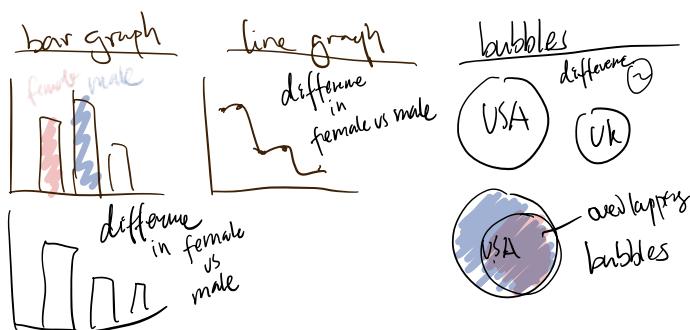
Dataset #3 - Unpaid work

- bar chart male vs female
- line graph for difference
- bubbles

Filter

- common ground in all datasets: bar chart! bubbles!
- remove auto-play ⇒ difficult to look at for a long time
- (③ ⑤)
- merge ① ② ③, make vis bigger on the right

Categorize



Combine & refine



ideas:

- ① interactive not only by scrolling
- ② add additional text descriptions
- ③ add visual elements

Questions

The visualization is interactive and is fun to interact with, and connected with the poem.

SHEET 2 — Initial Design: Bar + Select Poem Lines

Layout



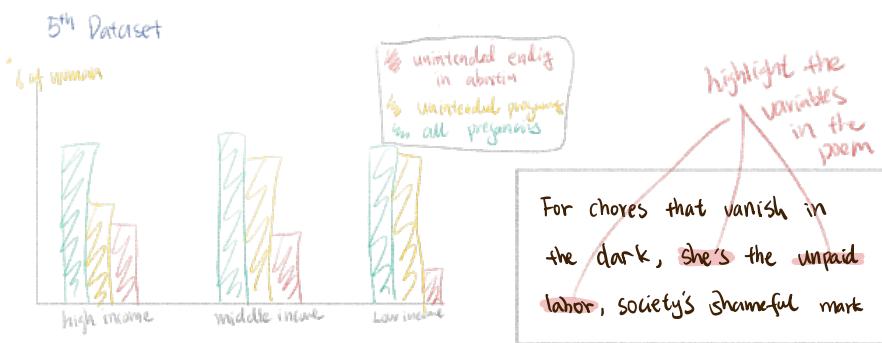
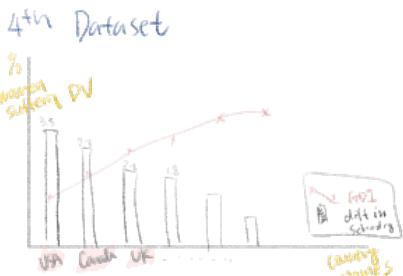
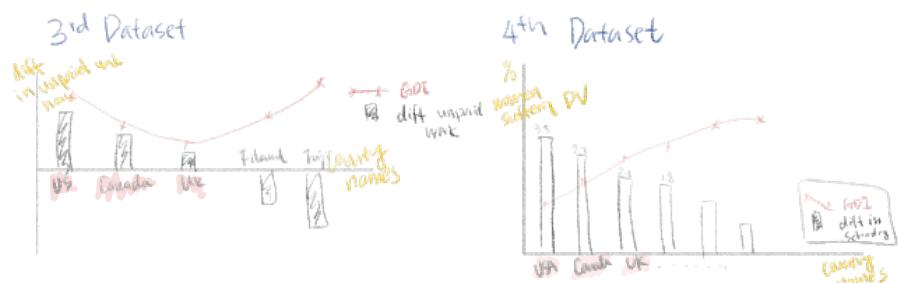
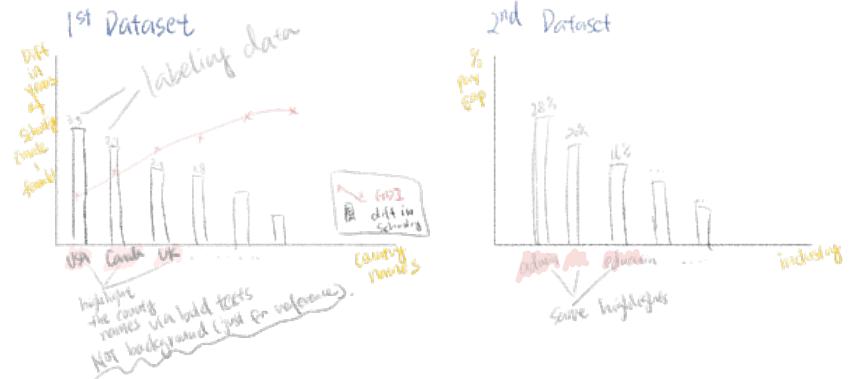
Title: Women's Right Data Vis

Author: Yiqun Lin

Date: Oct 11, 2023 Sheet: 2

Task: interactive visualization design with bar charts & user-select-match poem lines

Focus — Difference between male vs female



- if correct, a 'next vis' button will appear and users can proceed with the next vis
- else, try again with different poem lines and the poem will have highlights for the variables used for the vis

Discussion

- +VE:
- ① Fun to play the "game"
 - ② Requires users to look at the visualization and poem in details to match the visualizations with poem
 - ③ The bar graphs are consistent, it would be easier to comprehend
 - ④ There are many visual elements in the graphs such as highlighting and sorting

- VE:
- ① bad consistency for the poem
 - ② users may have to look at some lines of poem too many times
 - ③ users may lose focus to the vis but rather just trying to play the game

SHEET 3 - Initial Design Bubble + Automatic Scrolling

Layout



Focus - Non-bar Graphs



highlight top countries



Title: Women's Right Data Vis

Author: Yijun Lin

Date: Oct 11, 2023 Sheet: 3

Task: interactive visualization design with bubble graphs + automatic scrolling + voice over

Operations

- when user hits play, the vis starts playing. highlight the lines for corresponding vis design. background has the audio of the voice over. automatic scrolling
- pause any time. highlight remains on the poem. can scroll to anywhere. vis remains to be the highlighted lines' vis.
- last santa will display key insights I gained from these visualizations

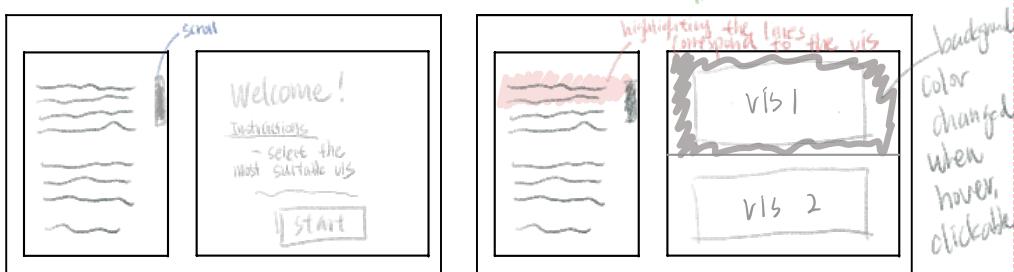
Discussion

- +VE:
- ① has voice, more engaging
 - ② users can scroll themselves when pausing but it can also scroll automatically
 - ③ the bubbles 'deceive' the audience, exaggerated the difference
 - ④ many visual elements such as colors, shape, orders.

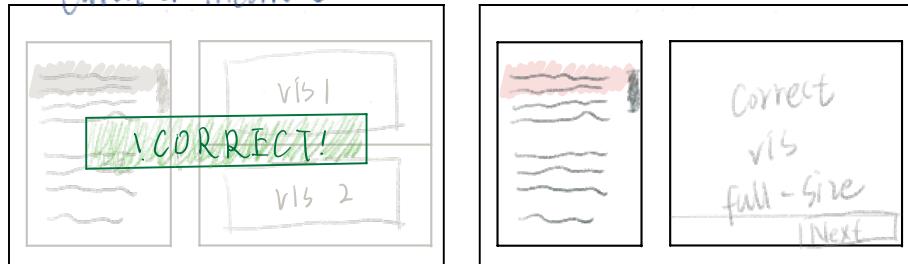
- VE:
- ① The audio might be annoying
 - ② The bubbles may falsely present information, although it helps to enhance the feelings of the poem
 - ③ May be difficult to navigate and may be distracted by the highlighted poem

SHEET 4 — Initial Design: Select Vis + Mixed Vis

Layout



Correct or incorrect



Focus

Bubble Comparison

→ Dataset 1 & 3
reference back to
Sheet #3

Bar Graphs

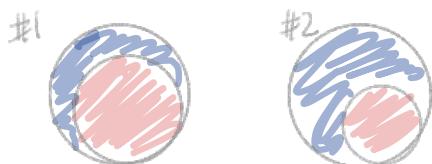
→ Datasets 2, 4, 5
reference back
to sheet #2

False Data Generation

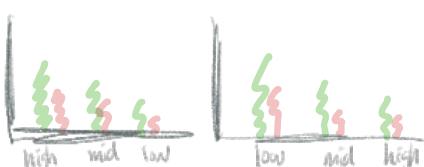
① Change the numbers to smaller/larger



② Change the gap



③ Change the income level



remember
the
data better

↑
Aim
to
make
the
false
data
more
intuitive

highlight the
variables
in the
poem

Title: Women's Right Data Vis

Author: Yijun Lin

Date: Oct 11, 2023 Sheet: 4

Task: interactive visualization

design with mixed visualization
types & select from 1 right vis
and 1 wrong vis

Operations

- upon opening the page, there will be instructions on playing the game. hit start to start
- the poem scroll automatically, highlight the sentences for the vis.
- two vis displayed. hover → click to select the right one user thinks
- display whether the user is right or not
- display the right vis full-screen
- click next to enter next vis

Discussion

- +VE:
- ① Interesting to play with.
 - ② May help the users to understand / read the vis better because they have to choose
 - ③ background voice more engaging
 - ④ many visual elements such as color, shape, order
 - ⑤ automatic scrolling may help to finish the poem

- VE:
- ① may focus too much on vis not poem
 - ② while bubbles may convey messages they intend ("over-stating" the differences), it may be deceiving.

SHEET 5 – Final Design

Layout



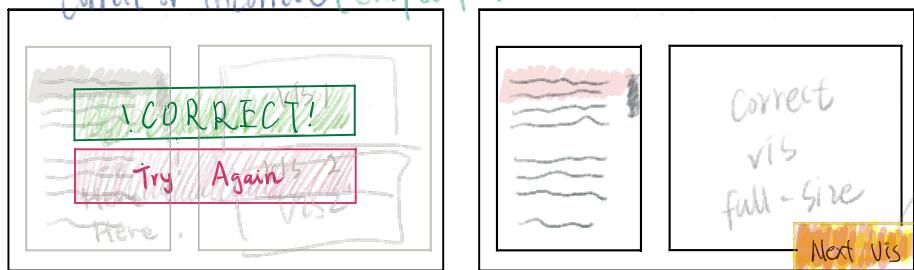
Title: Women's Right Data Vis

Author: Yijun Lin

Date: Oct 11, 2023 Sheet: 5

Task: Final design for the interactive visualizations using bubble and bar graphs. Allowing user to choose between a right vis & wrong vis for selected lines

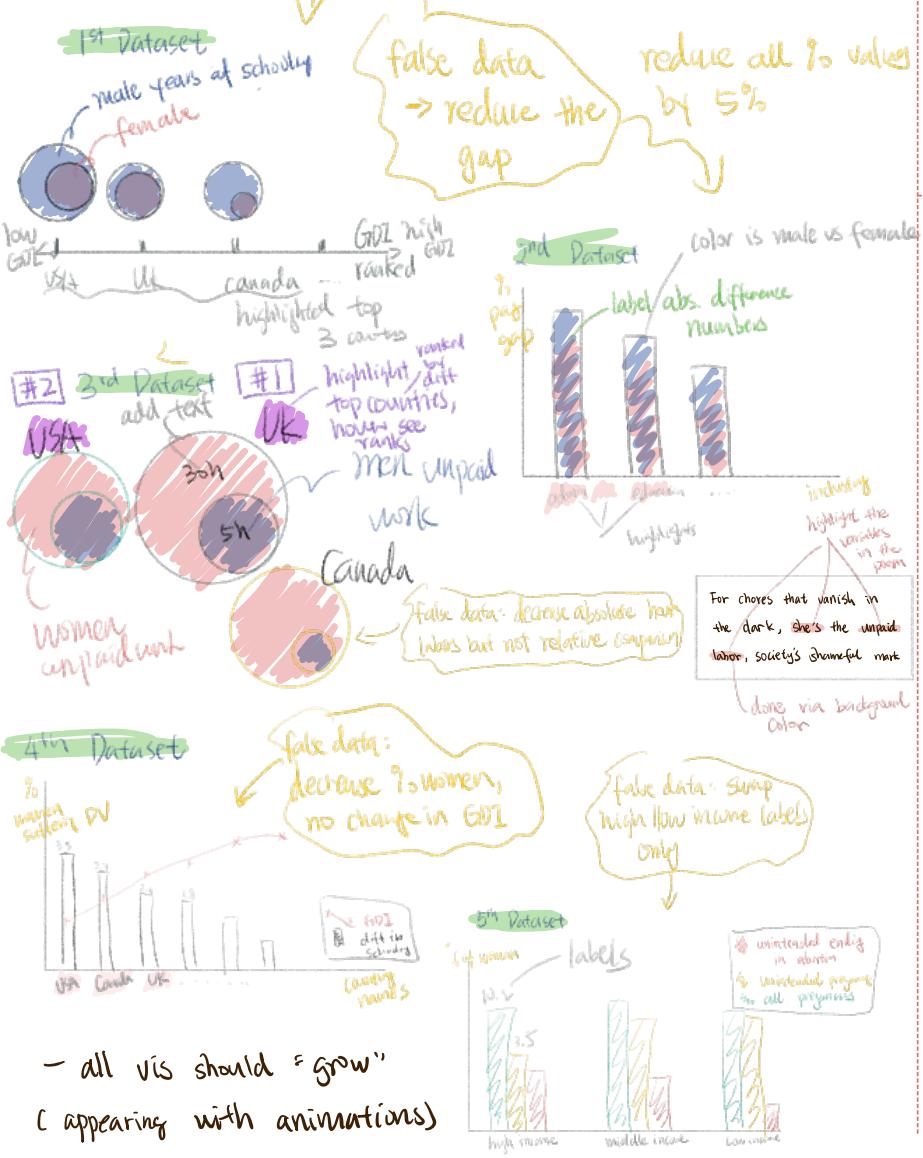
Correct or incorrect (only display one)



Operations

- upon opening the page, there will be instructions on playing the game. hit start to start
- the poem scroll automatically, highlight the sentences for the vis.
- two vis displayed. hover → click to select the right one user thinks
- display whether the user is right or not
- display the right vis full-screen
- click next to enter next vis
- The final page will display key findings from all vis in the visualization area

Focus



- all vis should "grow"
(appearing with animations)

Details

Algorithms: nothing specific

data cleaning & faking
vis

Dependencies: d3.js, pandas & numpy, React framework

Estimated Costs:

- | | |
|------|---|
| 2h | - further data cleaning + create false data |
| 1h | - audio recording |
| 10h | - building static visualizations via d3.js (false + true vis) |
| 4.5h | - interface building + add automatic audio & highlighting |
| 6 h | - displaying the vis with poem, hovering effects, click to check correct answers, next vis button |
| 2h | - testing |
- total: 25.5 h

Specific requirements: 1200 px min

