

1 Elyssa Collins

Ideas

- Interactive Family tree for each student
- Interactive map w/ points where each student was born, click on point and can see lines to places traveled as well as locations of family members in other colored points
- Click state/country and # of people who've lived or traveled there will pop up
- Bubble / Network chart with lines representing travel or living (w/ different colors)
 - two students would link if traveled or lived in the same place



Filter

- C is boring and could have more information
 ↳ more descriptive statistics
 could make only points of students available
 The tree in a is a bit very interesting
 - a and revised c are basically duplicates

Combine & Refine

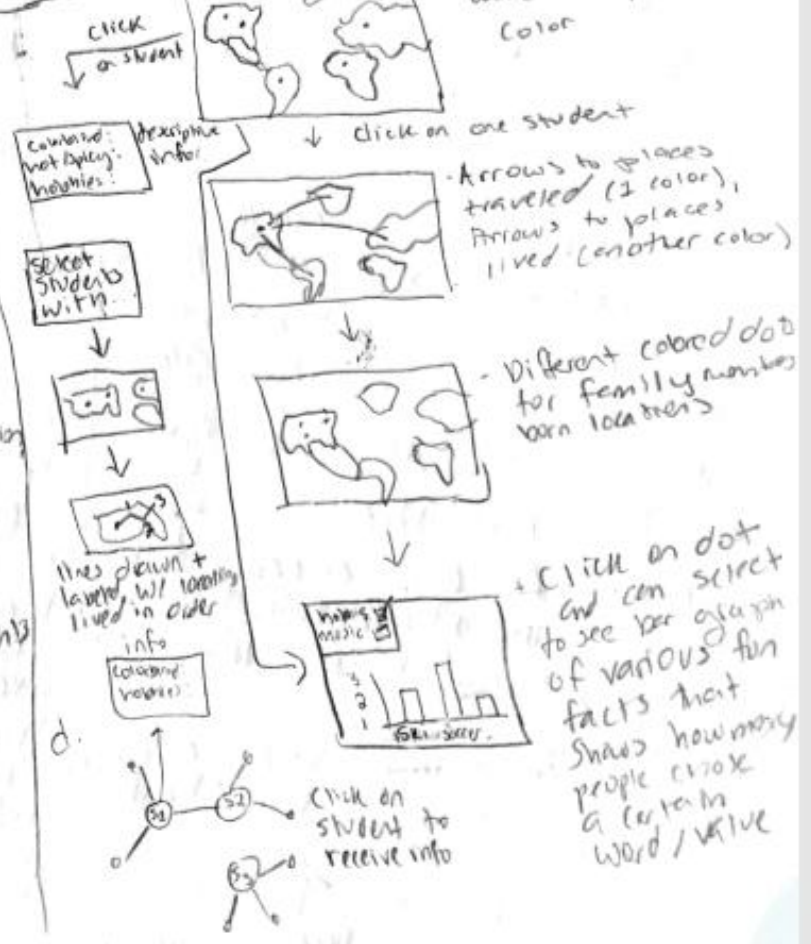
- Combine b with revised c
 map
 - locations where students were born, all one color

Categorize

- | | |
|---|---------|
| 1) Interactive maps | Current |
| 2) Static chart | |
| 1) Descriptive statistics of entire dataset | Needed |

Question

- a + b provide spatial information and show student info, but can't visualize connections between students
- d isn't spatial, but can visualize connections b/w students
- a + b is probably more effective because it shows more information



① Idea 1 | Big Picture

What students do you want to visualize?
 Hobbies: ☐ hiking ☐ skiing ...
 Music: ☐ Jazz ☐ Rock n roll ...
 Spicy? ☐ Hot ☐ No ...



Lived or Traveled
☒ Lived
☐ Traveled

Components

- Main component is to click checkboxes of various information to display students that have those characteristics. This will then show points on the map of the filtered students.
- The user can click a radio button to view arrows to locations traveled or a sequence of lines to locations lived
- The user can select a student circle on the map to show lived/traveled arrows/lines
- When hovering over locations will display

Info

Title: Student travels and locations lived
 Author: Elysa Collins
 Date: 1/8/2020
 Task: Interactive map
 Sheet #: 2

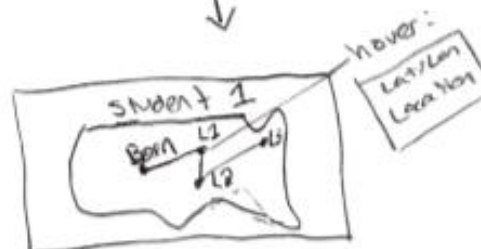
Part 1 Select students to show

Hobbies: ☒ hiking ☐ skiing ...
 Music: ☐ Jazz ☒ Rock n roll ...
 Spicy: ☒ Hot ☐ Medium ...



Lived or Traveled
☒ Lived
☐ Traveled

Click Student circle



Hover:
 Latitude
 Longitude

Positives and Negatives

This design shows geospatial information and allows the user to select what kind of students they would like to visualize. It also shows info for locations lived, as well as traveled. I think this viz would be fairly clear and wouldn't be too difficult to implement. This viz doesn't show summary statistics for the entire group.

③ Idea 2

Big picture



S1 Descriptive Info	
Cat/dog?	Dog
Spicy/not?	Spicy
Music:	Rock
...	

Components

- Main component is to click on a student to receive traveled locations (arrows) and a box will appear at the bottom of the screen for the descriptive information of the student (i.e., hobbies, music interests, etc)
- Hovering over icons for born locations (dots) & for places traveled will show the latitude + longitude, as well as the name of the place

student Travel

Author: Elysa Cairns

Date: 1/8/2020

Task: Interactive map, visualize traveled locations + student info + where parents were born

Sheet #: 3

Part 1



Click on S1, or any student born location dot



Travel arrows pop up to all 3 locations traveled



Squares appear for locations that family was born



- Descriptive info about student pops up

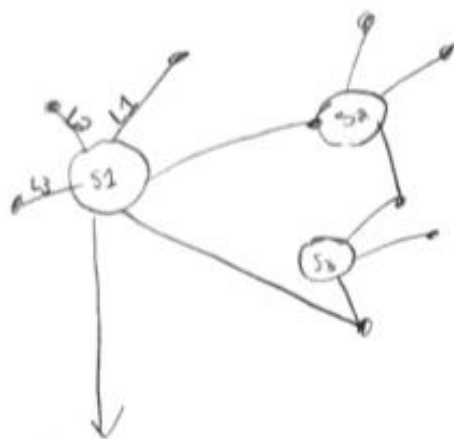
Positives and Negatives

This design shows geospatial information for where students and their parents were born and where the students traveled, as well as student descriptive info, but no info on where students have lived. Also no summary statistics for the whole group. Another disadvantage is that you can only select 1 student at a time, so can't visualize connections as well.

④ Idea 3 | Big Picture

Travel or Lived Network?

- ☐ Traveled
- ☒ Lived



S1 Descriptive Info
Cat/Dog: Dog
Spicy: Hot Spicy
...

Components

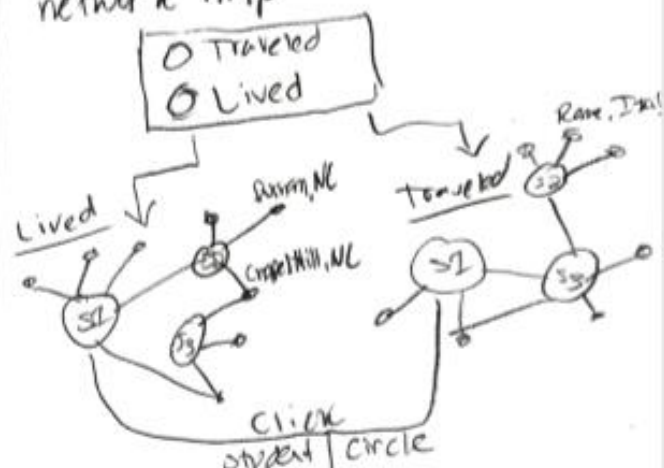
- Main component is to select "lived" or "traveled" to see an interconnected network of where students have lived/traveled and how they relate to one another
- The user can click a student bubble to obtain descriptive info about that student

Info

Title: Student Networks: Traveling and lived locations
Author: Elysa Collins
Date: 1/13/20
Task: Show similar locations of where students have traveled and lived
Sheet #: 4

Part I

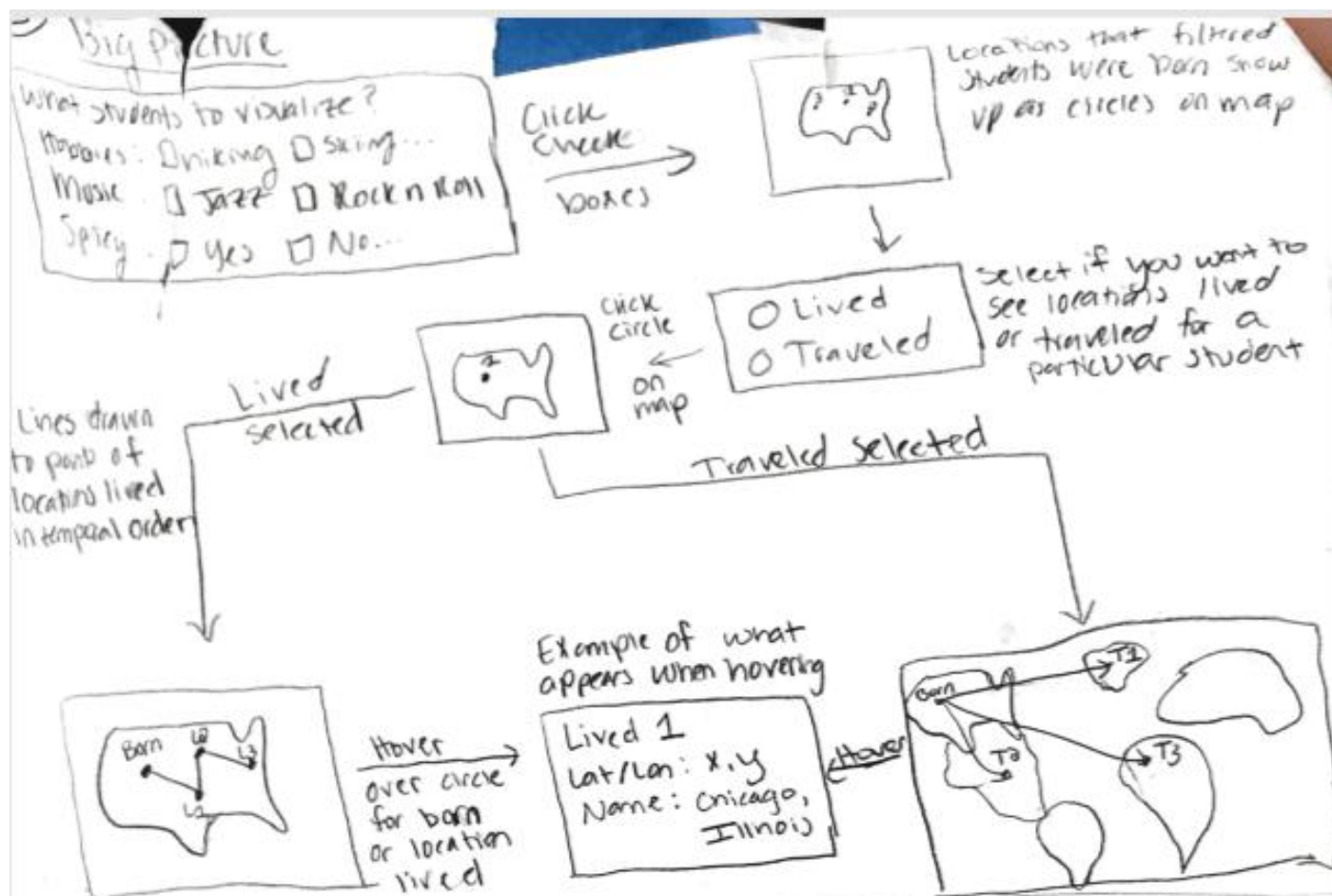
Select if you want to see the lived network map or traveled network map



Descriptive Info
Cat/Dog: Dog
...

Positive 3. Negative

This design doesn't show geospatial info, but it does show how students are connected to one another based on lived or traveled location. This viz may be confusing if there isn't a lot of overlap between locations and isn't very scalable. This viz doesn't show summaries of the entire group.



Description

- The user will filter the table of information by selecting different attributes of students that they want to display.
- The user will select "lived" or "traveled" to show locations lived or traveled by students. After clicking on a student circle (multiple can be selected at once), the map will display a temporal series of lines for locations lived or multiple arrows from born to locations traveled.
- Hovering over a location lived or traveled will produce a pop up box of the latitude, longitude, and name of the location.

Dependencies, Requirements, Cost

- This could be created as a web tool
- Potential software/packages:
 - mapbox
 - Plotly
 - Dash
- Develop code in R or Python to filter and plot data and to determine lines between points

What would you like to visualize?

Hobbies: ☐ Skiing ☐ Hiking

Music: ☐ Jazz ☐ Rock n Roll

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Click
check
boxes



☐ Lived
☐ Traveled

