**Usability Study Questions/ Actions**

**Visualization 1 – Bar Chart**

* Find the occupation with the highest mean income in Oregon in 2020
* If you are living in Texas and working in the Educational Instruction and Library field, how much would you expect to have earned in 2017

**Visualization 2 - Chloropleth**

* Which state or states has the most number of people employed in 2016?
* Do you think some states are doing better at getting their people employed than others?
* In the state that you are living in, which occupation’s mean income has been increasing over time?

**Visualization 3 – Tree Map**

* Name 3 major categories.
* How many people in Colorado are employed in Construction & Extraction Occupations over the 5 years?
* What state has a large number employed in the “Computer and Mathematical Occupations” category and what state has a small number?

**Comments from Subjects**

**Subject 1 (Kaizad)**

* Tree Map: Difficult to find specific state and occupation in the map form.
* Other questions were more straight forward and were answered easily.
* Suggestions given:
  + Would be cool to have an “invertible” tree map, so you can select by major category OR state.
  + The chloropleth map legend description was confusing and could use clarification.

**Subject 2 (Ben)**

* Tree Map:
  + Clean layout
  + Difficult to find small vs large occupational group in the given form and thus difficult to answer the question.
* Chloropleth:
  + A bit large. Could benefit from shirking this and the overlayed line charts.
  + Line charts could also benefit from centering to reduce scrolling.
  + Color scale description is confusing.
* Bar chart: Easy to use, no comments
* Overall: Graphs are pretty; some graphs and descriptions could use some small adjustments to tie things together.

**Subject 3 (Erin)**

* Bar chart: Easiest and clearest to navigate; the favorite visualization
* Chloropleth: The legend was confusing and made answering the questions difficult. Would go so far as to say the legend is misleading even.
* Tree Map: Difficult to compare large vs small occupations.

**Priority List**

* Must Have
  + Better legend description for the chloropleth.
  + Shrink the size of the chloropleth so it fits better on a full screen window.
  + Shrink size of the line charts in the chloropleth.
* Should Have
  + Different color feature for the chloropleth which normalizes by population of the state.
  + Center the line charts in the chloropleth.
* Could Have
  + Search bar for the tree map
  + Value filter for the tree map
* Will not have
  + Invertible tree map