OLIN STAFF WORKSHOP | STEP-BY-STEP CHEAT SHEET

ADMISSIONS

Data Set Up

- Connect to data > Excel spreadsheet > IPEDS Data - AAU (2010-2019).xlsx
- Add Admissions (2010-2019) sheet
- Open table and inner join to institutional characteristics table

Warm Ups

- Number of Records
    - 1,260 records (one record per 63 institutions * 10 years * 2 genders)
- Line Chart
    - Add Year to columns and applicants to rows
    - Add admissions and enrolled to chart by dropping them on the y axis (look for green double bar)
    - Show institution name filter and change to radio button
- Next Steps Thinking
    - It's difficult to compare institutions with the filter (difficult legibility = new chart type needed)
    - How could we normalize the data to make comparison easy regardless of an institution's size?
    - The gap between the lines is interesting (this is selectivity and yield)

Dashboard

- Selectivity Heat Map
    - Create a new calculated field called "CALC: Selectivity": sum([Admissions]) / sum([Applicants])
    - Add year to columns and change the pill from continuous to discrete
    - Add institution name to rows and filter to just private universities
    - Add calc: selectivity to color
    - Edit the color to hex code #A51417, reversed, with 10 steps, and end at .33.
    - Sort institution name on rows by selectivity
- Yield Heat Map
    - Duplicate the selectivity heat map
    - Create a new calculated field called "CALC: Yield": sum([Enrolled]) / sum([Admissions])
    - On color, replace calc: selectivity with calc: yield
    - Edit the colors to hex code #172752, with 10 steps, and start at .2.
- Admissions Dashboard
    - Add both heat maps to a new dashboard
    - Uncheck show header on the selectivity heat map, and adjust layout as you'd like.
    - Dashboard > actions > add action > highlight > check both sheets for source and target sheets, run action on select, target highlight on selected fields: institution name.

FINANCIAL AID

Data Set Up

- Data > new data source > excel spreadsheet > IPEDS Data - AAU (2010-2019).xlsx
- Add Financial Aid (2010-2019) sheet
- Open table and inner join to institutional characteristics table

Warm Ups

- Number of Records
    - 630 records (one record per 63 institutions * 10 years)
- Measures Crosstab
    - Filter the data to just WashU
    - Add year to rows and change the pill from continuous to discrete
    - Add “Average net price for students awarded grant of scholarship aid” to text
    - Double click “Number of undergraduates awarded any financial aid”
    - Add the following to the measure values card: “Percent of undergraduates awarded any financial aid” and “total number of full-time first-time degree/certificate seeks undergraduates - financial aid cohort”
- Next Steps Thinking
    - It’s helpful to see how the percent is calculated and be able to actually verify this myself
    - I see variation, but it’s difficult to really get a sense of how these numbers have changed over time
    - The most interesting number to me is the net price drop; noticing that less students are receiving financial aid, which makes me wonder if those extra resources are driving the cost down for those that do get aid.
    - Also realizing I want more data! I wish I had the net price for students who are NOT awarded aid.
    - And finally, I’m wondering what all is included in this all inclusive “any financial aid”; does it include loans?

Dashboard

- Area Chart
    - Filter to just WashU and add year to columns and make it discrete
    - Add net price to rows and change the mark from a bar to a line
    - Add another net price pill to rows and make its marks type an area
    - Create a dual axis and synchronize the axes
- Text
    - Filter to 2019 and just WashU
    - Add the following data pills to the text mark
        - Average net price for students awarded grant of scholarship aid
        - Number of undergraduates awarded any financial aid
        - Percent of undergraduates awarded any financial aid
        - Total number of full-time first-time degree/certificate seeks undergraduates - financial aid cohort
    - Make a sentence out of your label
        - Of the <SUM(Total number of full-time first-time degree/certificate seeking undergraduates - financial aid cohort)> full-time, first-time degree and certificate seeking undergraduates who enrolled in 2018-19, <SUM(Number of undergraduates awarded any financial aid)> students were awarded some form of financial aid, or <SUM(Percent of undergraduates awarded any financial

aid)>%. The average net price for these students was <SUM(Average net price for students awarded grant of scholarship aid)>.

- Embed definitions
    - Add the following definitions to the tooltip
    - Definitions from IPEDS
        - Financial Aid

          Federal Work Study, grants, loans to students (government and/or private), assistantships, scholarships, fellowships, tuition waivers, tuition discounts, employer aid (tuition reimbursement) and other monies (other than from relatives/friends) provided to students to meet expenses. This excludes loans to parents.
        - Net Price

          The Higher Education Opportunity Act of 2008 defines institutional net price as "the average yearly price actually charged to first-time, full-time undergraduate students receiving student aid at an institution of higher education after deducting such aid." In IPEDS, average institutional net price is generated by subtracting the average amount of federal, state/local government, or institutional grant and scholarship aid from the total cost of attendance. Total cost of attendance is the sum of published tuition and required fees (lower of in-district or in-state for public institutions), books and supplies, and the weighted average for room and board and other expenses. Cost of attendance data are collected in the Institutional Characteristics (IC) component of IPEDS, and financial aid data are collected in the Student Financial Aid (SFA) component of IPEDS.

- Donut
    - Create a calculated field with just the number 1 in it and place it on rows with an aggregation of min
    - Change the mark type to a pie and change the view from standard to entire view
    - Create another calculated field called: CALC: Percent of undergraduates NOT awarded any financial aid with the following logic: 100 - [Percent of undergraduates awarded any financial aid]
    - Add measure names to filters, uncheck all, and select only the two percentages we care about: the percent of undergraduates awarded any financial aid and those who did not (these will equal 100%)
    - Add another Calc: 1 to rows, make it a white circle, and then make them a dual axis
    - Add the percentage that receives aid to the label on the white circle and clean up formatting as desired.

PROGRAMS

Data Set Up

- Data > new data source > Excel spreadsheet > IPEDS Data - AAU (2010-2019).xlsx
- Add Program Completions (2019) sheet
- Open table and inner join to institutional characteristics table

Warm Ups

- Number of Records
    - 9,576 records (one record per 63 institutions * 38 programs * first or second major * 2 genders)
- Bar Chart
    - Add program to rows, number of completions to columns, and sort the bars in descending order
    - Add gender to columns and filter institution to just WashU
- Set
    - Select the programs that have at least 1 completion for WashU's data and create set called "WashU programs"; put that set on the filters card to eliminate unneeded program labels
- 100% Bar Chart
    - Duplicate your bar chart sheet and move gender from columns to color
    - Add a quick table calculation to the sum of completions for the percent of total
    - Change the compute using to table(across)
    - Create a calculated field called: CALC % Completions - Women Only
      sum(IF [Gender] = "Women" THEN [Number of Completions] END) / sum([Number of Completions])
- Next Steps Thinking
    - I like having the programs ranked in a way that's meaningful for both genders, but I miss the context of the basic bar charts; this seems to warp some of the analysis, like over emphasizing education and engineering technologies when they actually had very few completions.

Dashboard

- Rank Slope Chart
    - Add gender to columns and number of completions to rows
    - Add program to detail and change the mark to a circle
    - Add the WashU programs set to filters and also filter to just WashU from institution name
    - Add a quick table calculation of rank to completions and compute using program
    - Edit the Y axis and reverse the axis
    - Duplicate the ranked completions pill (holding down control on a pc / command on a mac) on rows
    - Change the middle marks card from a circle to a line and create a dual axis that's synchronized
    - Add labels and adjust colors as desired
- Bar Charts
    - Add program to rows and completions to columns
    - Create a bar chart for just women by filtering gender, as well as WashU programs and WashU institution
    - Duplicate the sheet and change the gender filter to men; reverse the x axis
- Text Labels
    - Program Label
        - Add program to text and change the view to Entire View; adjust font as desired

        - Men and Women Labels
            - Filter to just WashU, WashU programs, and men
            - Add gender, completions, and program to label and create the following:
              <Gender>
              <SUM(Number of Completions)> men completed majors in <Program> in 2019
            - Duplicate the label and change the gender to women
        - 100% Bar Chart
            - Take number of completions to columns and make it a percent of total
            - Add gender colors and show the labels; filter to just WashU and WashU programs
- Dashboard
    - Add all of the sheets to the dashboard and float the men and women bar charts. Align with them with the ranked slope chart. Float the men and women labels as well and position as desired.
    - Actions
        - Filter
            - Add a filter dashboard action where source sheets = men bar chart, women bar chart, rank slope chart; run action on hover; target sheets on all the labels; clearing selection will exclude all values; selected fields program.
        - Highlighter
            - Add a highlighter action where source sheet and target sheets = men bar chart, women bar chart, and rank slope chart; run action on hover; selected fields = program.