How to Create an Interactive Dashboard using EXCEL

Presentation is everything when using data. Since THECB's 60x30 TX interactive became available, Institutional Research has data to use. Using Excel to create dashboards from this data will enhance readability as well as comparing measures using Excel techniques.

Higher Education typically has high data reporting needs with limited budgets. Using Excel with THECB interactive data can be a win situation for everyone.

Dashboard using Excel

- **THECB Web site.**
  - http://www.txhigheredaccountability.org/acctpublic/
  - Select Interactive (hi-lighted in red)

Dashboard using Excel

- Interactive Reports

  - http://www.txhigheredaccountability.org/AcctPublic/InteractiveReport/ManageReports

  - Able to build custom reports from the THECB database and download data to Excel

60×30TX Texas Higher Education
Accountability System   Home

Interactive Reports

You may build your own custom reports from THECB databases. Follow these steps to create a custom report.

1. After reading these instructions, select "Create a Report"

   On the page that follows:

2. Select the desired Institution Type and Institution. You may select multiple institutions.
3. Select data you would like to include in the report.
4. Confirm or modify the pre-selected filters to customize the report.
5. Select "View Report" to view the report.
6. Select "Create CSV" to download the report as a Comma Separated Values (.CSV) file that is editable with Excel.

○ Create a Report

Dashboard using Excel

- ## Interactive Reports
  - ### Click on Create a Report

60x30TX | Texas Higher Education
Accountability System

Home   Resources ▾   THECB ▾   60x30TX.com   **Interactive**
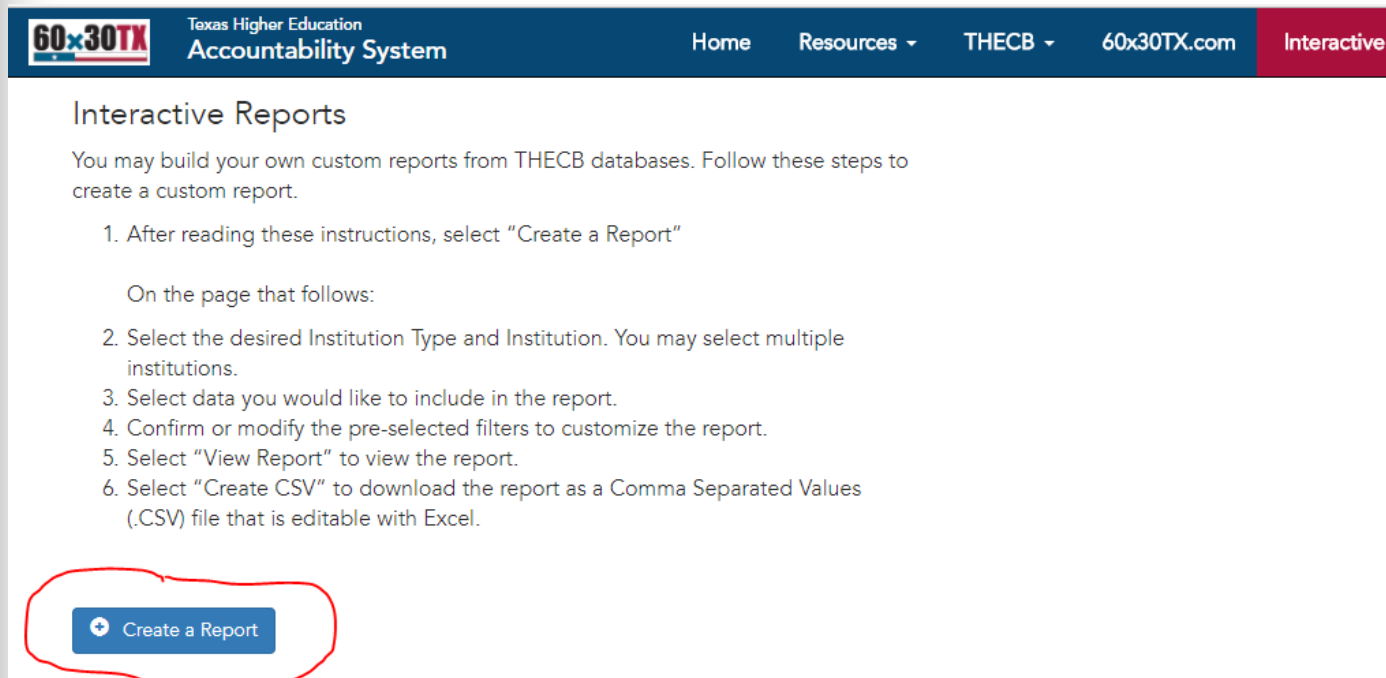
Interactive Reports

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⊕ Create a Report

Dashboard using Excel

- **Interactive Reports**
  - Select other report criteria, I selected "Annual Unduplicated Enrollment by Gender, Ethnicity and Type Major (2-Year)
  - Click "View Report"

Dashboard using Excel

- ## Interactive Reports

  - ### Click "Create CSV" which will download the file

Dashboard using Excel

- Click to open downloaded file
  - Save file as Excel Workbook
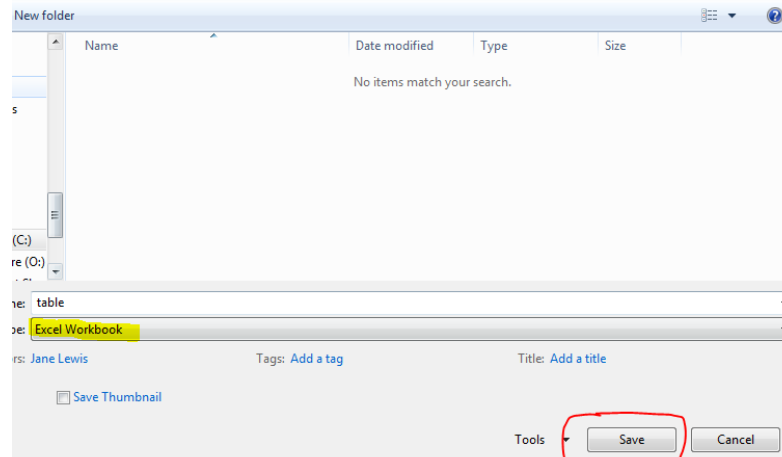
  - Delete the first row, click on the '1' , right click and click delete

Dashboard using Excel

- After you have downloaded the THECB data and saved as an Excel workbook, we will:
  - Create a table, pivot tables and pivot charts.
  - Copy Pivot charts to a sheet we will name "Dashboard"
  - Add slicers to the Pivot charts on the "Dashboard" sheet. Slicers are *visual filters.* Using a slicer, you can filter your data by clicking on the data you want
- Let's Begin

Dashboard using Excel
- ## This is my Dashboard

Slicer   Pivot Chart   Pivot Chart

Dashboard sheet   Pivot Chart
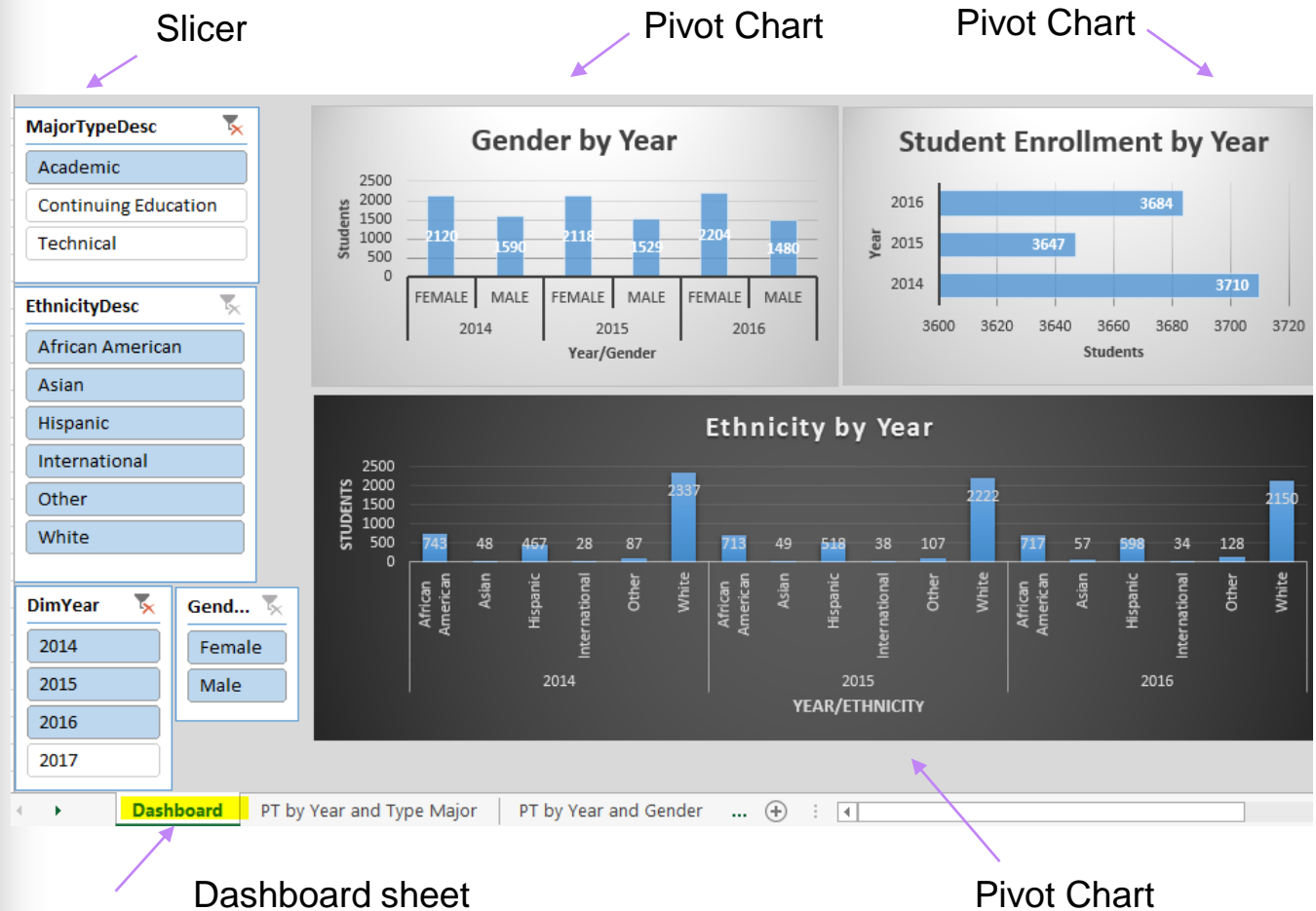
Format Data as Table

- Click on a cell within your EXCEL spreadsheet

- Click the HOME tab, arrow beside "Format Data as Table"

- Select your color scheme
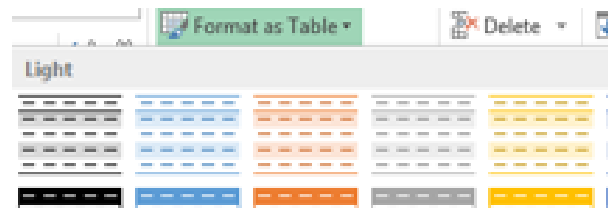
Format Data as Table

- Click OK on the pop up box

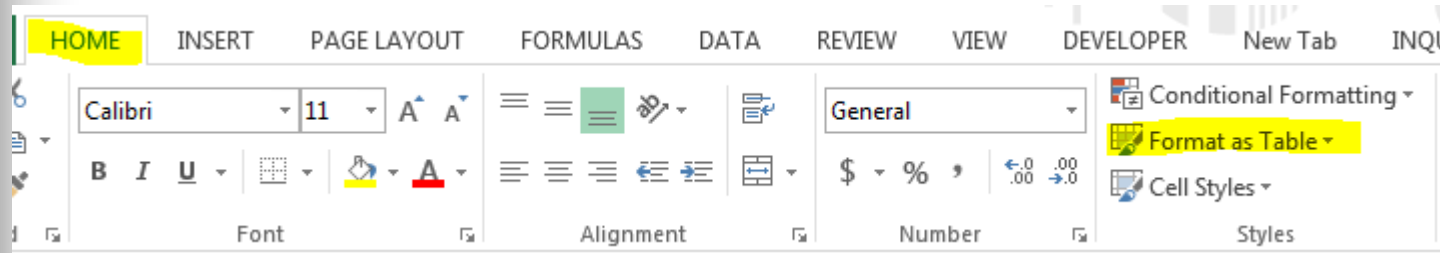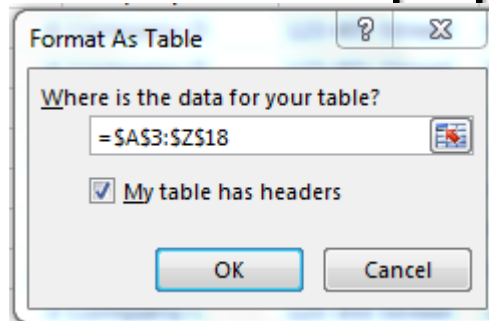- An EXCEL table has been created
- A Design tab will be displayed that shows attributes checked for the table
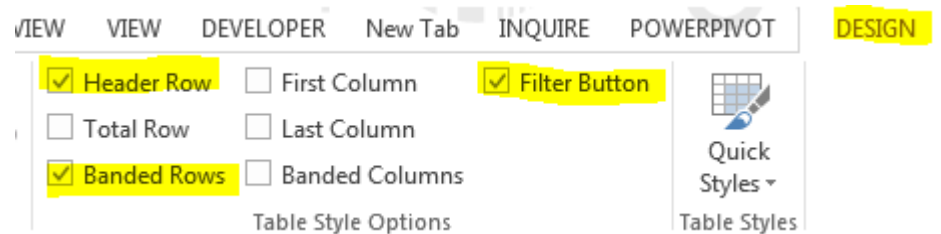
Format Data as Table
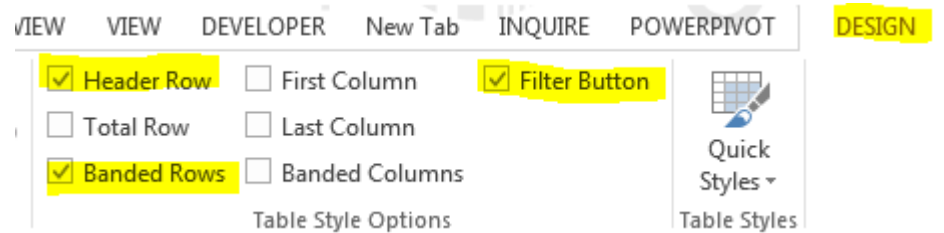
- **Header Row** – Column headers remain visible as you scroll down in your spreadsheet

- **Banded Rows** – Shading alternate rows in a large spreadsheet to better distinguish the data

Format Data as Table

- **Filter Button** – Allows you to view specific rows in an Excel spreadsheet, while hiding the other rows. A drop down menu appears in each cell of a header row
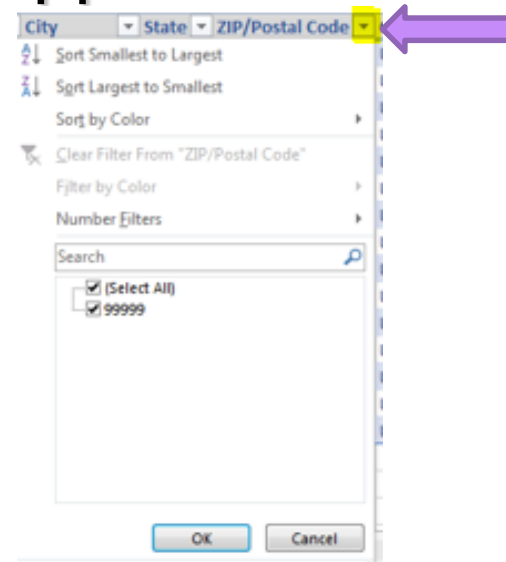
Create a Calculated Column

- By entering a formula in one cell in a table column, you can create a calculated column in which that formula is instantly applied to all other cells in that table column

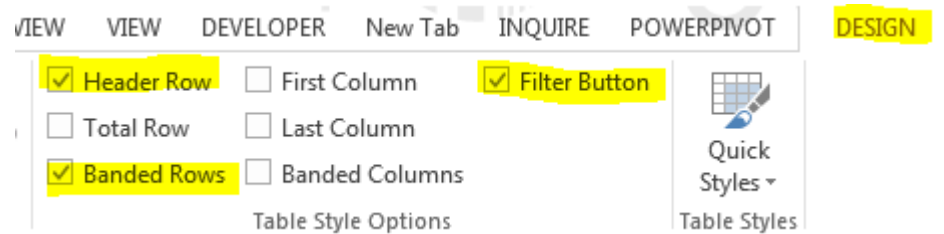- By typing in the column **immediately to the right of the table**, Excel will automatically extend the table for you. Place your cursor in the active cell after the last column in the table

H	I
Count ▼	
44	

Create a Calculated Column
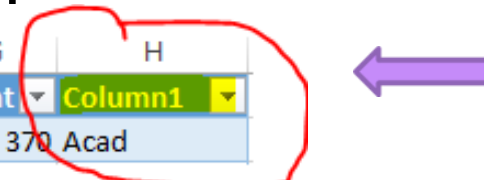
H	I
Count ▼	
44	

- For this example, we are going to use the MID formula to obtain the course subject. In the active cell after the last column in the table, type =mid(Column name, starting position, length)

F	G	H	I	J
▼ MajorTypeDesc	▼ Count ▼			
an Academic	370	=mid([@MajorTypeDesc]1,4)		

- Press enter and a new column is created. Change the column heading to "Major Type" instead of Column1

F	G	H
MajorTypeDesc	▼ Count ▼	Column1 ▼
Academic	370	Acad

Create a Calculated Column

- Creating columns expands the available data for Pivot Tables and Pivot Charts

- Using the Formula Tab, If option, add a column for Web Courses

Pivot Table

- A **pivot table** is a program tool that allows you to reorganize and summarize selected columns and rows of data in a spreadsheet **table** to obtain a desired report. A **pivot table** doesn't actually change the spreadsheet or database itself

Pivot Table

- To begin, Click in Column A, Row 2 (A2) in the Excel Spreadsheet to make the cell active
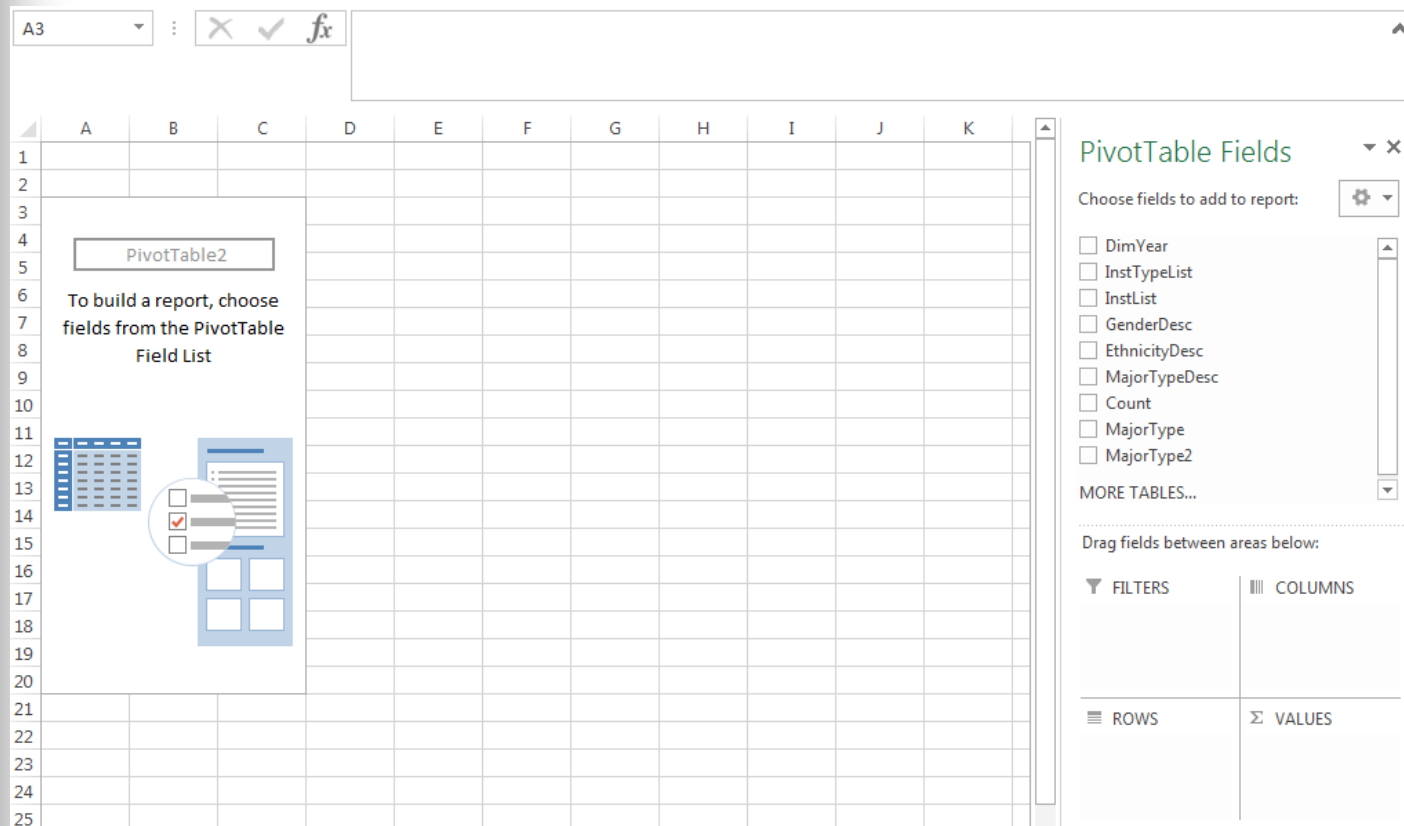
- From the Insert tab, select Pivot Table
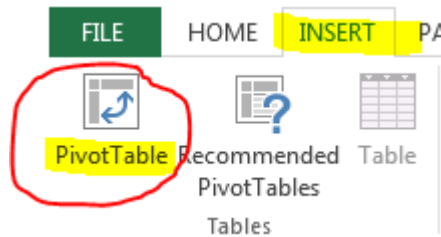
- The Create PivotTable dialog box will appear, click OK
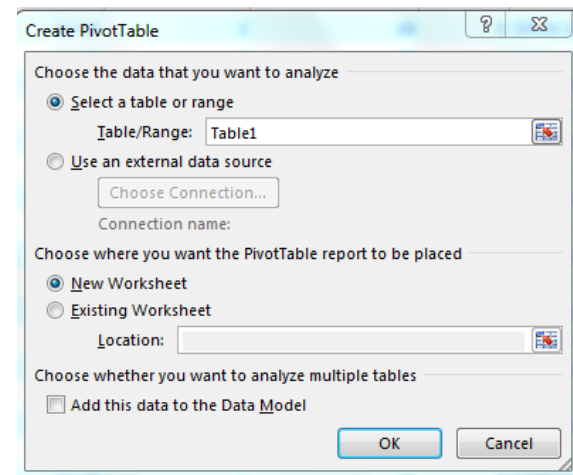
Pivot Table

- A blank PivotTable and Field List will appear on a new worksheet

Pivot Table

■ Drag or check data boxes to create a pivot table by DimYear, Gender Desc, *(Rows) and* count *(Values),* Major Type Desc (Filters)

Pivot Table

PivotTable Fields ▼ ✕

Choose fields to add to report: ⚙ ▼

- ☑ **DimYear**
- ☐ InstTypeList
- ☐ InstList
- ☑ **GenderDesc**
- ☐ EthnicityDesc
- ☑ **MajorTypeDesc**   ▼
- ☑ **Count**
- ☐ MajorType
- ☐ MajorType2

MORE TABLES...

Drag fields between areas below:

▼ FILTERS	‖‖ COLUMNS
MajorTypeD... ▼	

≡ ROWS	Σ VALUES
DimYear ▼	Sum of Count ▼
GenderDesc ▼	

MajorTypeDesc	Academic ▼
Row Labels ▼	**Sum of Count**
⊟ 2014	3710
Female	2120
Male	1590
⊟ 2015	3647
Female	2118
Male	1529
⊟ 2016	3684
Female	2204
Male	1480
⊟ 2017	4758
Female	2864
Male	1894
Grand Total	**15799**

Pivot Chart

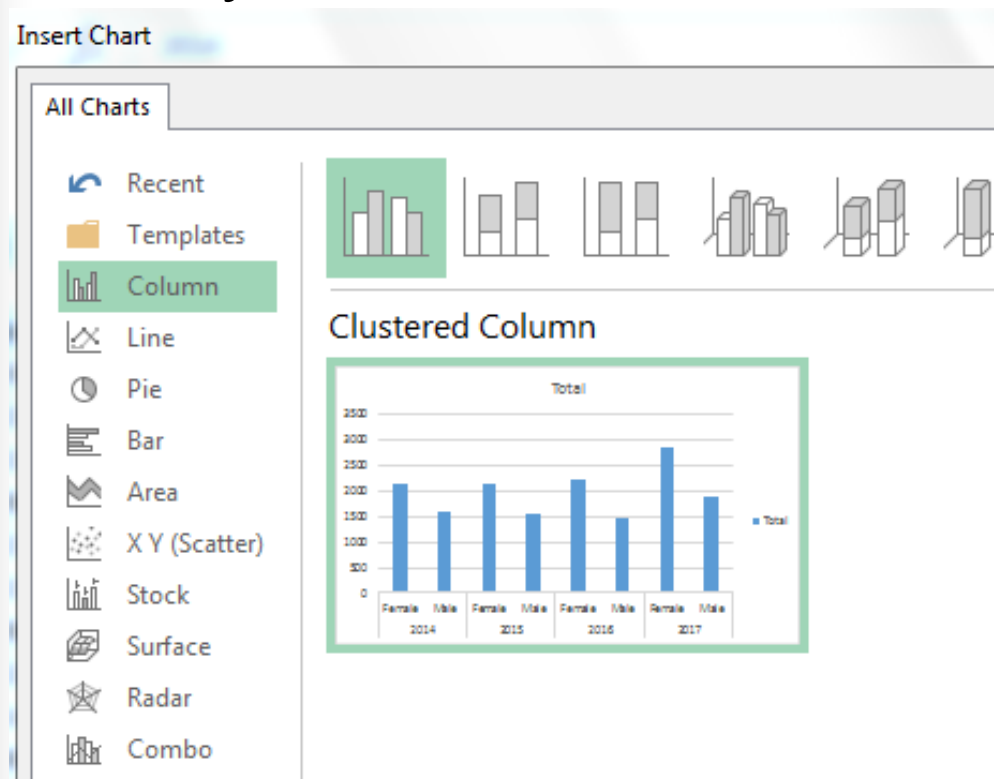- To begin, click inside the pivot table on a data field. From the Insert tab, click Pivot Chart
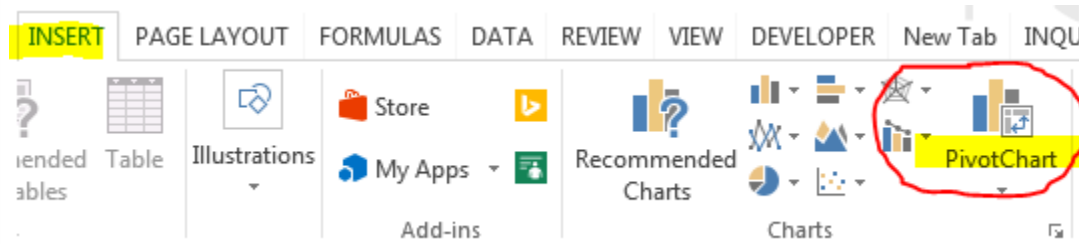
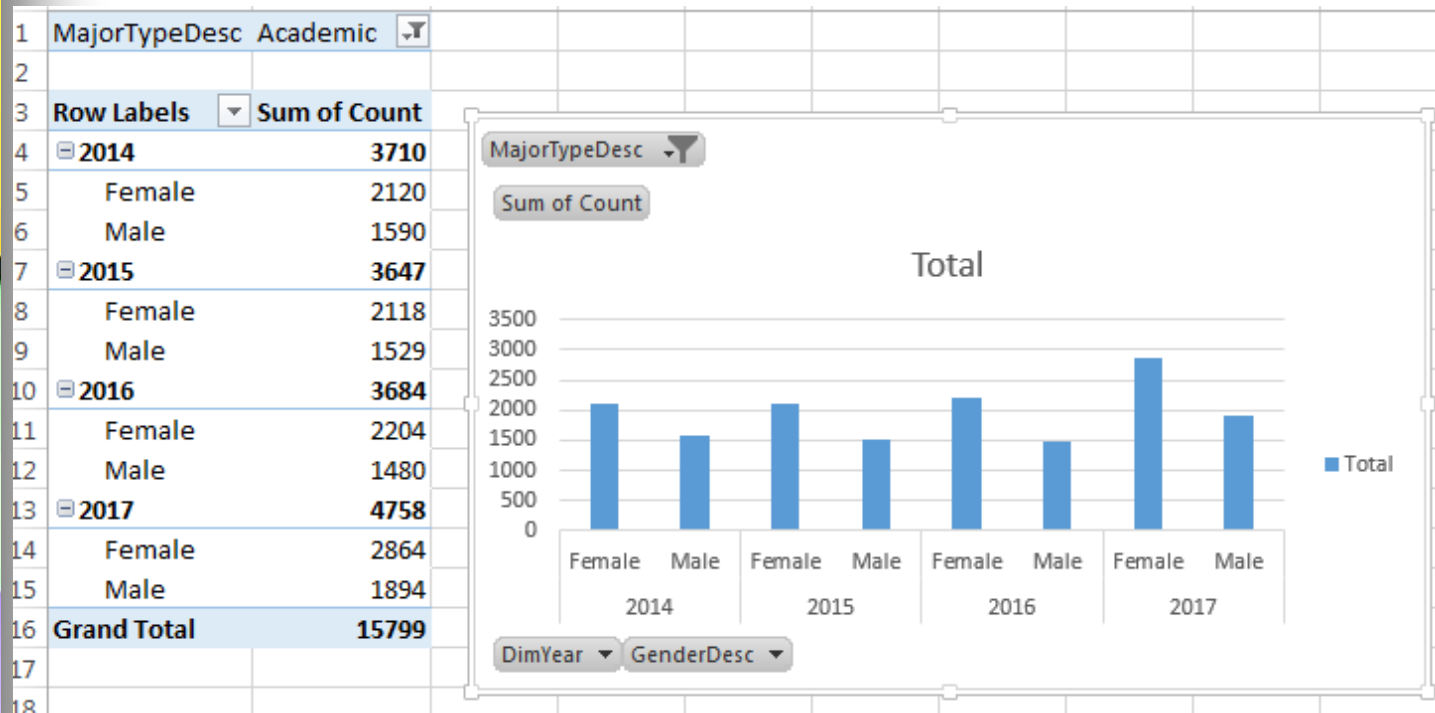- Along with your Pivot Table, you have a Pivot Chart

Pivot Chart

- A chart is displayed, but you can click on different charts to see which chart best illustrates your data. Click OK once you like a chart
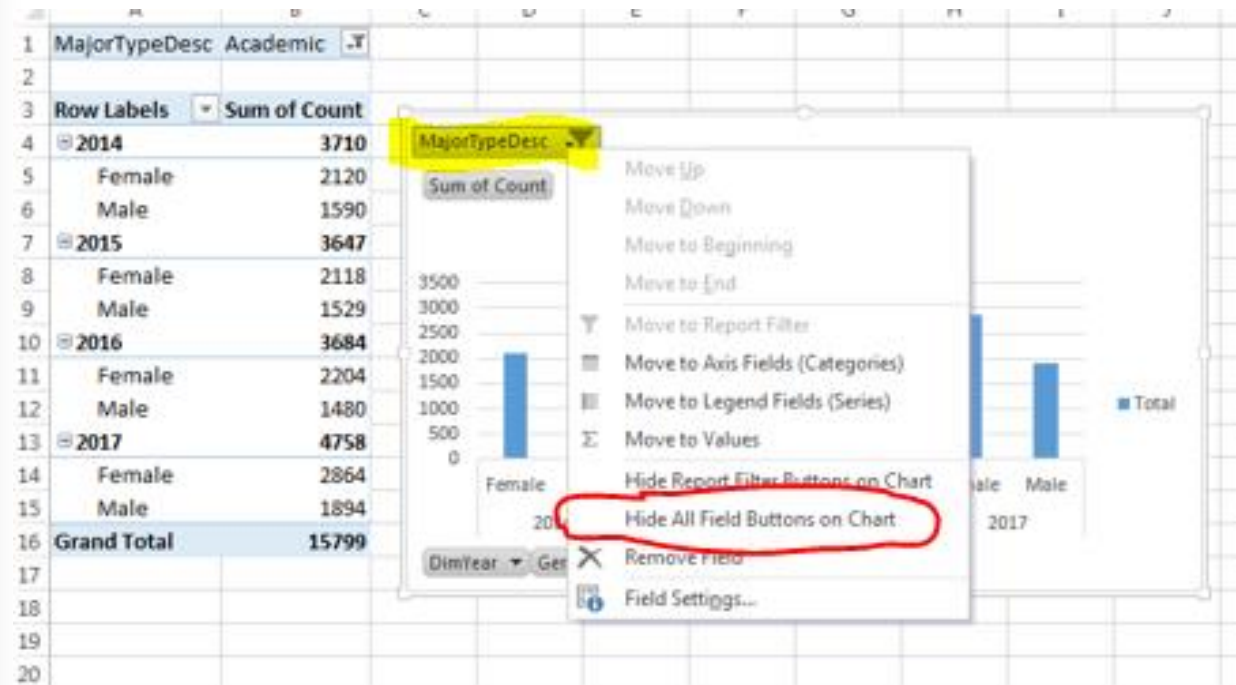
Pivot Chart

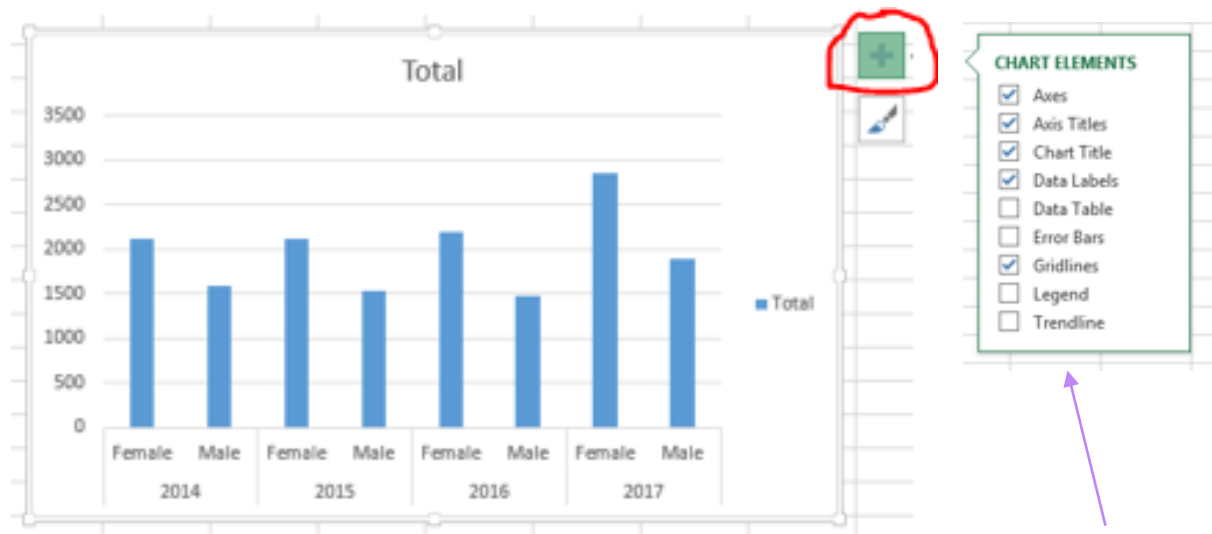- The pivot table and pivot chart are shown together.

Customize Pivot Chart

- Hide filled buttons, right click on hi-lighted button and select "Hide all field buttons on chart"
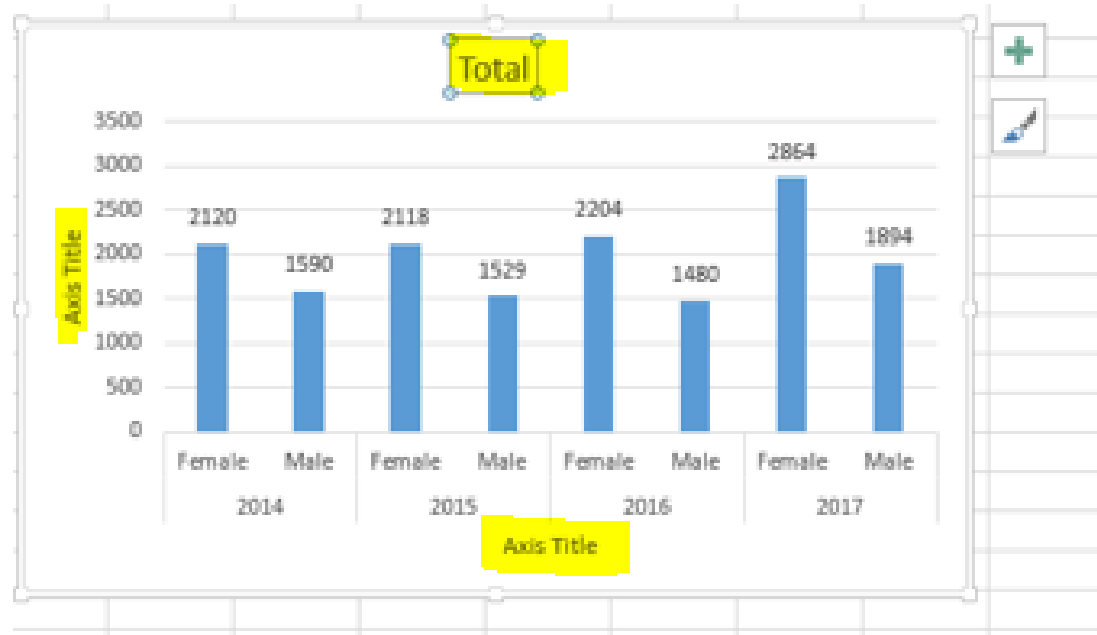
Customize Pivot Chart

- Click inside of chart and the "+" will appear, click the "+" and see chart elements

See Chart elements clicked
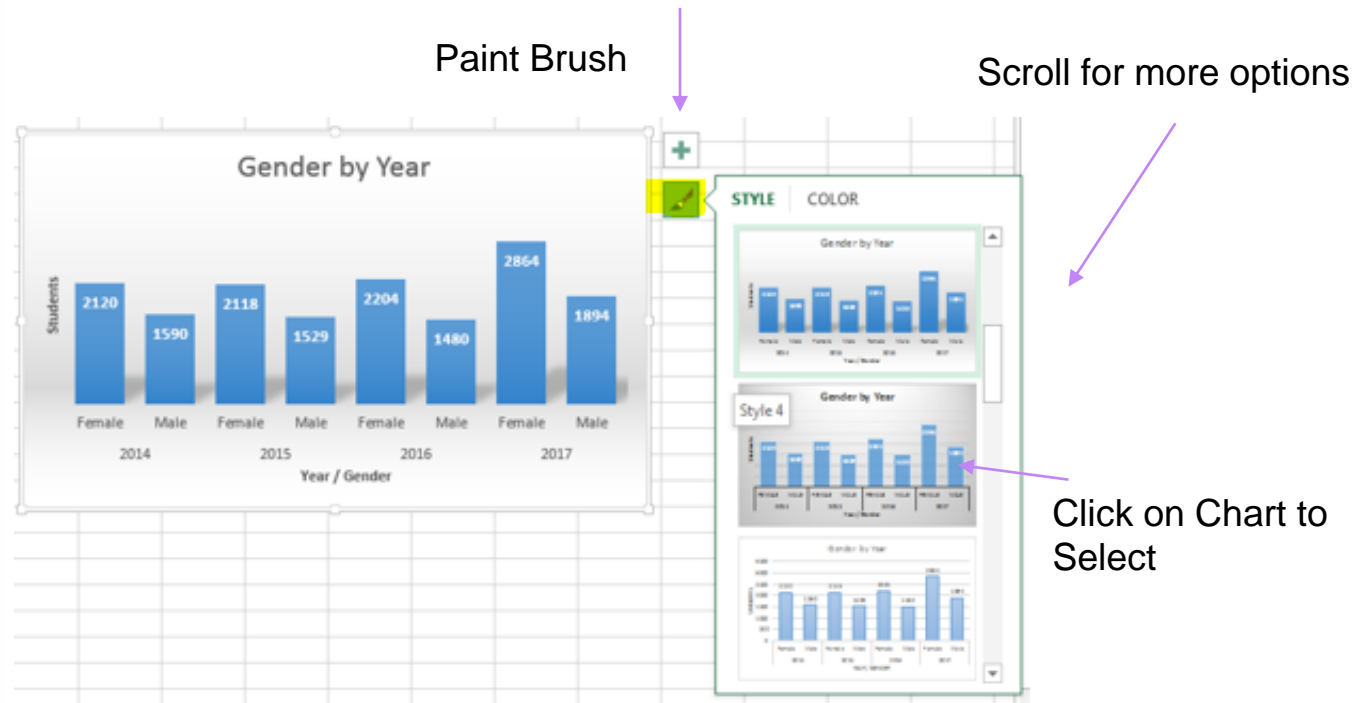
Customize Pivot Chart

- Change Chart and Axis Titles
  - Click on the title and change
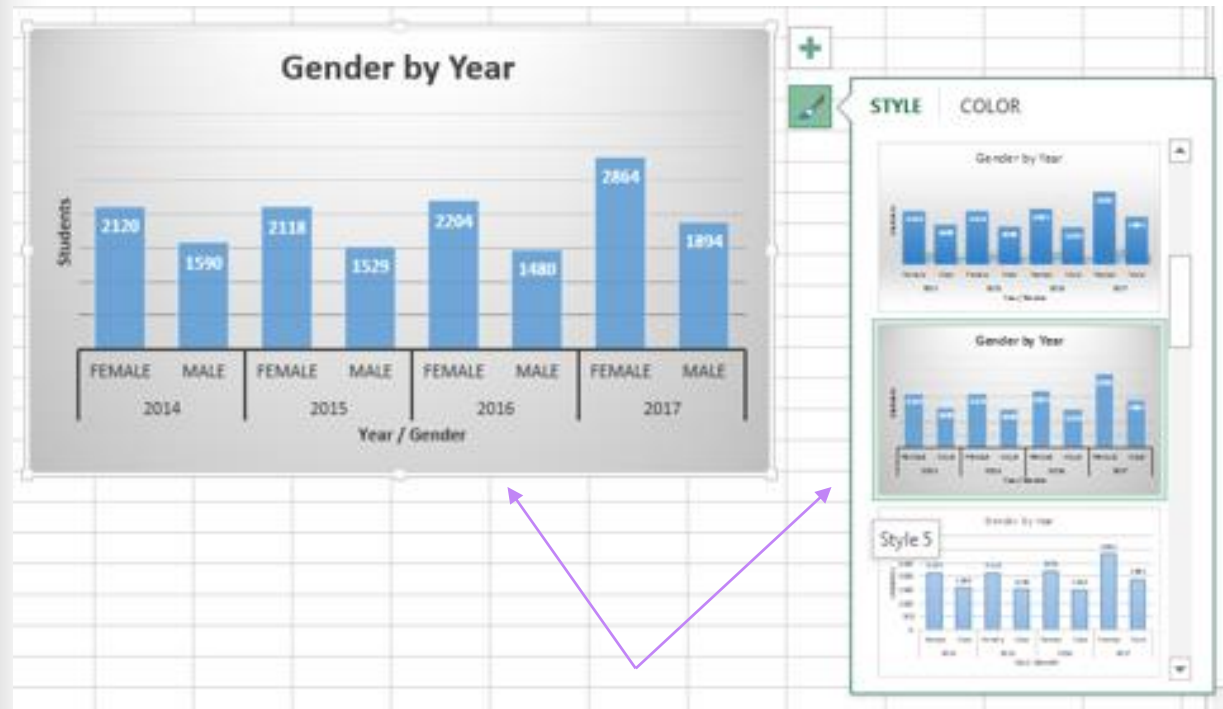 - Do the same with each Axis

Customize Pivot Chart

- Alternative Chart styles
  - Click paint brush and alternative styles will be displayed. Use the right scroll bar to see different choices. Click on a chart style

Paint Brush

Scroll for more options

Click on Chart to Select

Customize Pivot Chart

- Alternative Chart styles
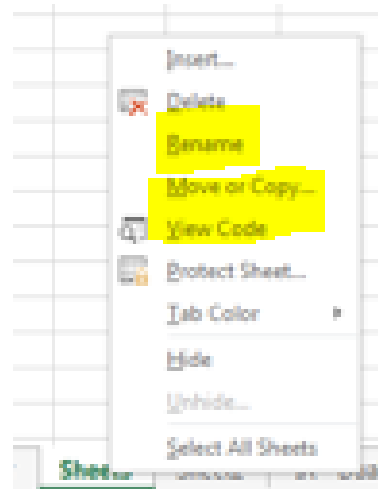 - See the Chart Selected

Create Dashboard

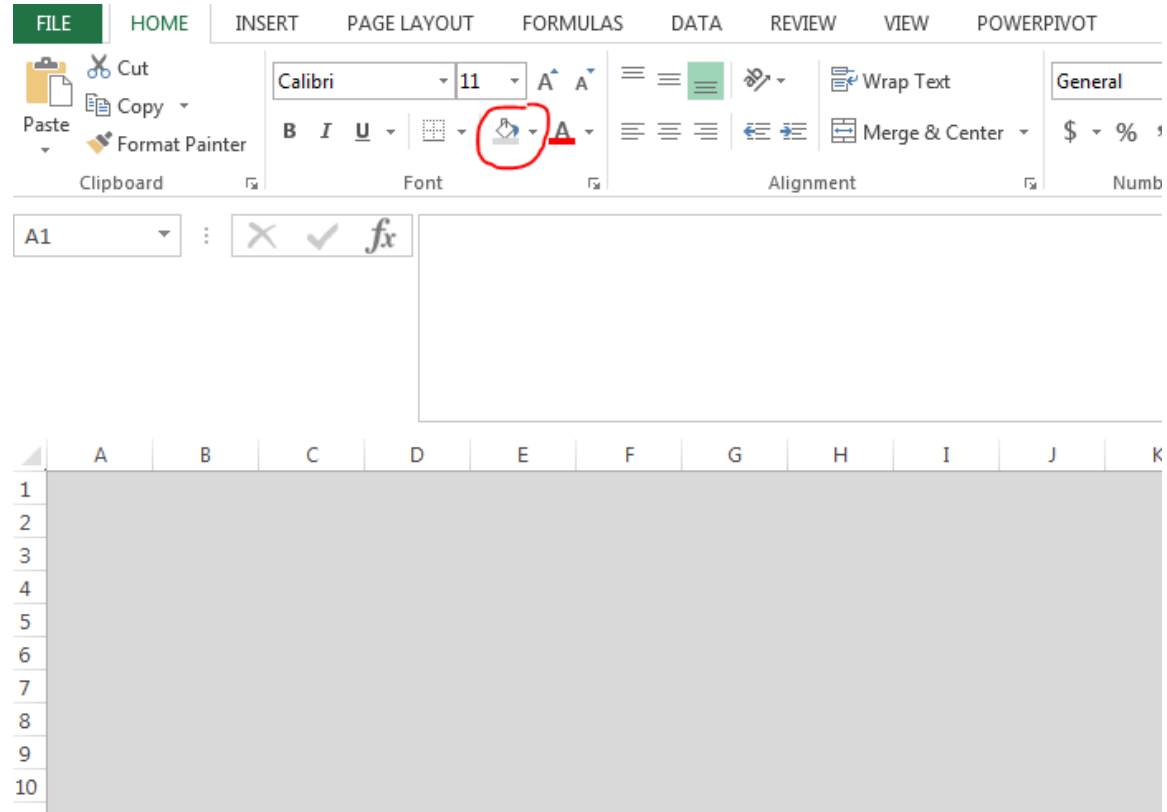- Add a new blank sheet clicking the "+" along the bottom of the workbook

- Right click on tab and rename to "Dashboard"
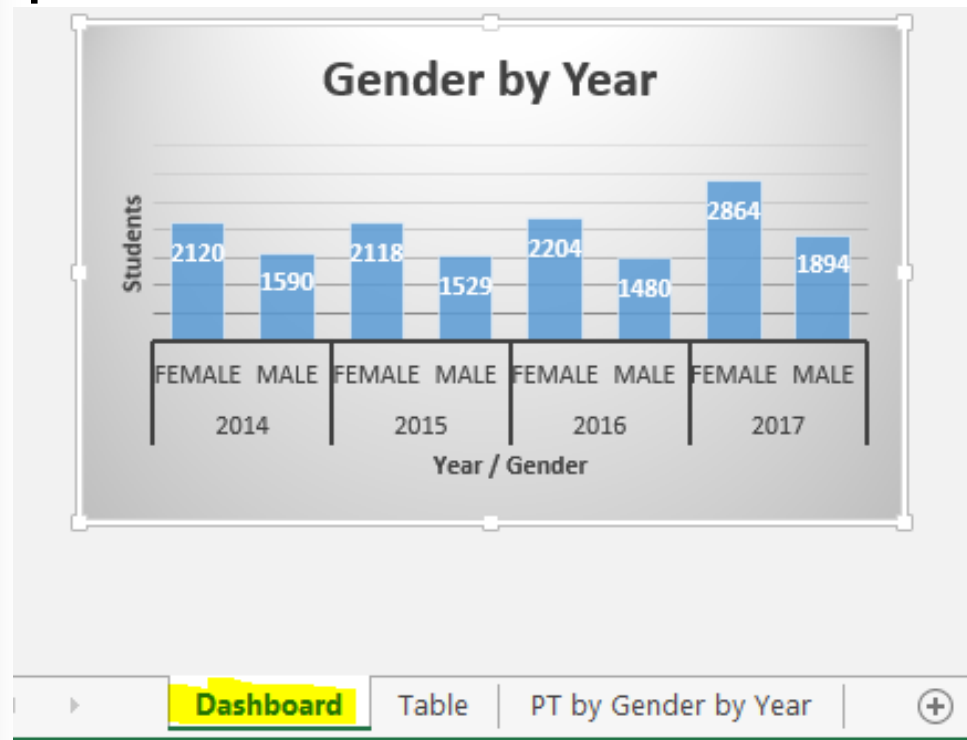- Move the sheet to be the first

Create Dashboard

- On the Dashboard sheet, select a background fill color for the entire sheet you can view

Create Dashboard

- Copy pivot chart to the Dashboard sheet. I use Ctrl + V to paste. Slicers do not always recognize other ways to paste
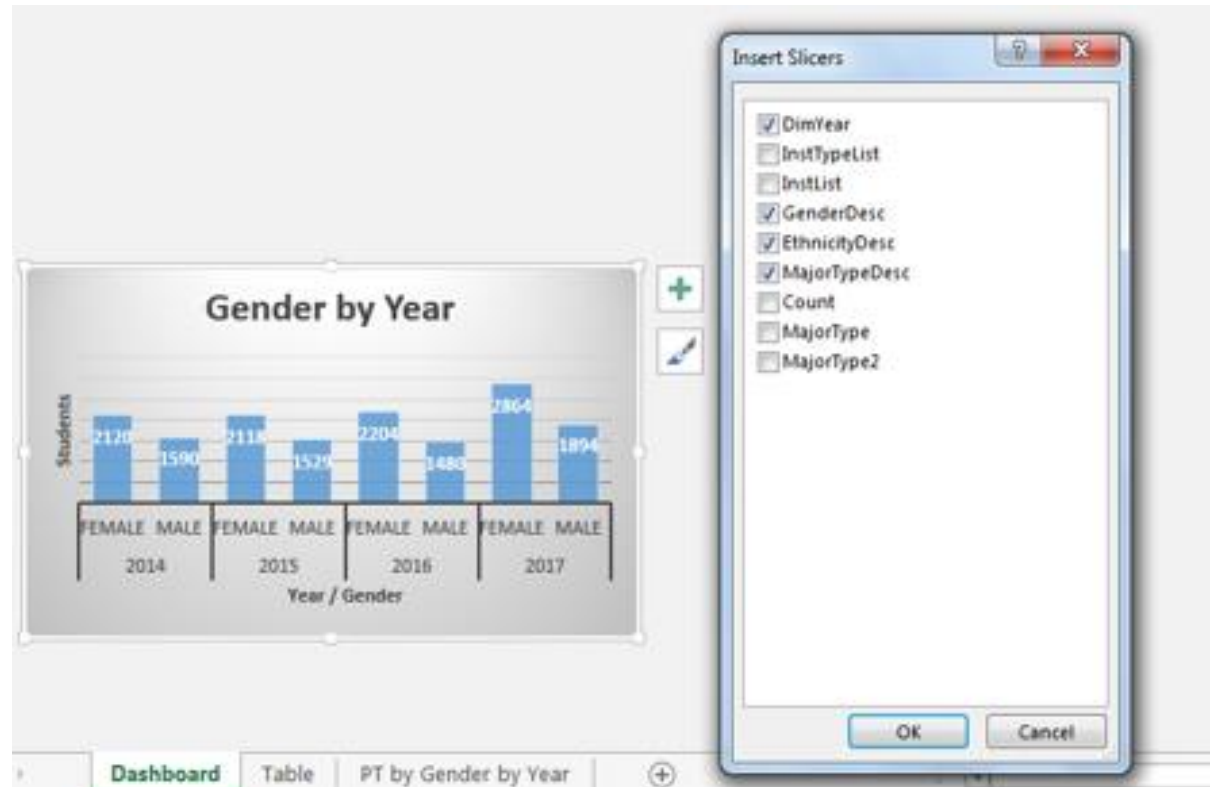
Create Dashboard

■ Add slicers to the dashboard. Slicers which are visual filters

- Click on one of the pivot charts on the dashboard
- Select the slicer option from the insert tab
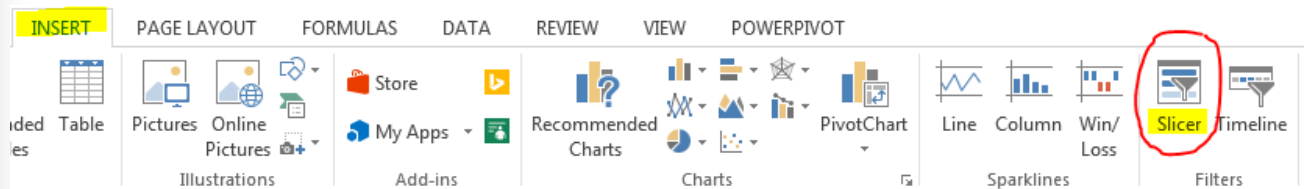
Create Dashboard

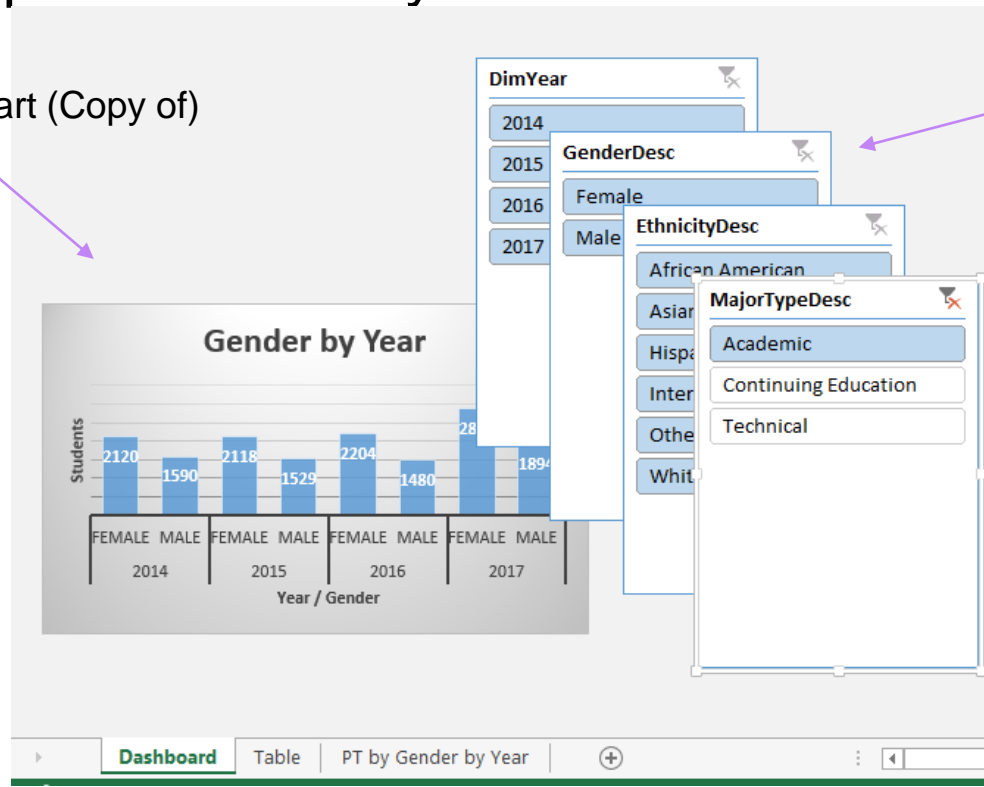- Data columns from the THECB table sheet are available to use as slicers

Create Dashboard

- Move and re-size slicers and/or pivot charts
  - Initially Slicers are connected to only 1 pivot chart on your dashboard
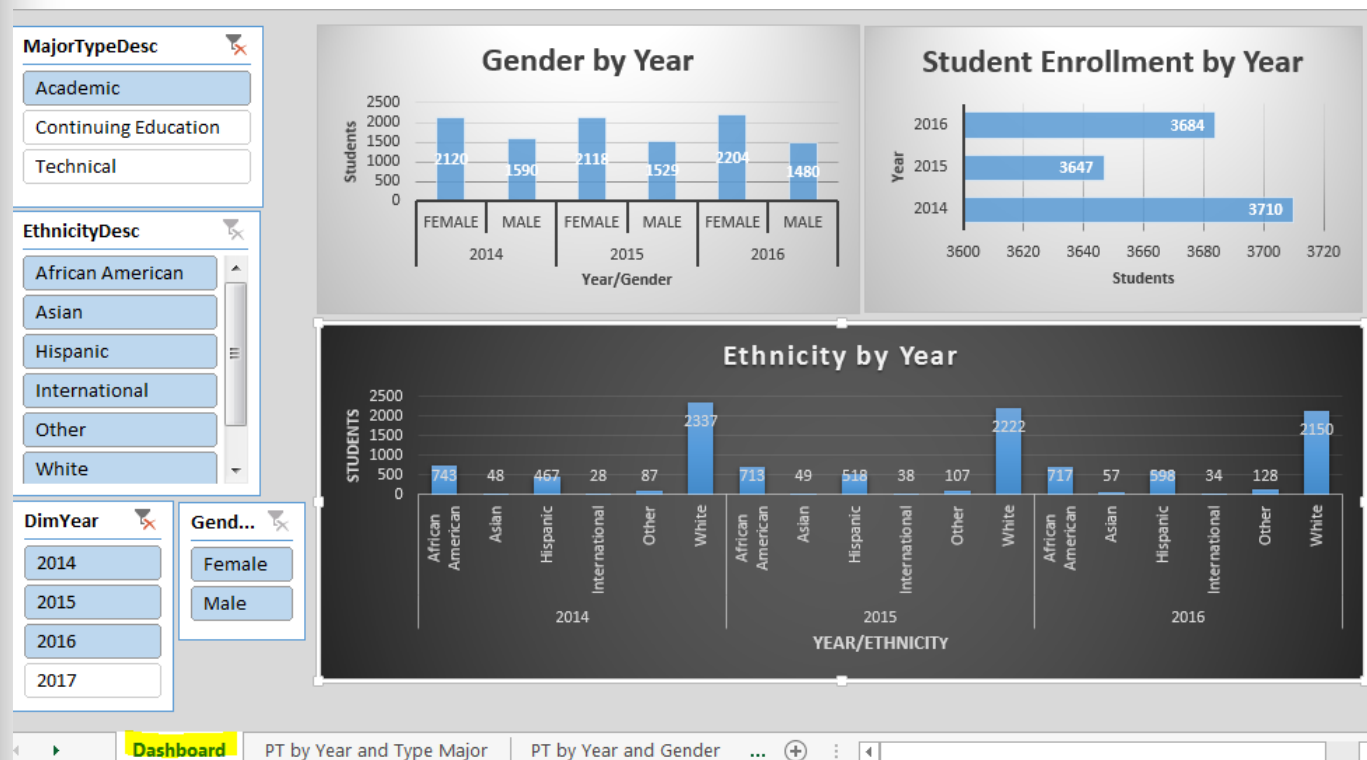

Pivot Chart (Copy of)

Slicers

Create Dashboard

- I created additional pivot tables/charts and copied these to the "Dashboard" sheet
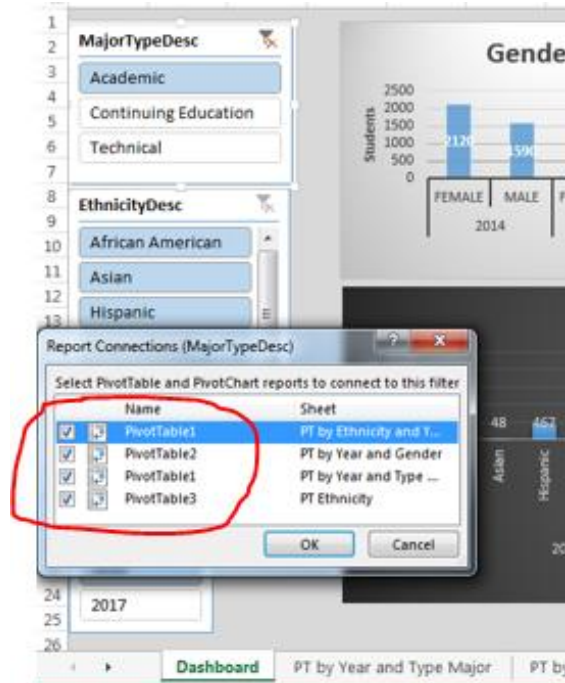
Create Dashboard

- To connect the Slicers to each Pivot Chart
 - Right click inside each slicer, and select "Report Connections"

Create Dashboard

- Click to check all Pivot Tables listed which correspond to each Pivot Chart on the Dashboard sheet
  - Repeat for each slicer. In this example, I would do this 4 times once for each slicer
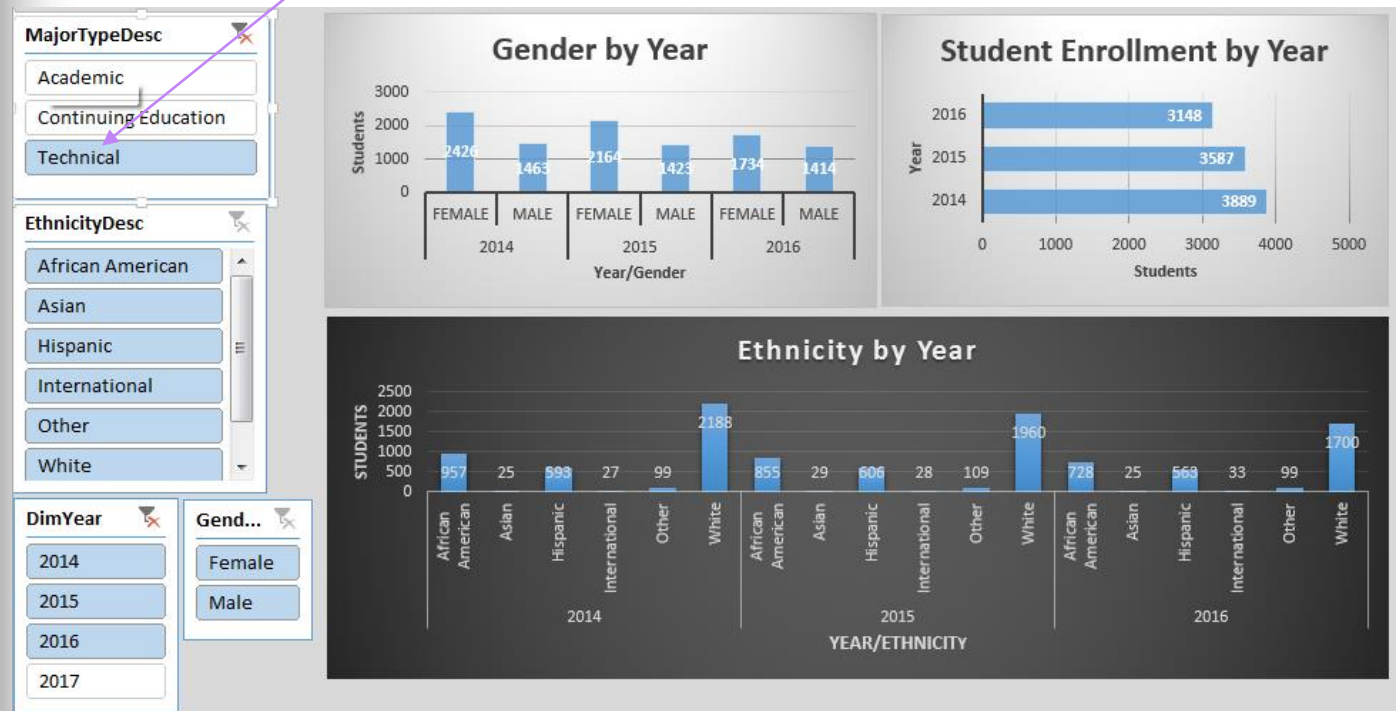
Create Dashboard

- Clicking on slicer combinations will change the 3 pivot charts
  - Slicer data which are blue are active.
  - Below I selected just the "Academic" type
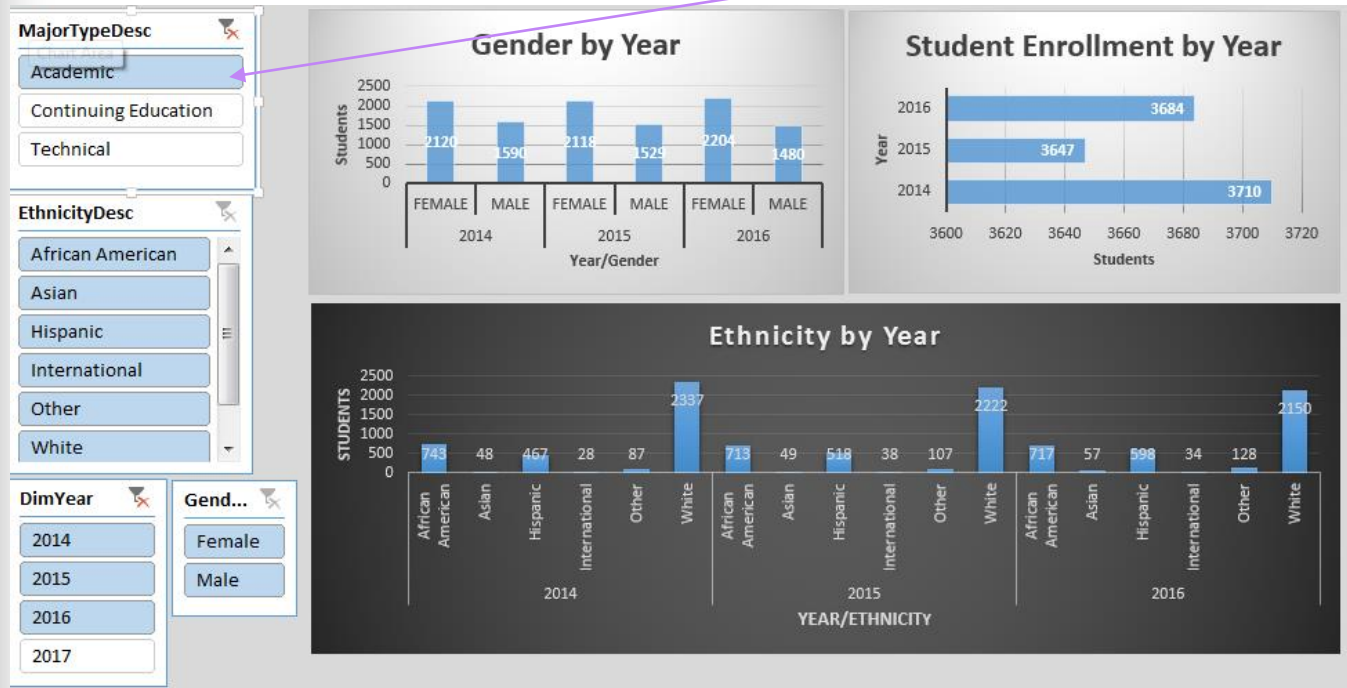
Create Dashboard

- Changing to "Technical" type, the 3 pivot charts reflect just that major type
  - To select all data inside an individual slicer, hold the shift key as you select

Create Dashboard

- **Selecting data from the THECB interactive option and creating a Dashboard, you can:**
  - Visually analyze the data in multiple ways
  - Group data fields separately in pivot tables/charts and use slicers to connect the information
  - **Slicers** are extremely useful when you create a dashboard page and you want one click to affect multiple items on the page.

Conclusion

- View the 3 videos listed below, especially part-3 which demonstrates the pivot table / pivot chart / dashboard / slicer process

http://www.excelcampus.com/charts/pivot-tables-dashboards-part-1

http://www.excelcampus.com/charts/pivot-tables-dashboards-part-2

http://www.excelcampus.com/charts/pivot-tables-dashboards-part-3