This is a hands-on workshop. Please make sure to download to your laptop Power BI Desktop and the data file I developed.

Link to download Power BI Desktop:
powerbi.microsoft.com/en-us/desktop/

*Power BI desktop is FREE!

Link to download data for workshop (Google Drive):
https://goo.gl/MfdBvu

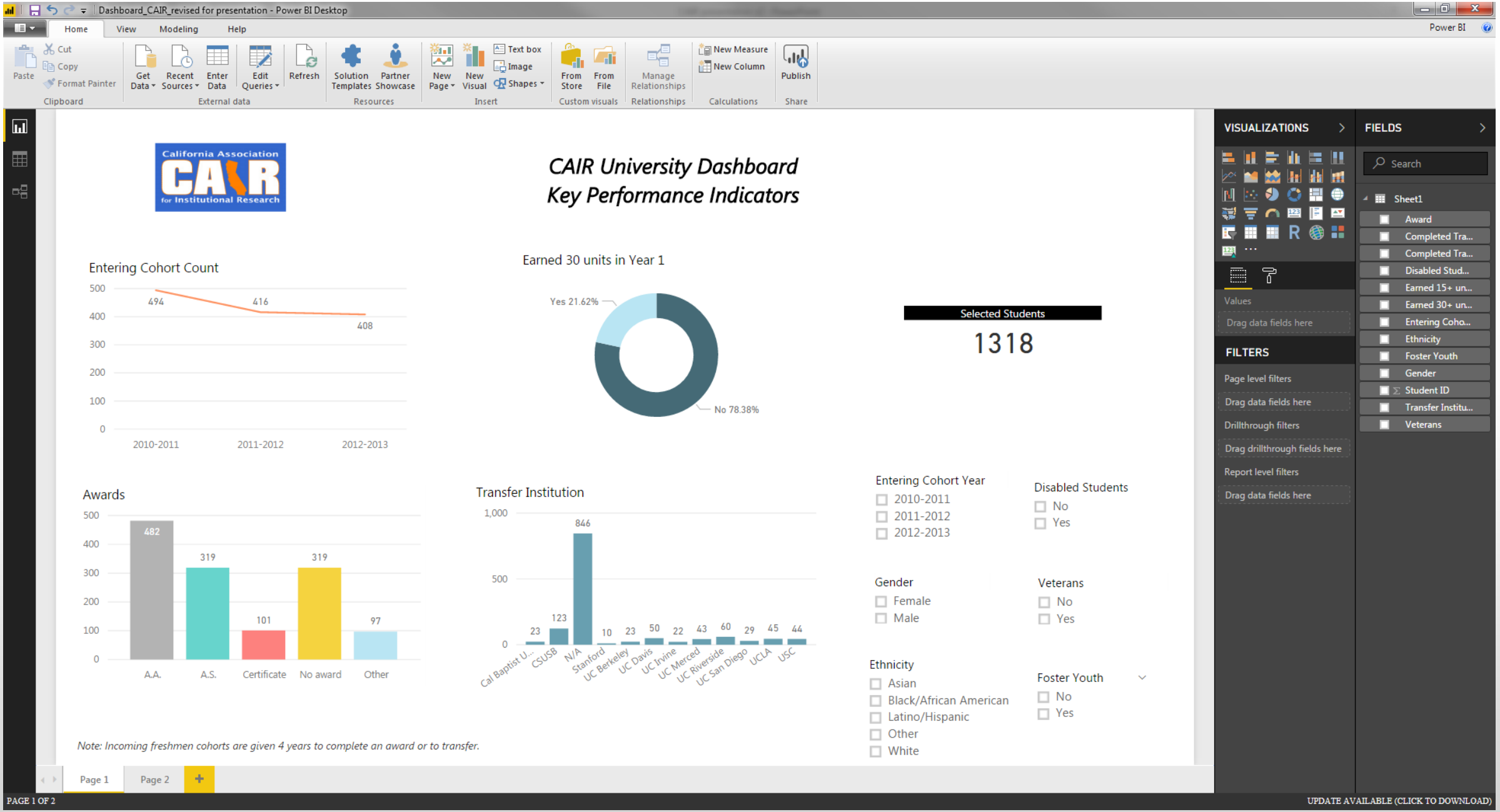
Power at Your Fingertips: Developing an Interactive Dashboard Using Power BI

Jaime Rodriguez
Institutional Research Specialist
Moreno Valley College
2017 CAIR Conference

Learning objectives of workshop

- Learn how to upload data to Power BI.
- Learn how to develop a dashboard.
- Learn how to publish your Power BI dashboard to Power BI service.

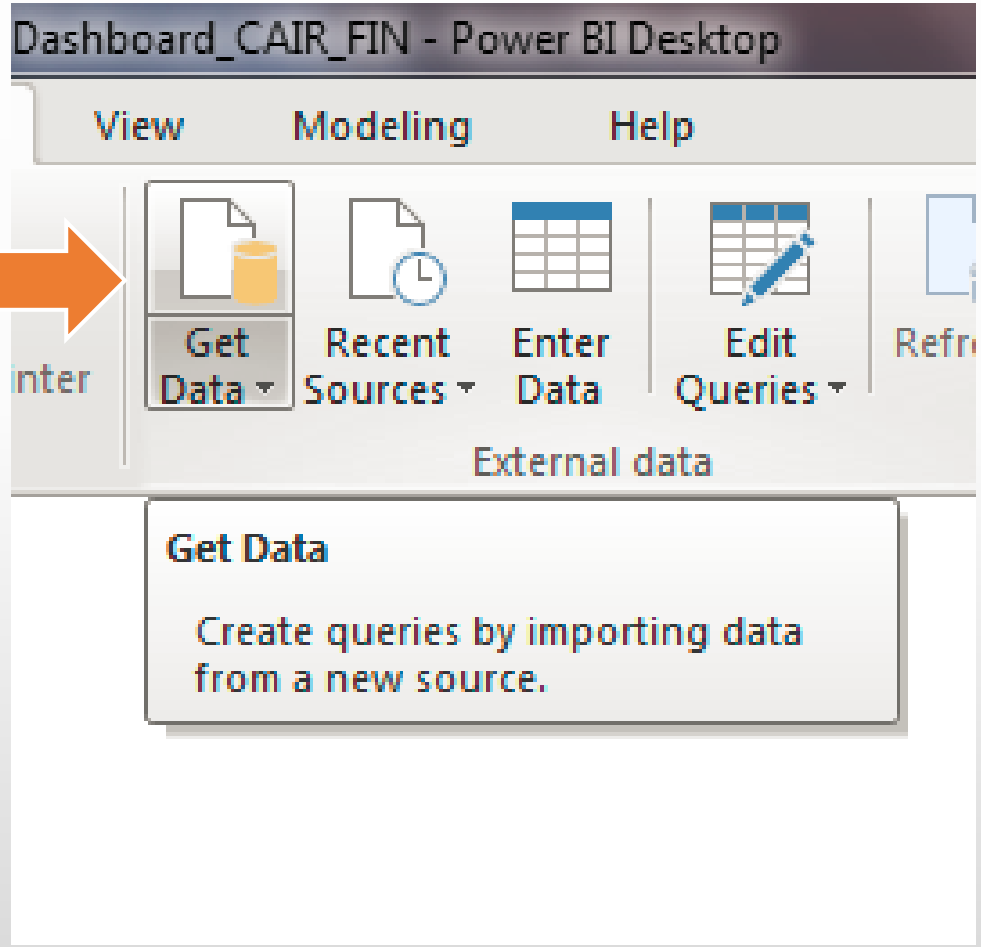
This is the dashboard we will be creating today.



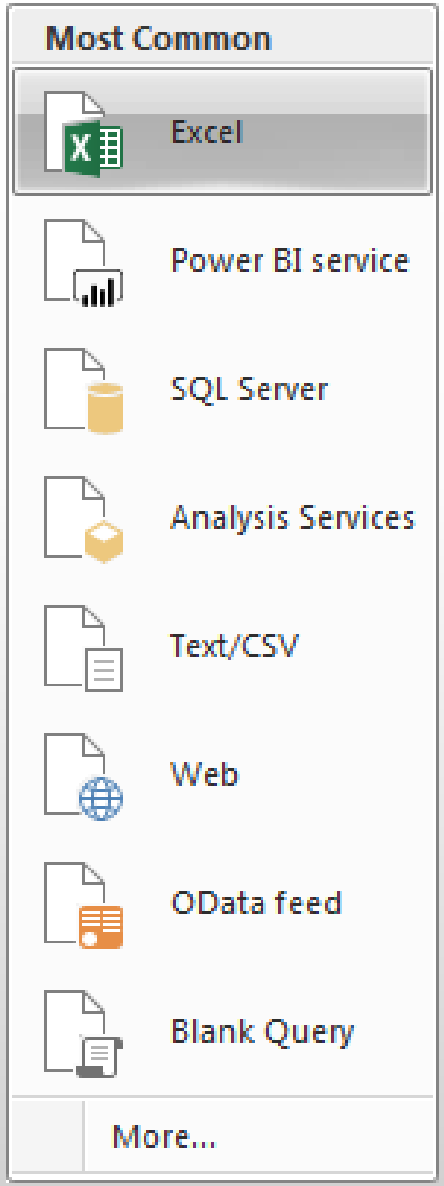
Let’s get started!

Steps to upload the data file.

Step 1

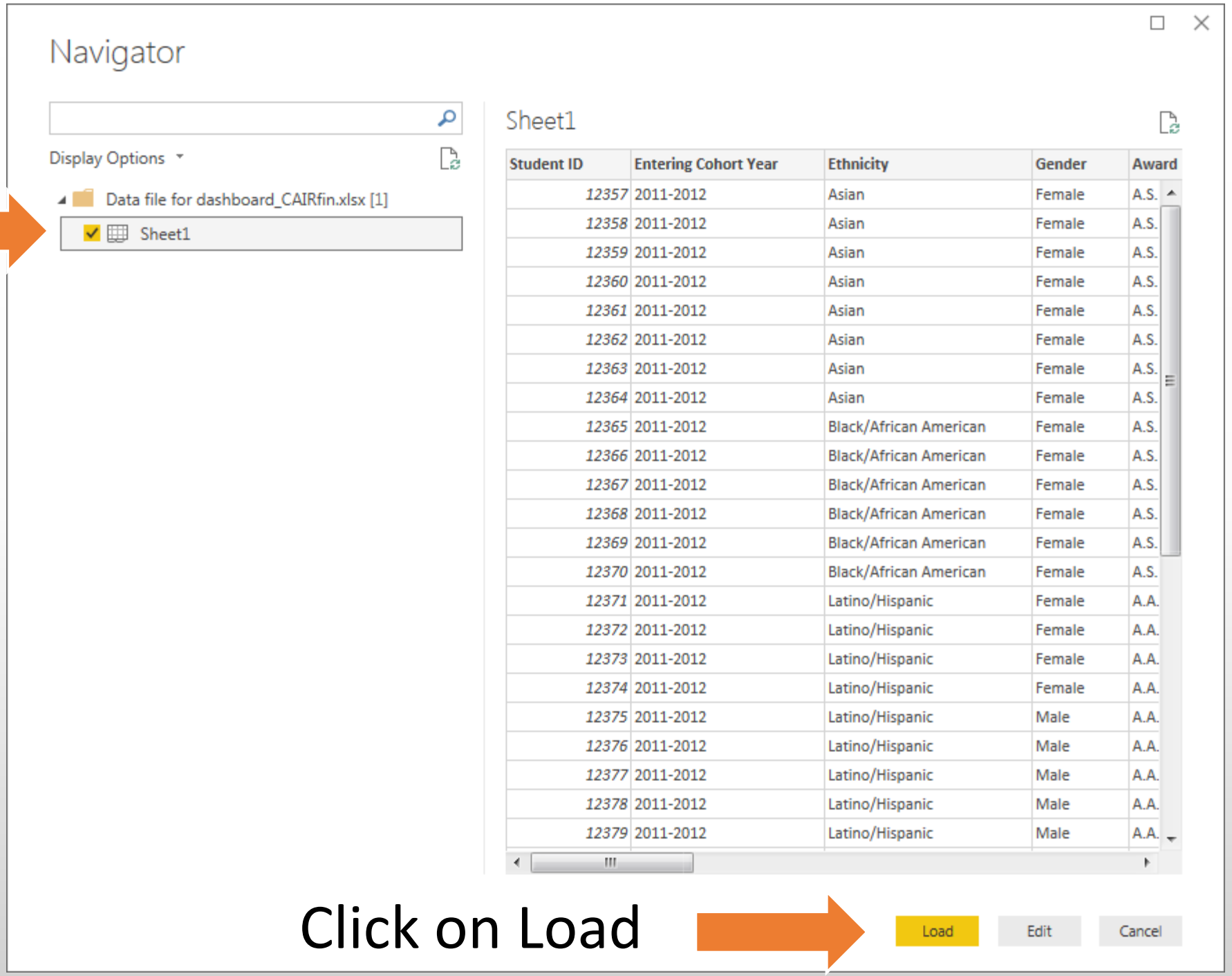


Step 2



Select data file from saved location.

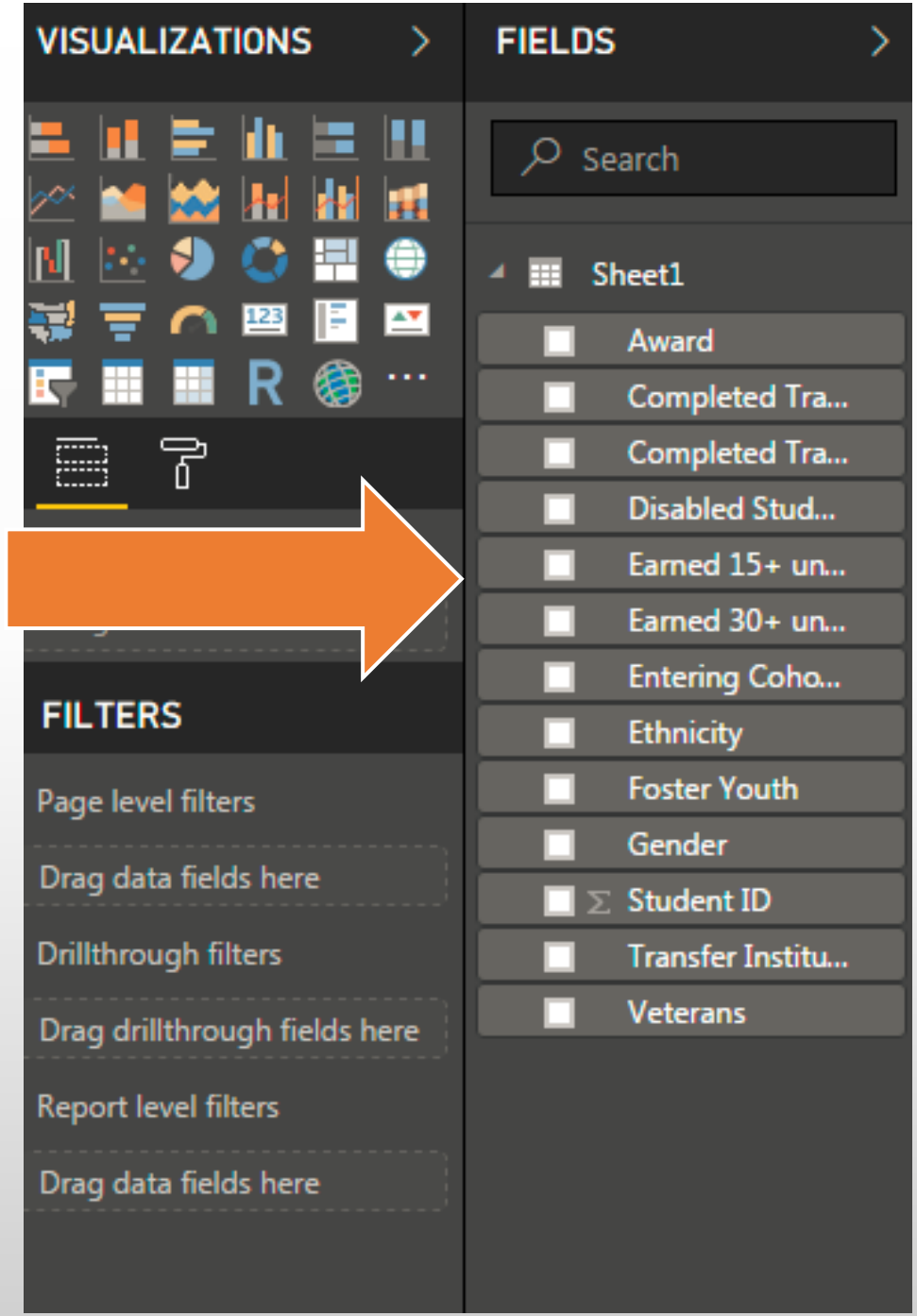
Click on sheet



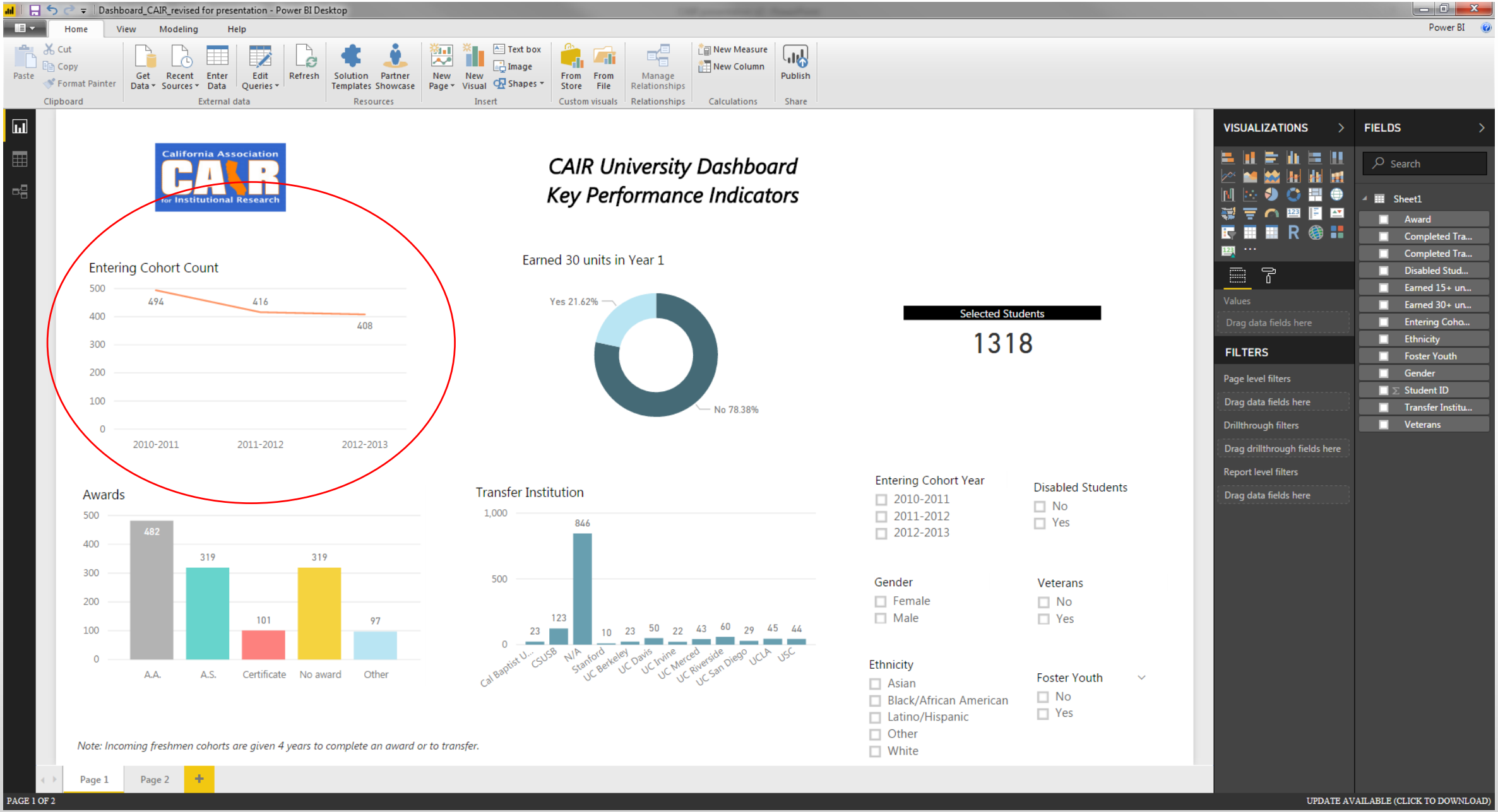
Student ID	Entering Cohort Year	Ethnicity	Gender	Award
12357	2011-2012	Asian	Female	A.S.
12358	2011-2012	Asian	Female	A.S.
12359	2011-2012	Asian	Female	A.S.
12360	2011-2012	Asian	Female	A.S.
12361	2011-2012	Asian	Female	A.S.
12362	2011-2012	Asian	Female	A.S.
12363	2011-2012	Asian	Female	A.S.
12364	2011-2012	Asian	Female	A.S.
12365	2011-2012	Black/African American	Female	A.S.
12366	2011-2012	Black/African American	Female	A.S.
12367	2011-2012	Black/African American	Female	A.S.
12368	2011-2012	Black/African American	Female	A.S.
12369	2011-2012	Black/African American	Female	A.S.
12370	2011-2012	Black/African American	Female	A.S.
12371	2011-2012	Latino/Hispanic	Female	A.A.
12372	2011-2012	Latino/Hispanic	Female	A.A.
12373	2011-2012	Latino/Hispanic	Female	A.A.
12374	2011-2012	Latino/Hispanic	Female	A.A.
12375	2011-2012	Latino/Hispanic	Male	A.A.
12376	2011-2012	Latino/Hispanic	Male	A.A.
12377	2011-2012	Latino/Hispanic	Male	A.A.
12378	2011-2012	Latino/Hispanic	Male	A.A.
12379	2011-2012	Latino/Hispanic	Male	A.A.

Click on Load

In FIELDS section there should now be data fields. Data upload successful!



#1: Line Chart


Dashboard_CAIR_revised for presentation - Power BI Desktop
Home
View
Modeling
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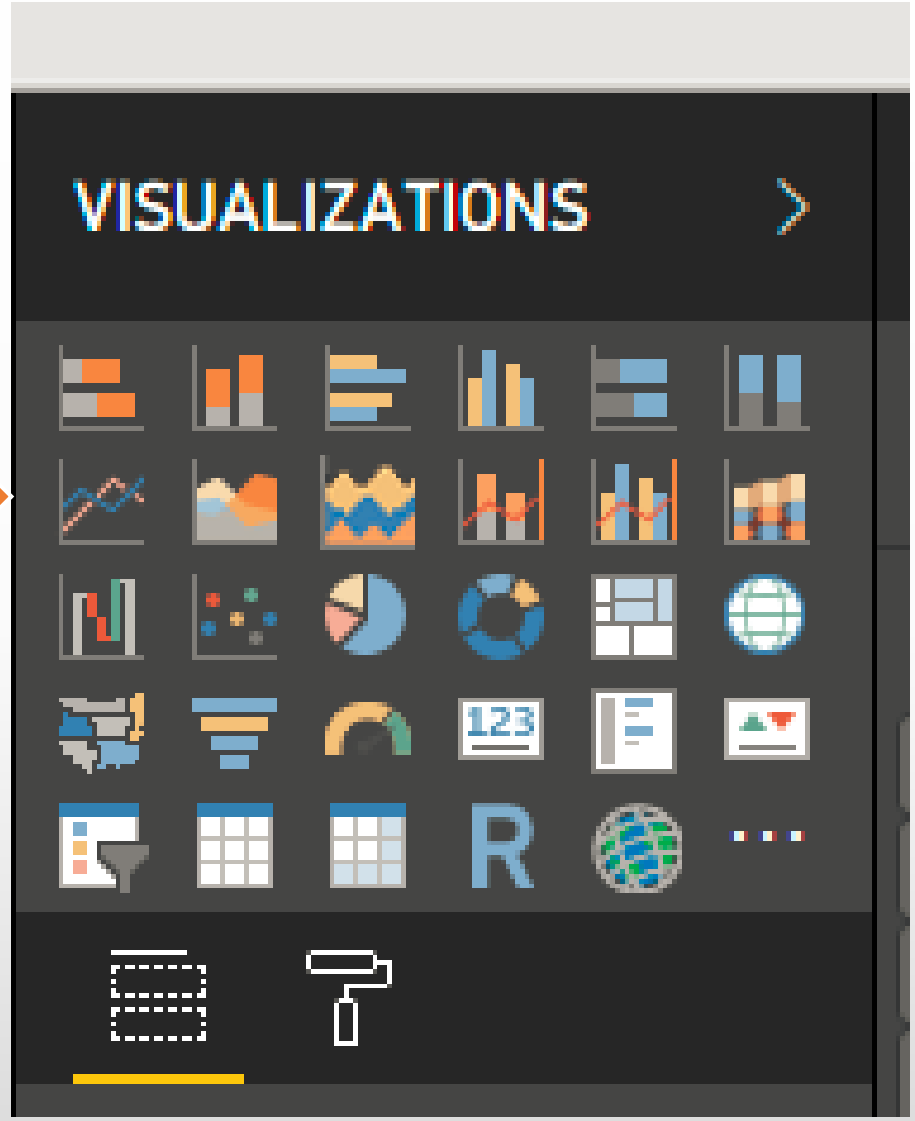
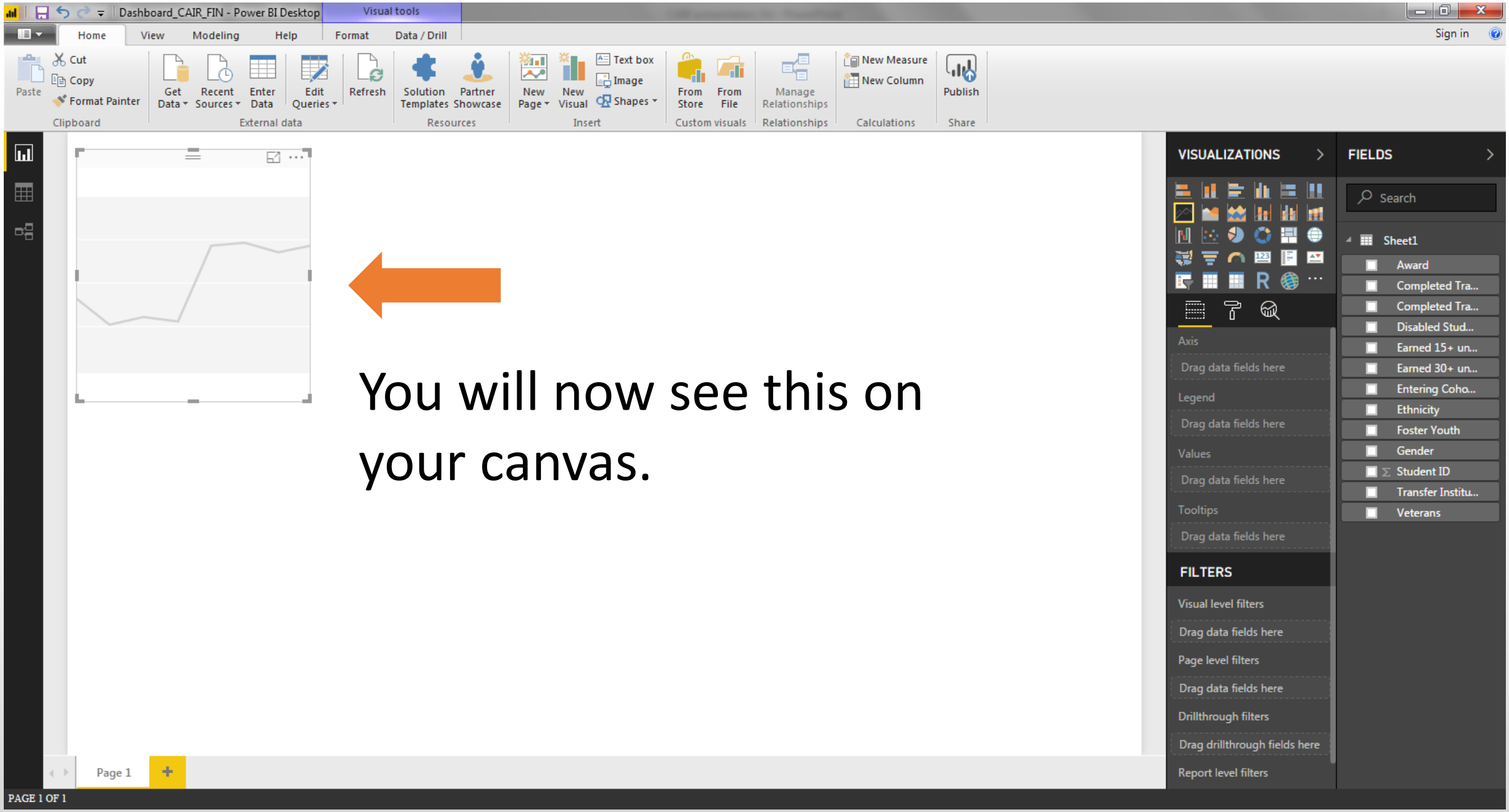
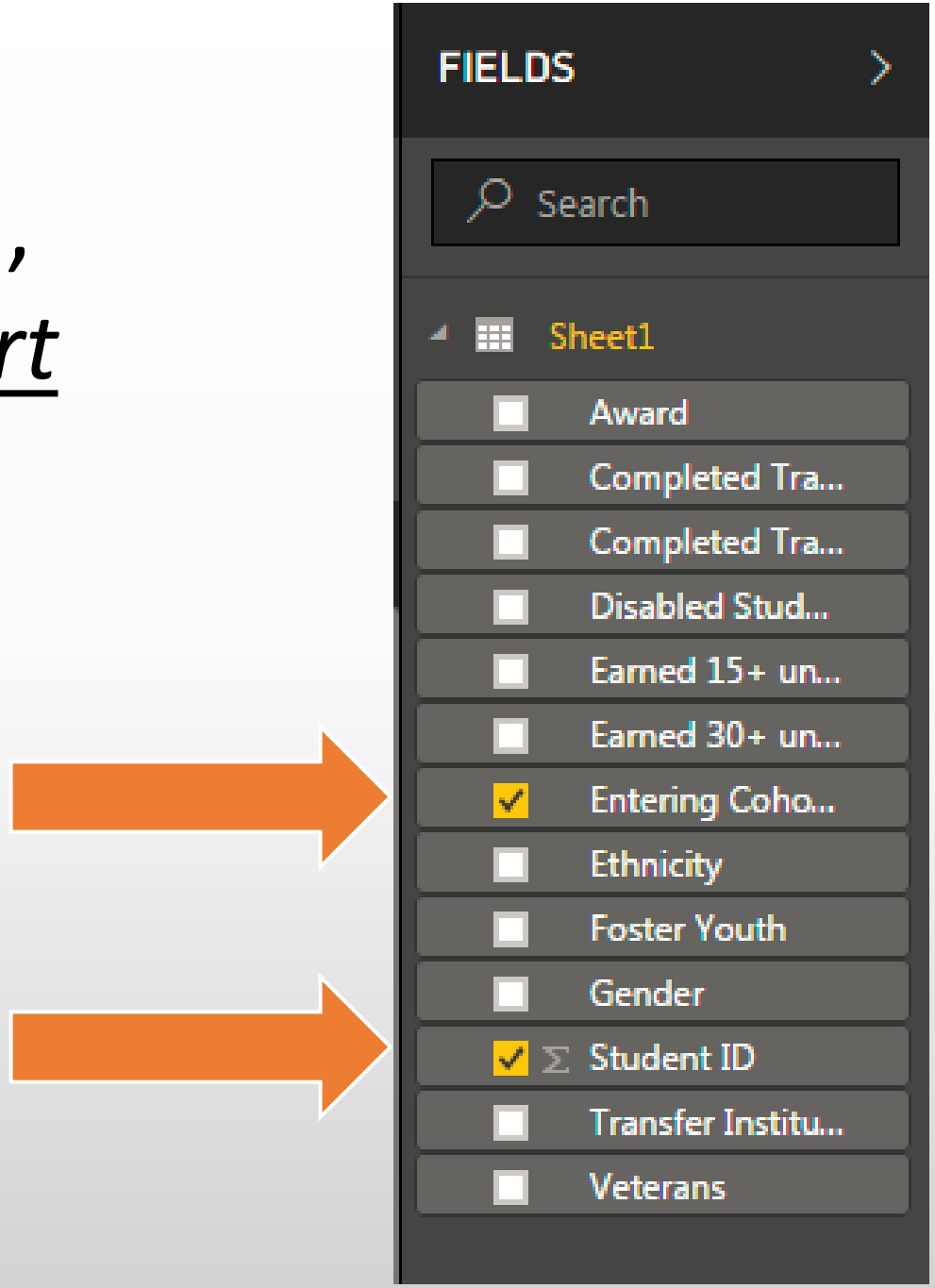
Power BI
Paste
Cut
Copy
Format Painter
Clipboard
Get Data
Recent Sources
Enter Data
Edit Queries
Refresh
External data
Solution Templates
Partner Showcase
Resources
New Page
New Visual
Text box
Image
Shapes
Insert
From Store
From File
Custom visuals
Manage Relationships
Relationships
New Measure
New Column
Calculations
Publish
Share
California Association CAIR for Institutional Research
CAIR University Dashboard
Key Performance Indicators
Entering Cohort Count
500
400
300
200
100
0
494
416
408
2010-2011
2011-2012
2012-2013
Earned 30 units in Year 1
Yes 21.62%
No 78.38%
Selected Students
1318
Awards
500
400
300
200
100
0
482
319
101
319
97
A.A.
A.S.
Certificate
No award
Other
Transfer Institution
1,000
500
0
23
123
846
10
23
50
22
43
60
29
45
44
Cal Baptist U...
CSUSB
N/A
Stanford
UC Berkeley
UC Davis
UC Irvine
UC Merced
UC Riverside
UC San Diego
UCLA
USC
Entering Cohort Year
2010-2011
2011-2012
2012-2013
Disabled Students
No
Yes
Gender
Female
Male
Veterans
No
Yes
Ethnicity
Asian
Black/African American
Latino/Hispanic
Other
White
Foster Youth
No
Yes
Note: Incoming freshmen cohorts are given 4 years to complete an award or to transfer.
Page 1
Page 2
PAGE 1 OF 2
VISUALIZATIONS
Values
Drag data fields here
FILTERS
Page level filters
Drag data fields here
Drillthrough filters
Drag drillthrough fields here
Report level filters
Drag data fields here
FIELDS
Search
Sheet1
Award
Completed Tra...
Completed Tra...
Disabled Stud...
Earned 15+ un...
Earned 30+ un...
Entering Coho...
Ethnicity
Foster Youth
Gender
Student ID
Transfer Institu...
Veterans
UPDATE AVAILABLE (CLICK TO DOWNLOAD)

Click on *Line Chart*




Dashboard_CAIR_FIN - Power BI Desktop
Visual tools
Home
View
Modeling
Help
Format
Data / Drill
Sign in
Cut
Copy
Format Painter
Paste
Clipboard
Get Data
Recent Sources
Enter Data
Edit Queries
Refresh
External data
Solution Templates
Partner Showcase
Resources
New Page
New Visual
Text box
Image
Shapes
Insert
From Store
From File
Custom visuals
Manage Relationships
Relationships
New Measure
New Column
Calculations
Publish
Share
You will now see this on your canvas.
VISUALIZATIONS
Axis
Drag data fields here
Legend
Drag data fields here
Values
Drag data fields here
Tooltips
Drag data fields here
FILTERS
Visual level filters
Drag data fields here
Page level filters
Drag data fields here
Drillthrough filters
Drag drillthrough fields here
Report level filters
FIELDS
Search
Sheet1
Award
Completed Tra...
Completed Tra...
Disabled Stud...
Earned 15+ un...
Earned 30+ un...
Entering Coho...
Ethnicity
Foster Youth
Gender
Student ID
Transfer Institu...
Veterans
Page 1
PAGE 1 OF 1

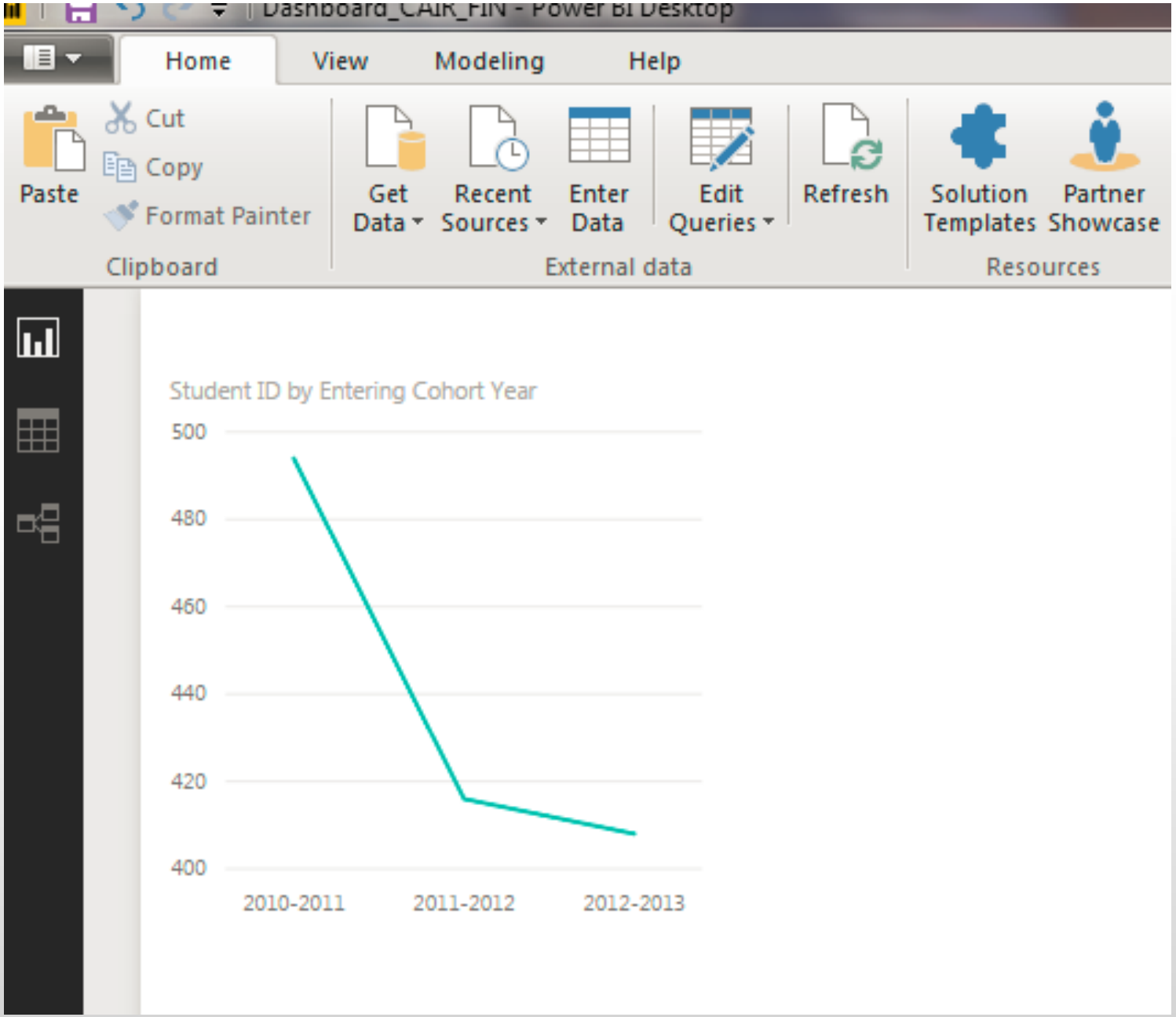
In the FIELDS section, select *Entering Cohort* and *StudentID*.



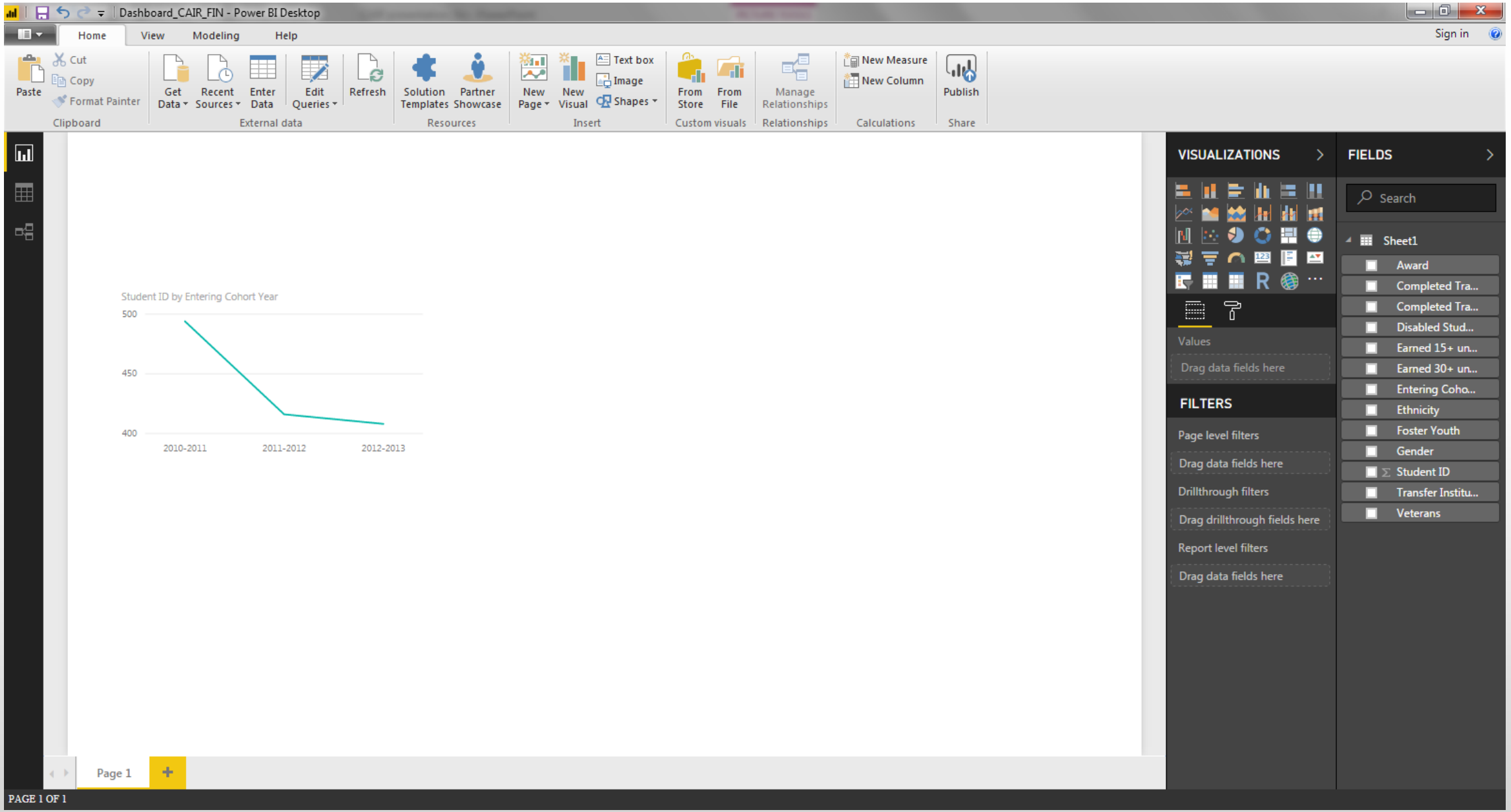
You should now see this line chart on your canvas.

Adjust size and location on canvas.*

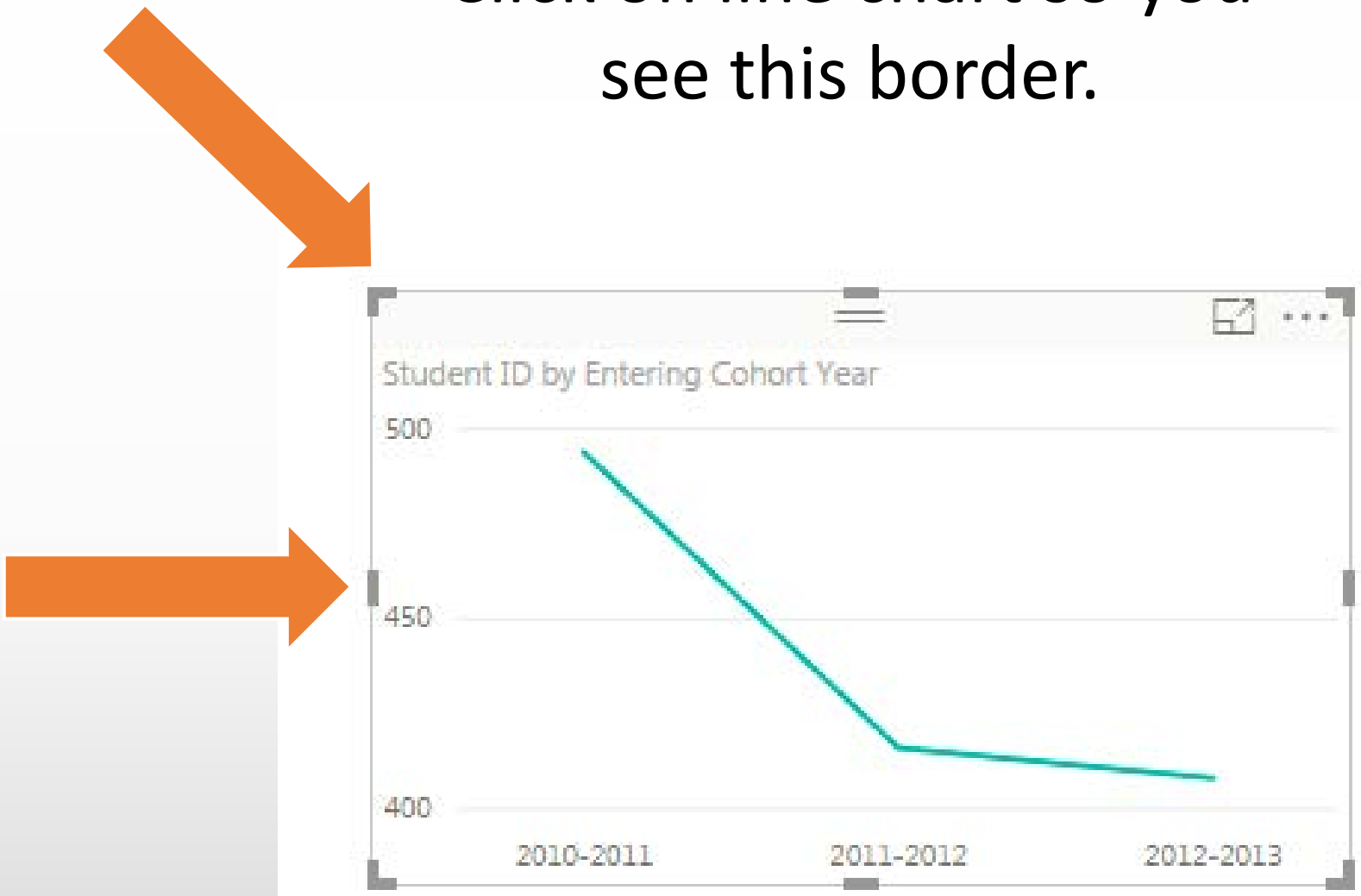
* Do this for remaining items you will add to canvas.



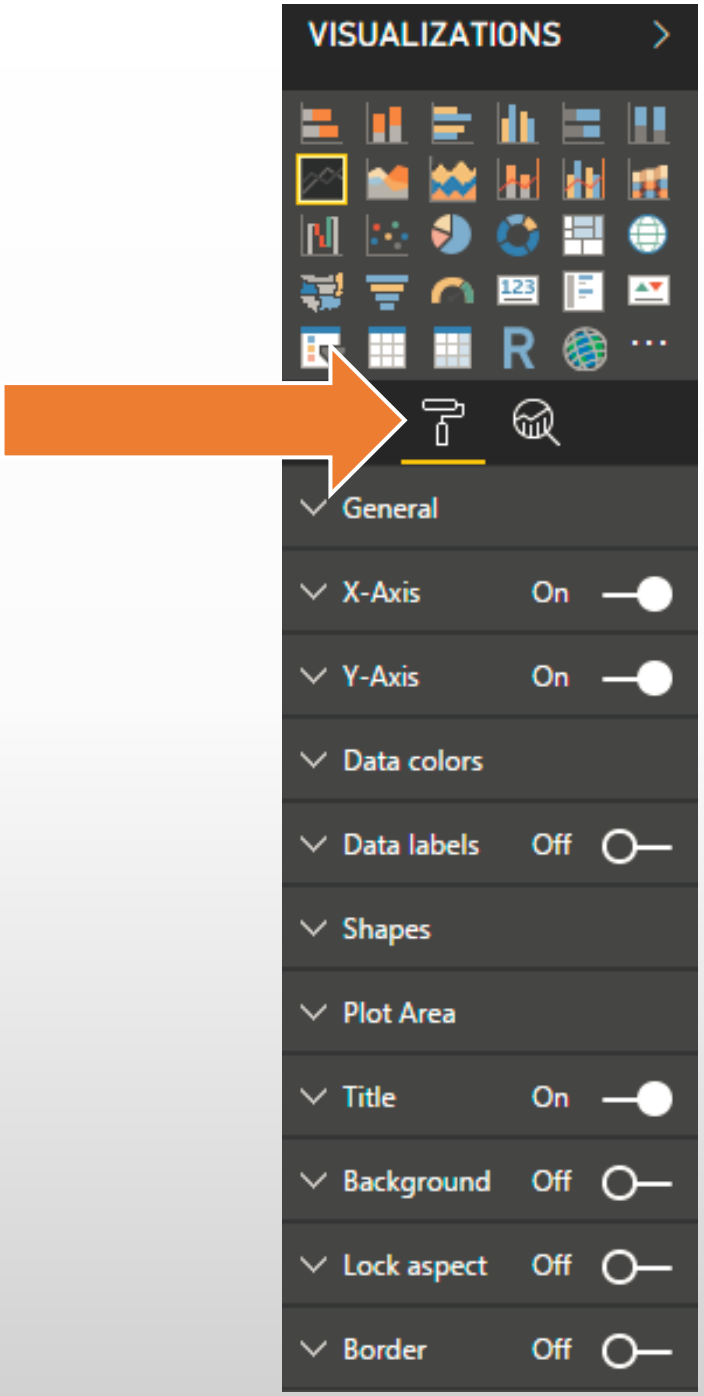
Line chart should look like this.



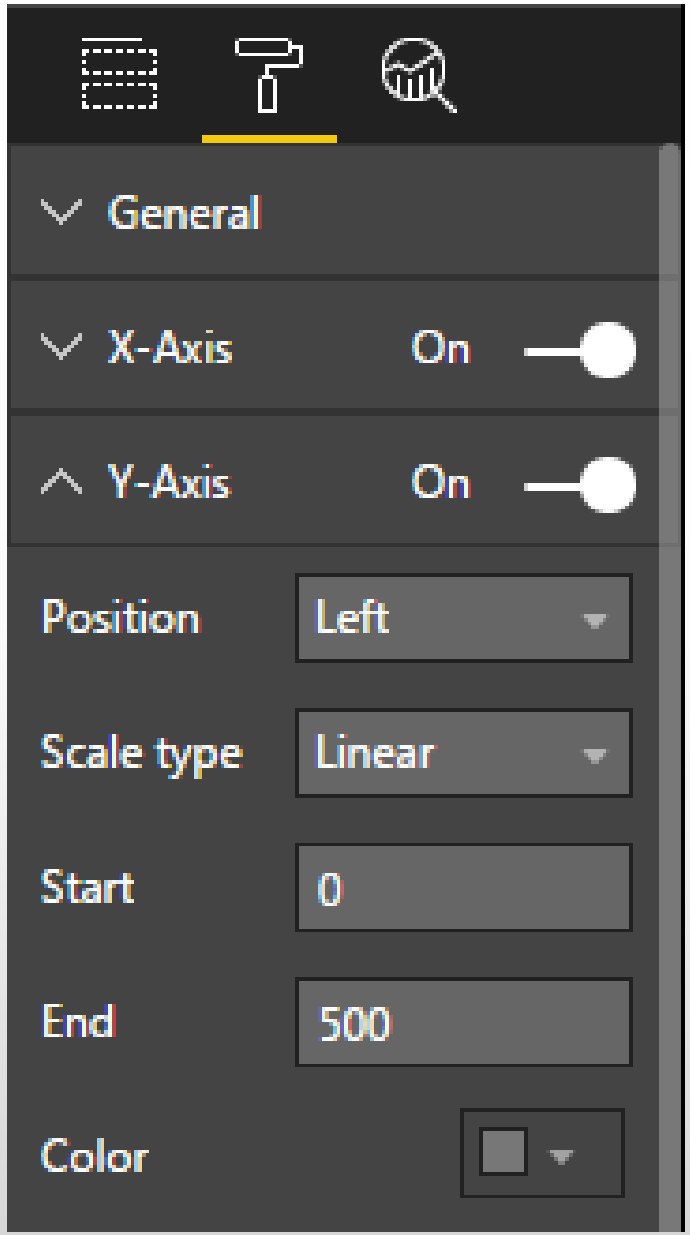
Click on line chart so you see this border.



Under *Visualizations* section, click on the *Paint Roller.*



Click on Y-Axis:
- Since our line chart data ranges from 0 to 500, we are going to put 0 in *Start* and 500 *End*.



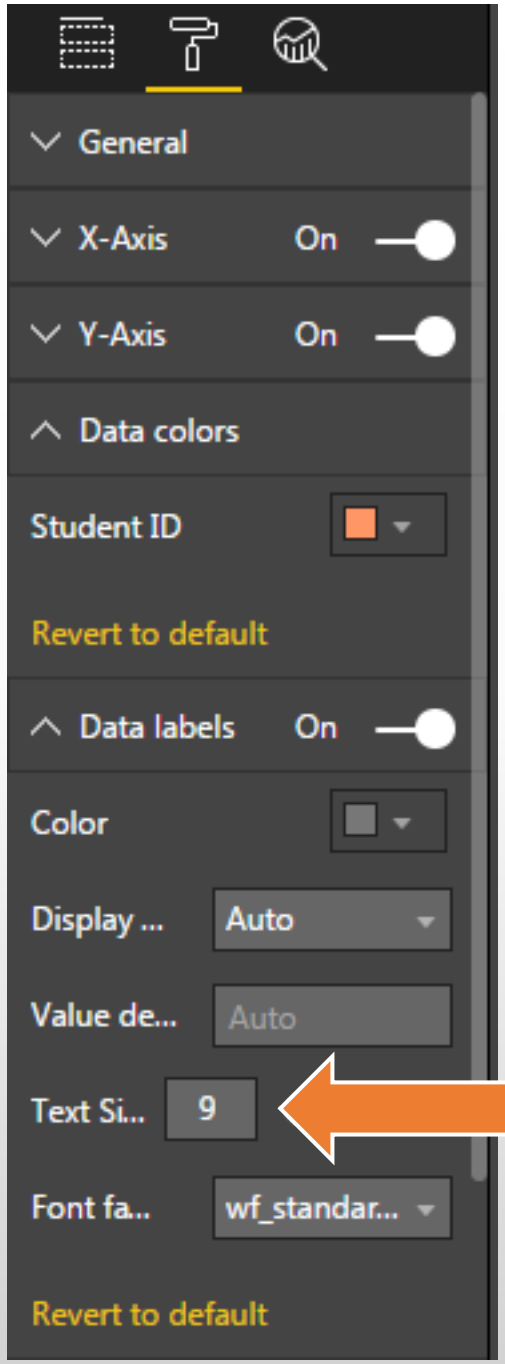
This step is important since it keeps the Y Axis of the chart from changing when criteria is selected on the dashboard.

Data colors:

- Pick a color for line in chart.

Data labels:

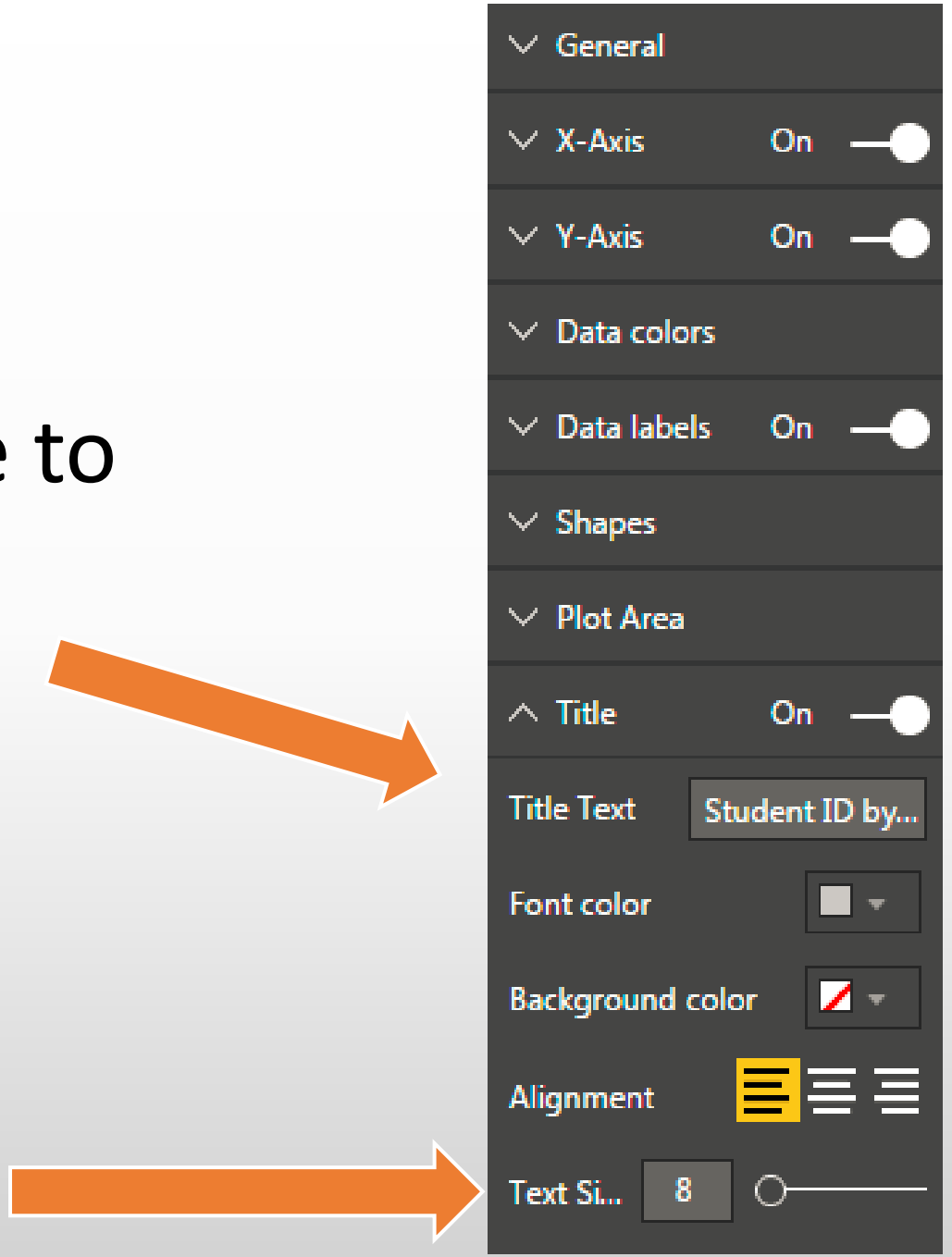
Turn On



Under *Data Labels* you can also change color and size of text for the data labels.

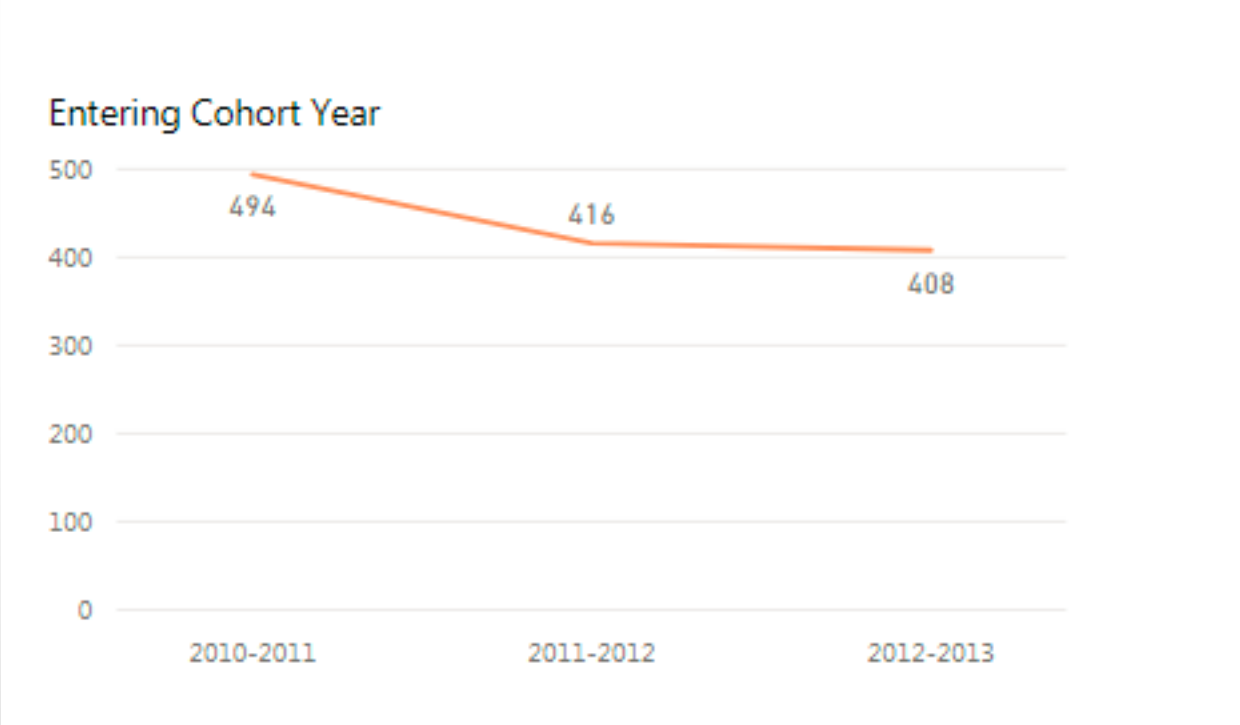
Title Text: Change to *Entering Cohort Count*.

Text Size: You can change text size here for title. I select 11 for chart titles.

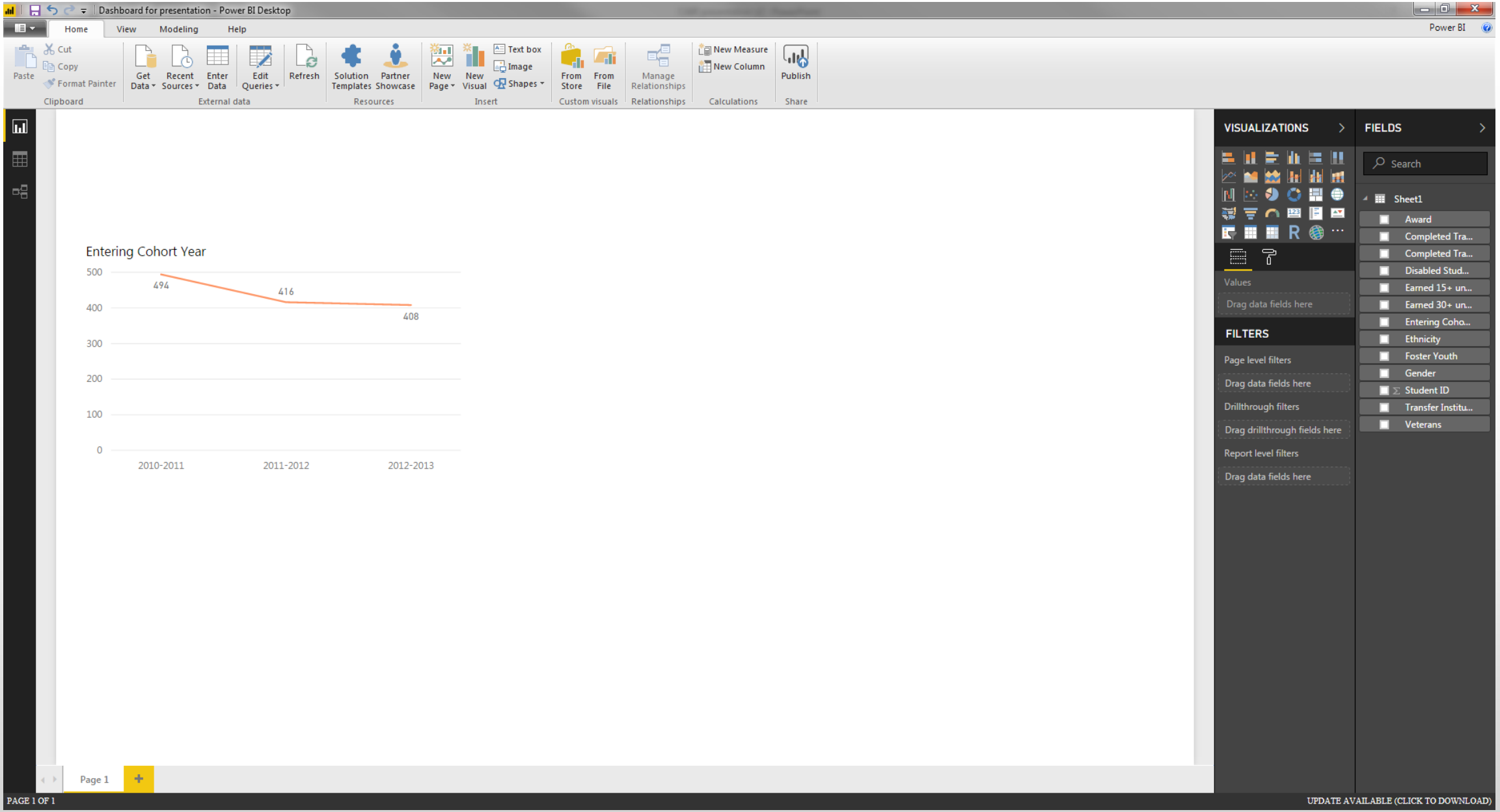


Font Color: You can change color of text for the title.

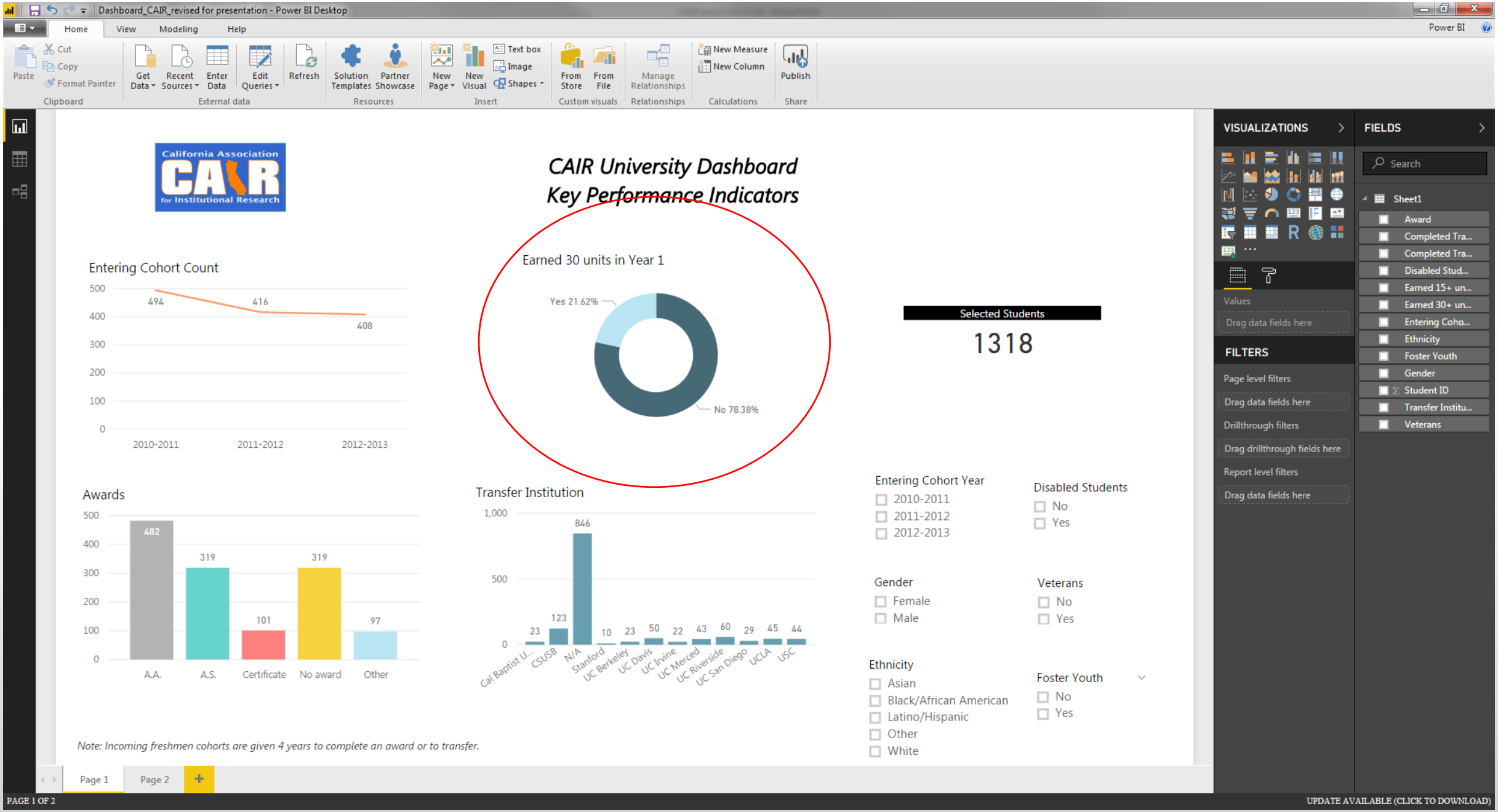
Your line chart should look like this.



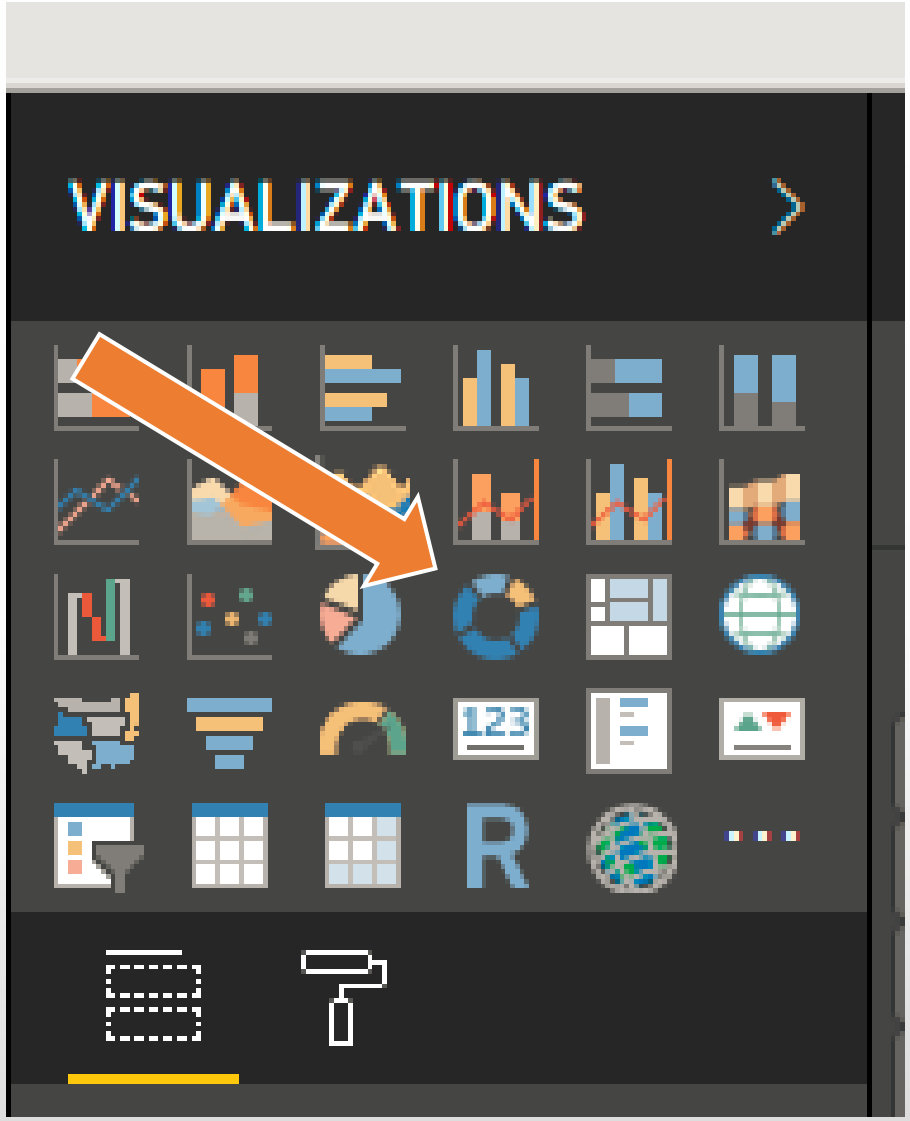
The line chart and canvas should look like this now.



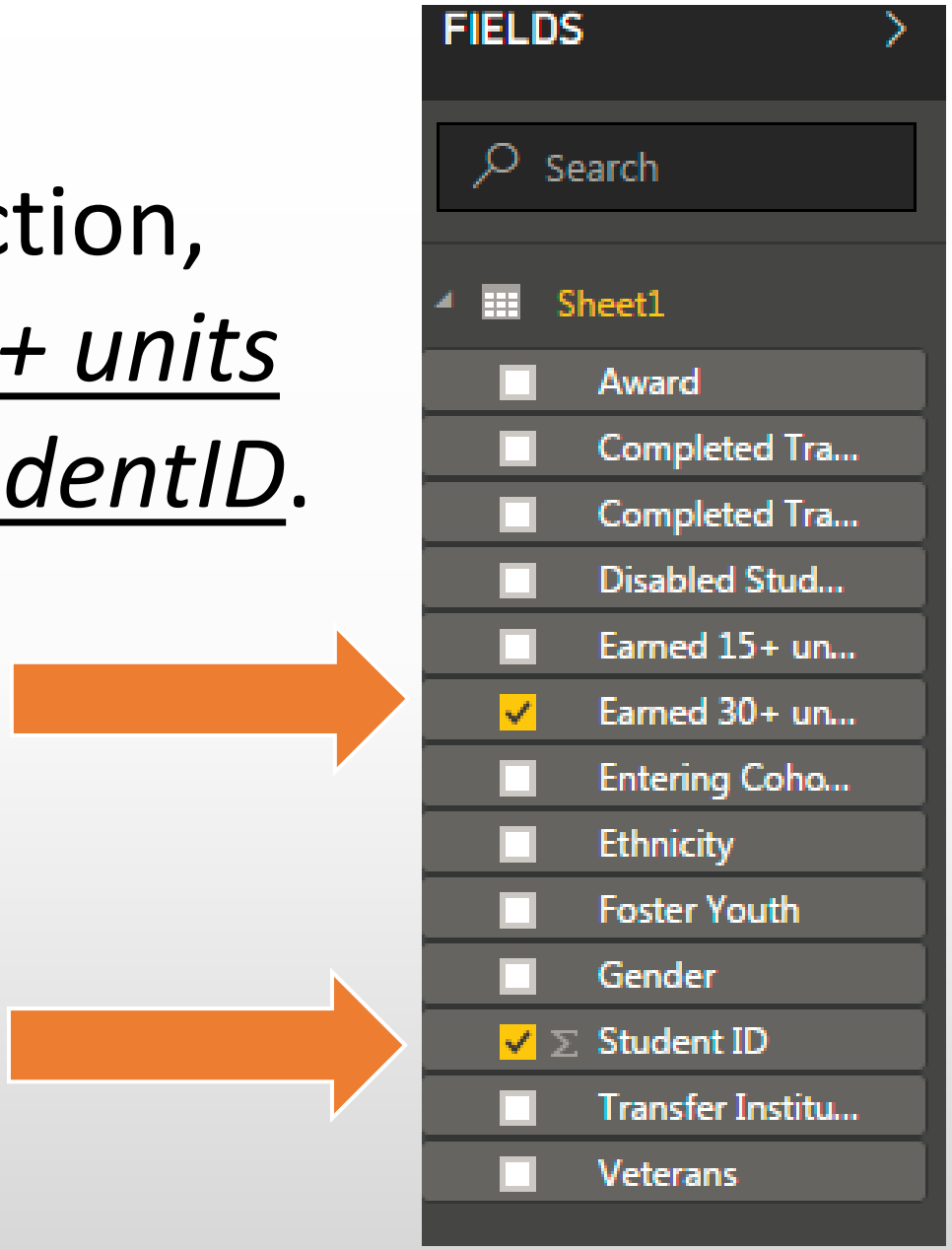
#2: Donut Chart



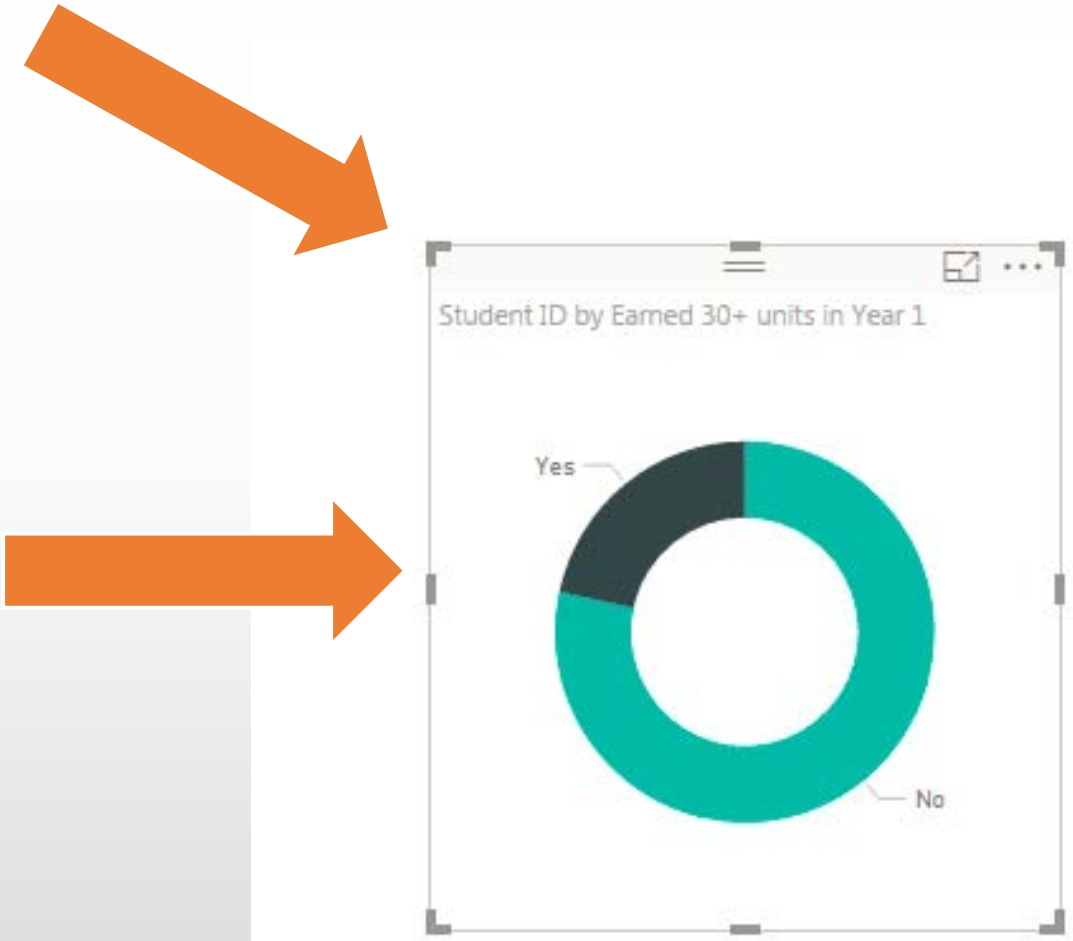
Click on
Donut Chart



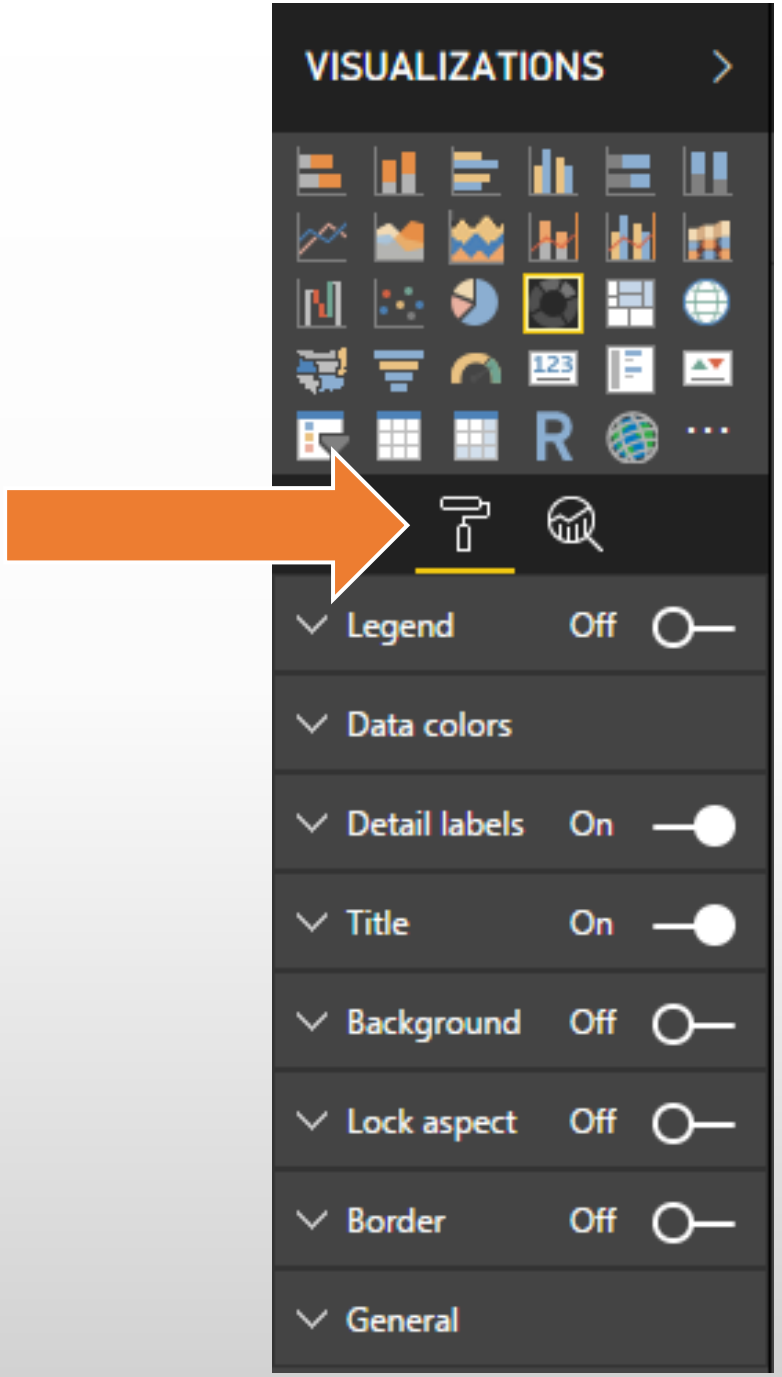
In the FIELDS section, select *Earned 30+ units in Year 1* and *StudentID*.



Click on Donut Chart so you see this border.

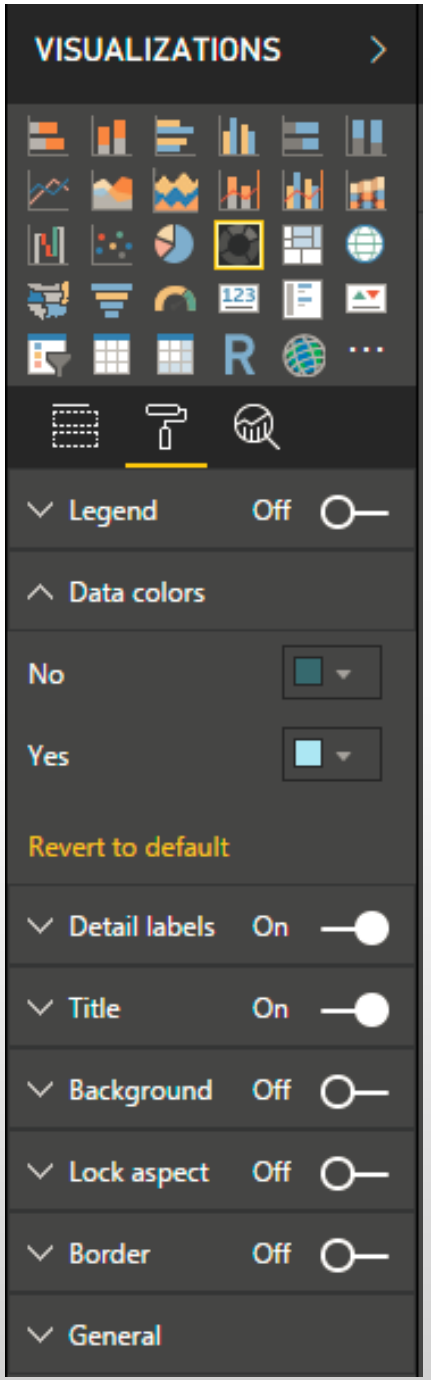


Under Visualizations section, click on the *Paint Roller.*

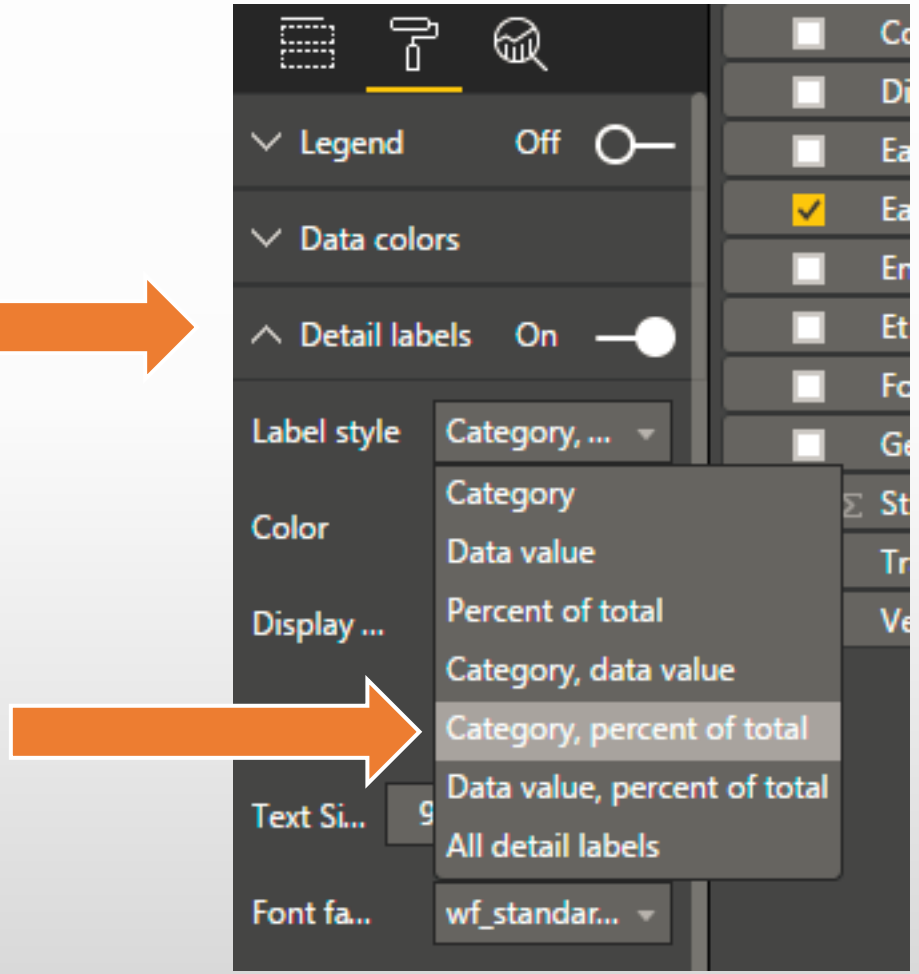


Data colors:

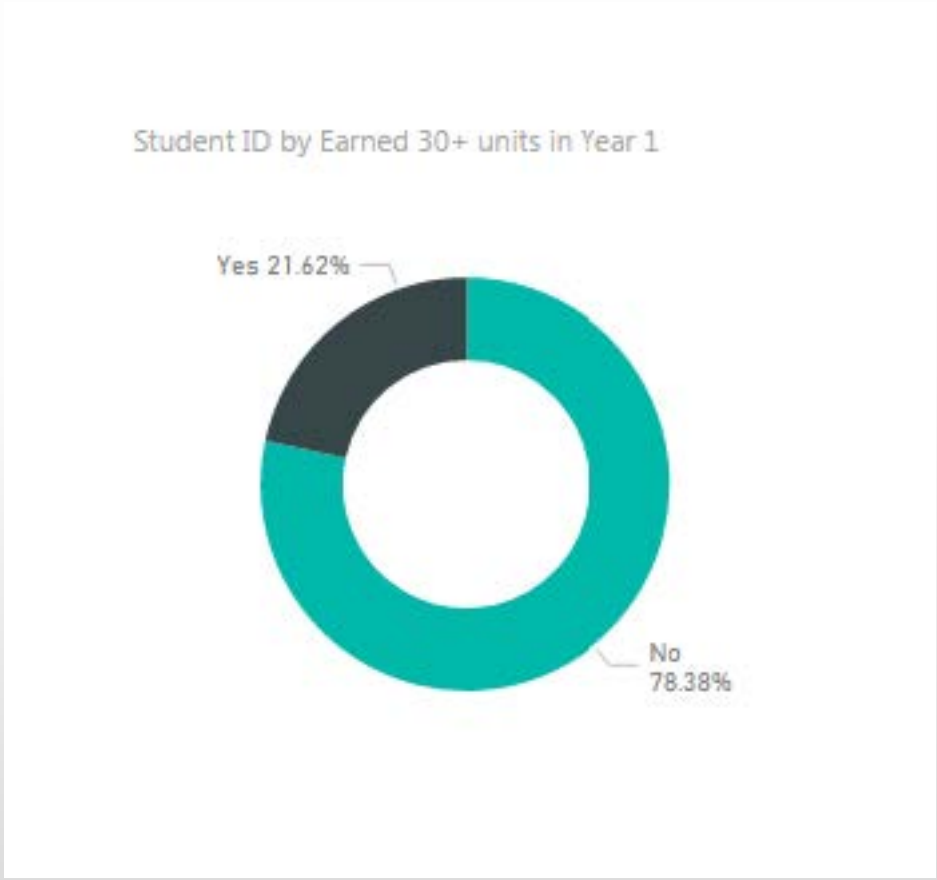
- Pick two colors.



Under Label Style, select *Category, Percent of Total*. This option will provide the percent totals for Yes and No responses.

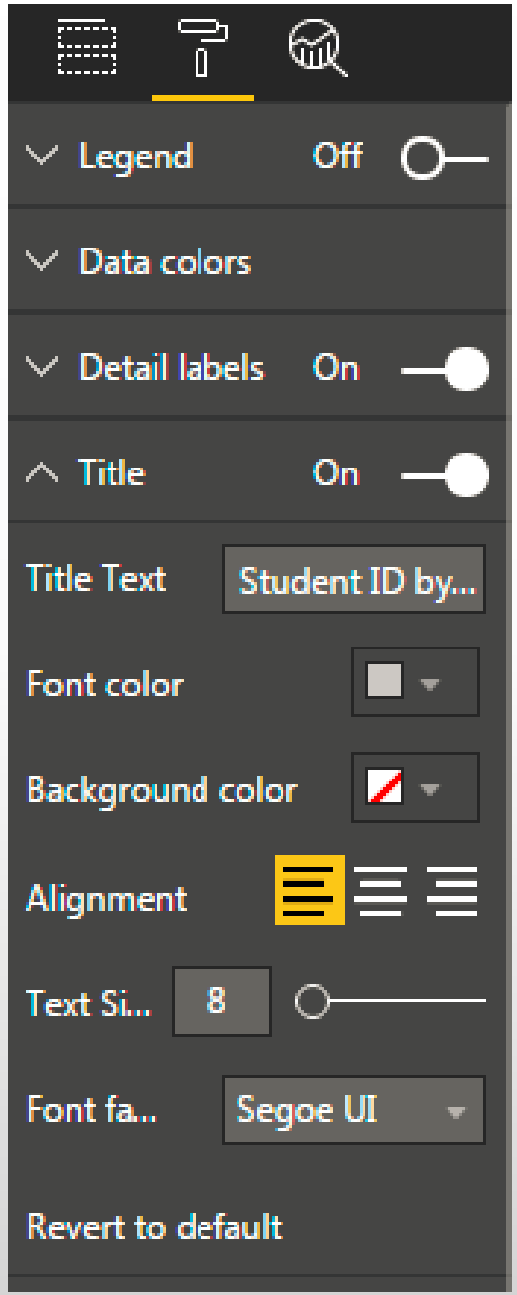


Your Donut Chart should look like this with new labels.



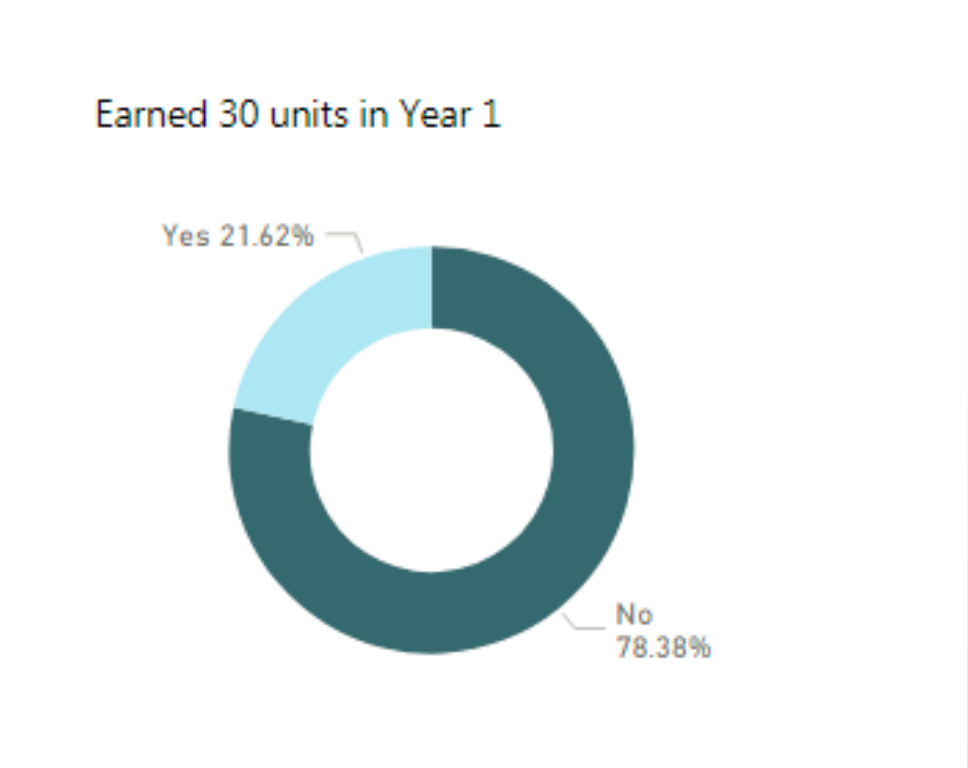
Title Text: Change to *Earned 30 units in Year 1*.

Text Size: You can change text size here for title. I select 11 for chart titles.

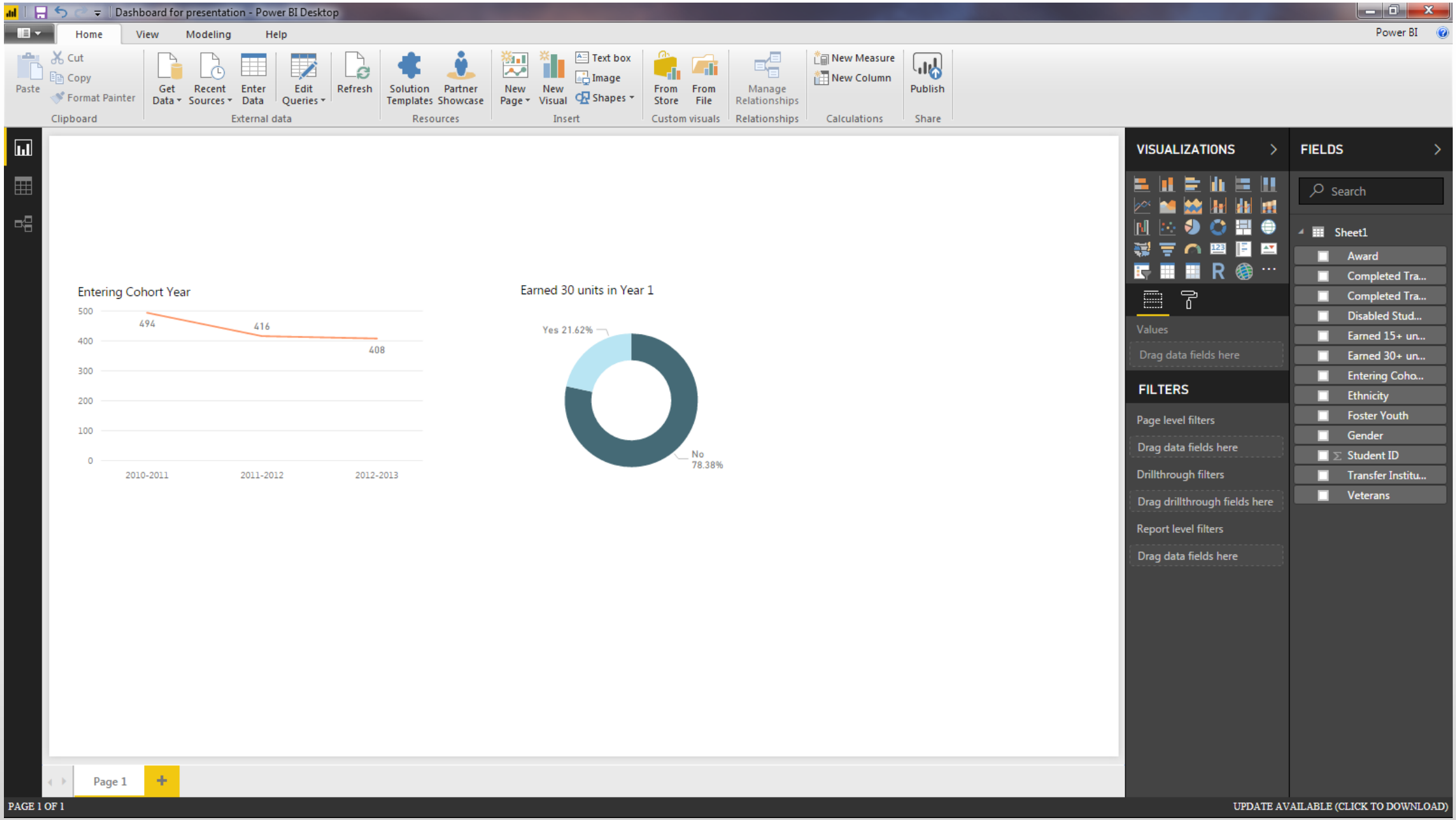


Font Color: You can change font color of the title.

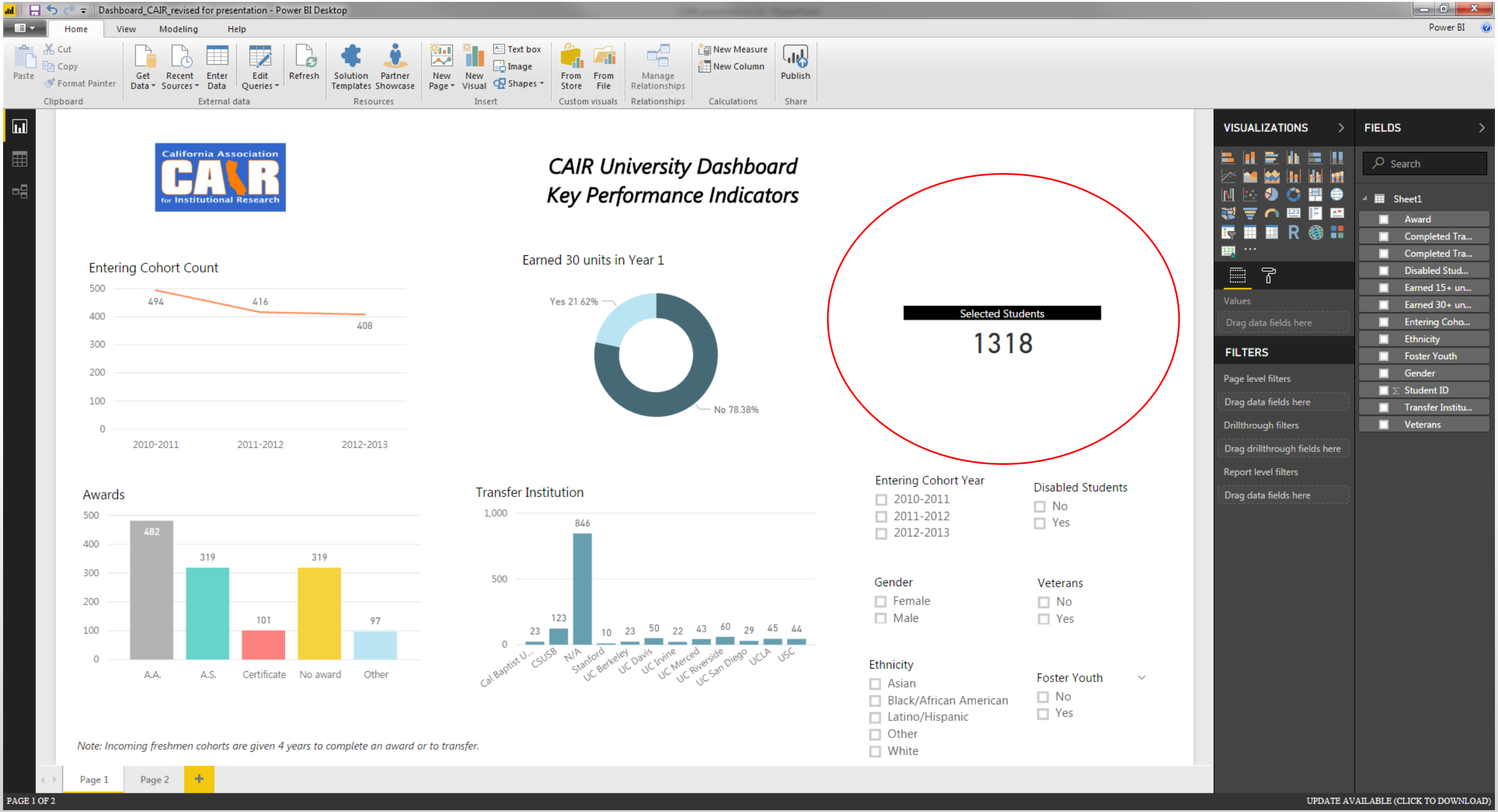
Your donut chart should look like this.



The donut chart and canvas should look like this now.



#3: Card


Dashboard_CAIR_revised for presentation - Power BI Desktop
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Stanford
UC Berkeley
UC Davis
UC Irvine
UC Merced
UC Riverside
UC San Diego
UCLA
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Entering Cohort Year
2010-2011
2011-2012
2012-2013
Disabled Students
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Latino/Hispanic
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Foster Youth
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Note: Incoming freshmen cohorts are given 4 years to complete an award or to transfer.
Page 1
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Drag drillthrough fields here
Report level filters
Drag data fields here
FIELDS
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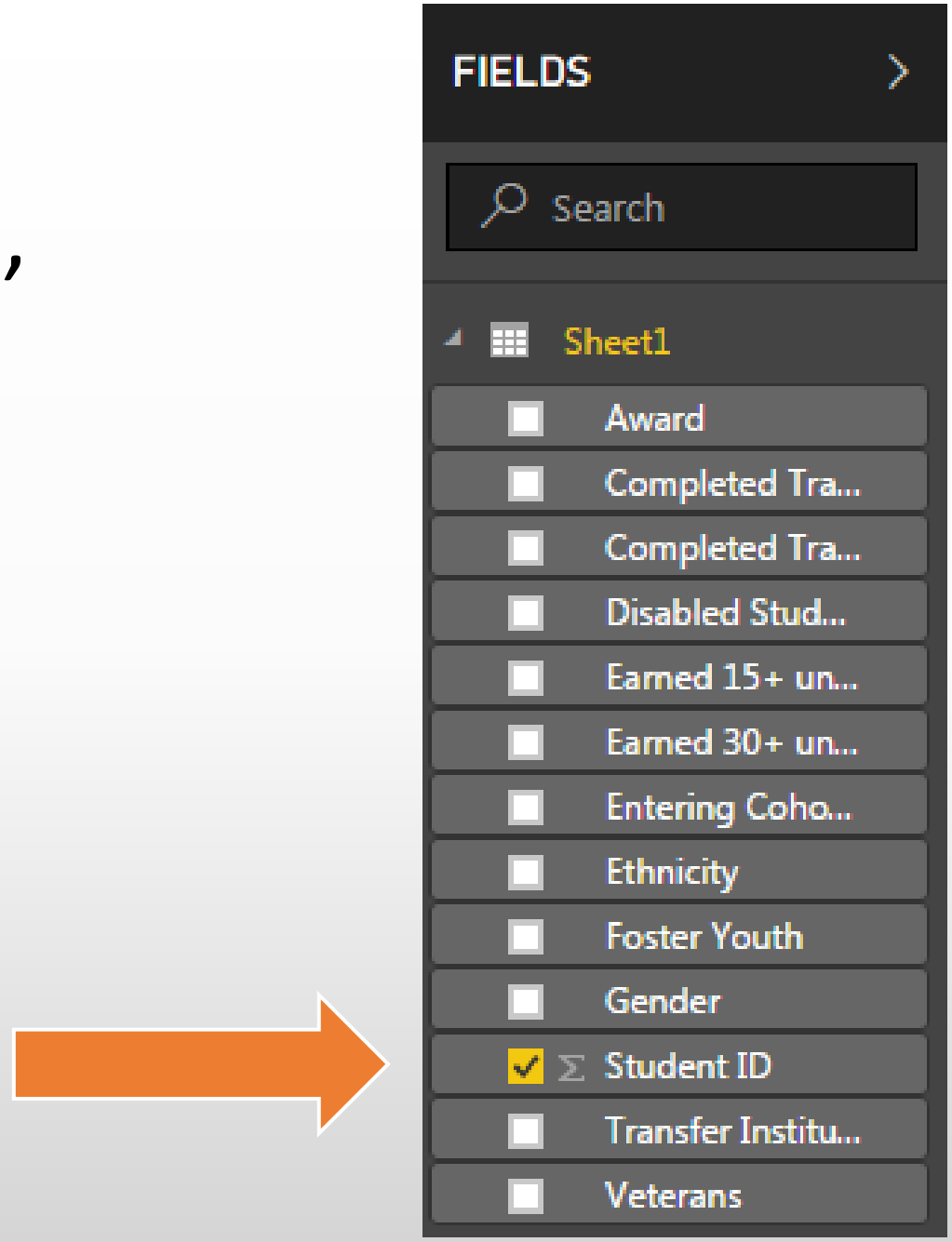
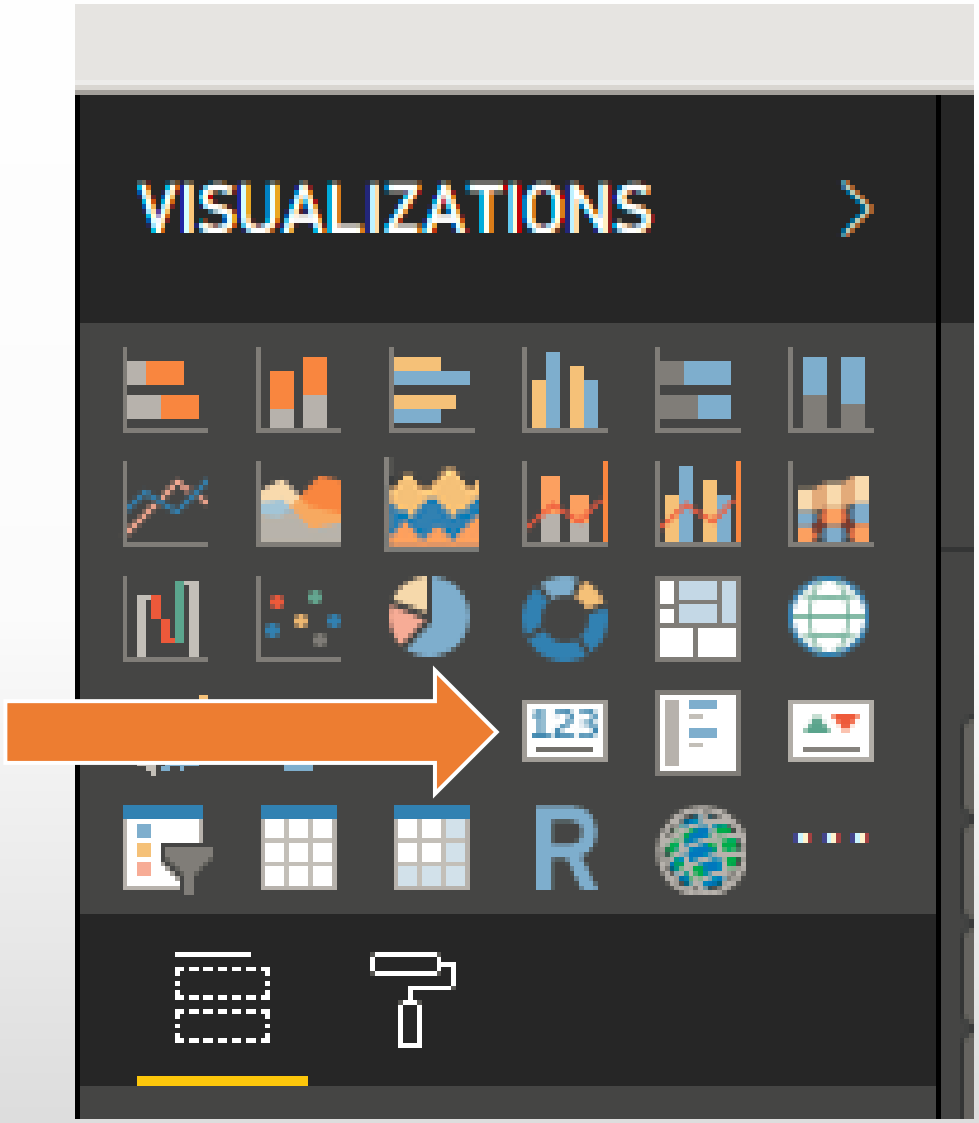
Award
Completed Tra...
Completed Tra...
Disabled Stud...
Earned 15+ un...
Earned 30+ un...
Entering Coho...
Ethnicity
Foster Youth
Gender
Student ID
Transfer Institu...
Veterans
UPDATE AVAILABLE (CLICK TO DOWNLOAD)

The value of using a card in your dashboard is its ability to inform the user at all times how many students have been selected according to the different criteria selected in the dashboard .

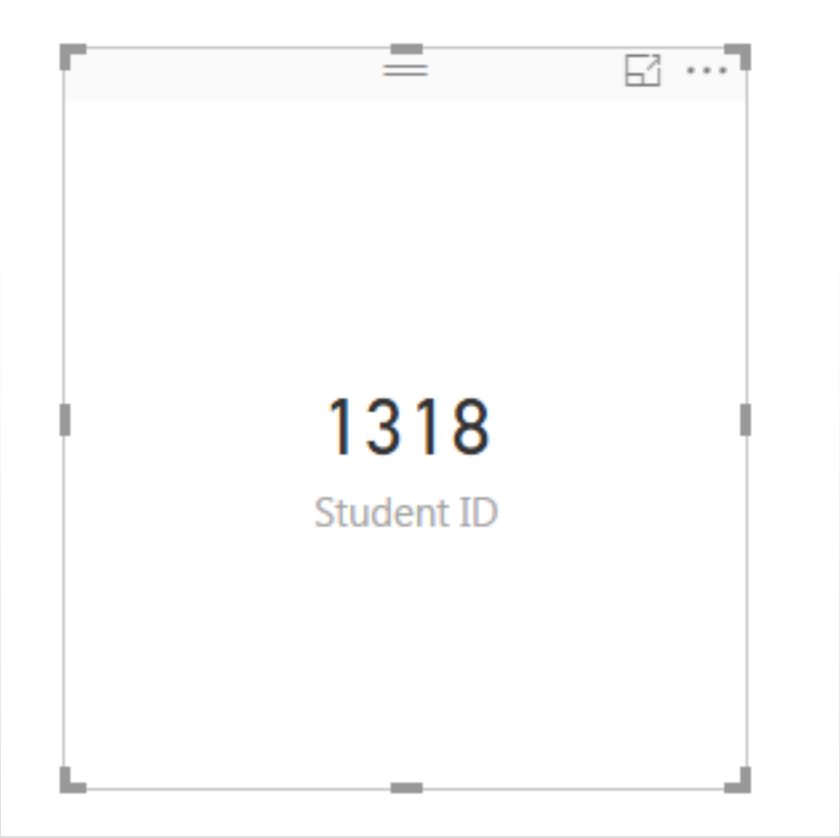
In the FIELDS section, click *StudentID*.



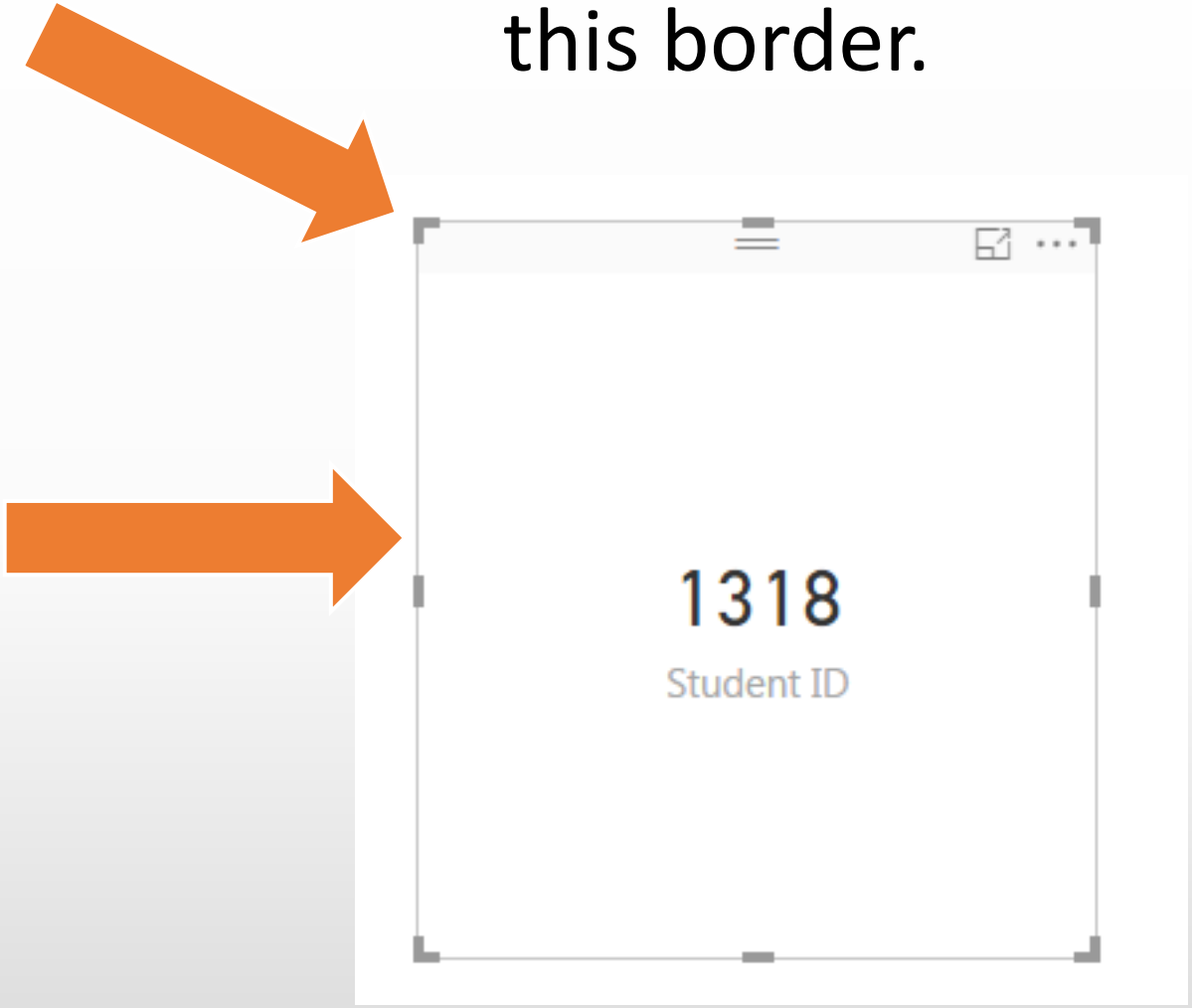
Click on *Card*



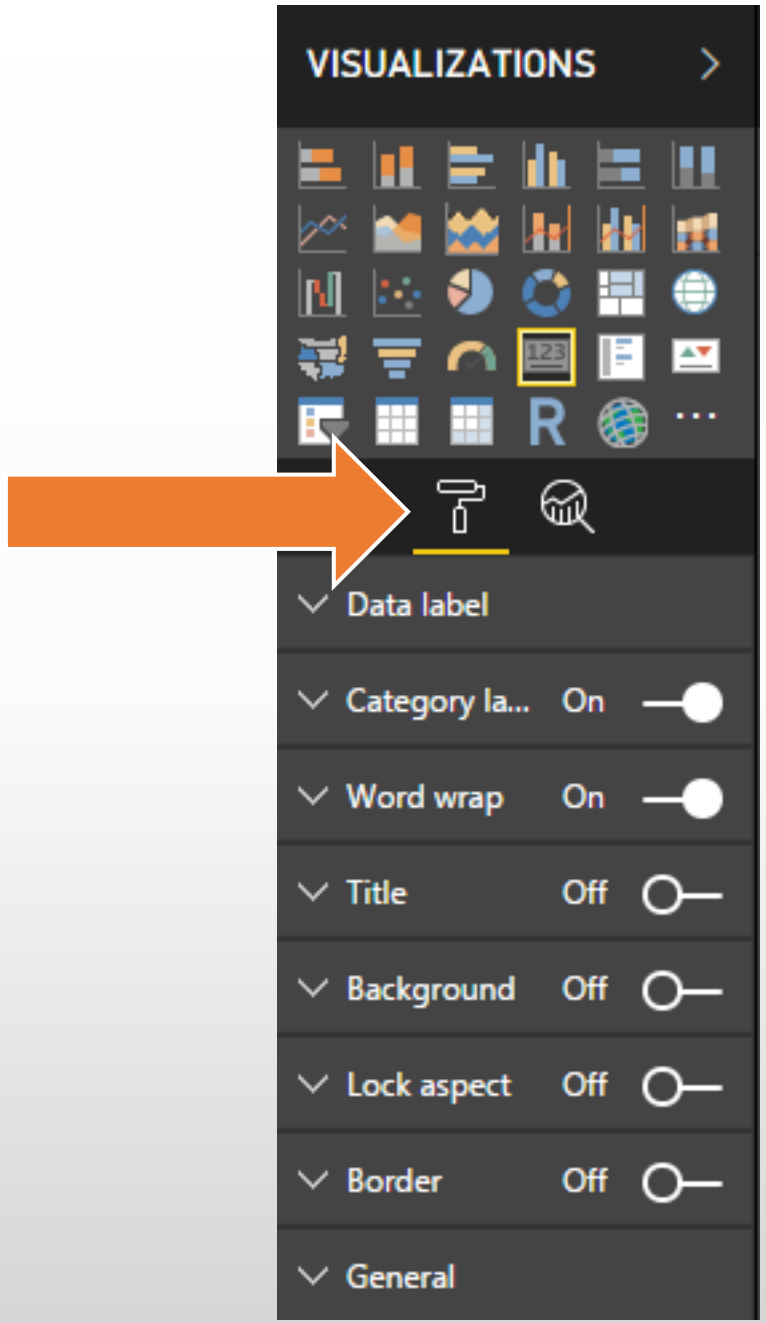
Your Card should look like this.



Click on Card so you see this border.

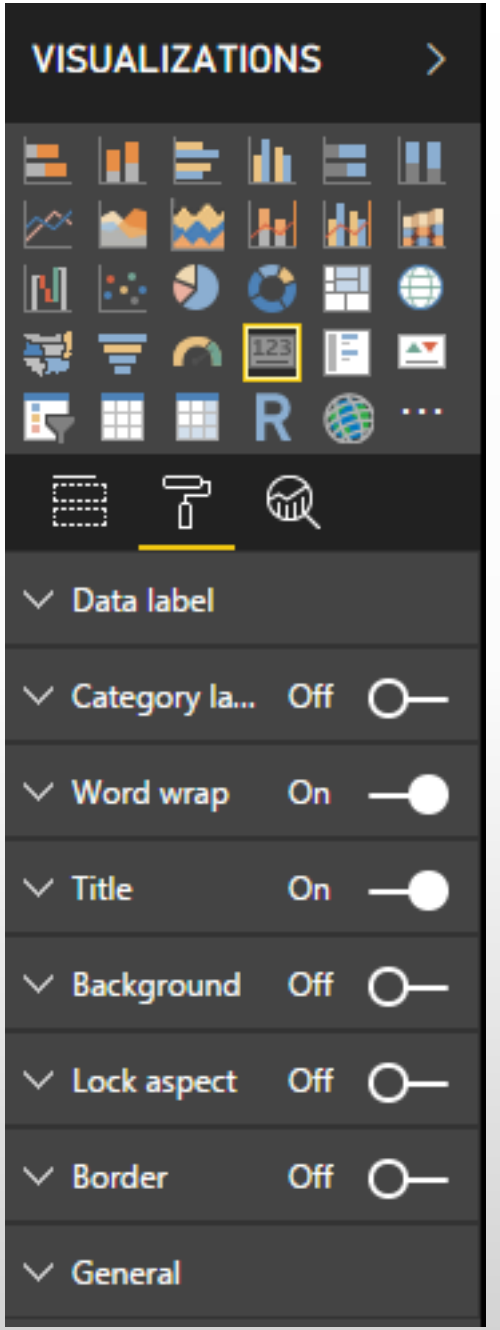


Under Visualizations section, click on the *Paint Roller.*



Turn *Category Label off*

Turn *Title* on

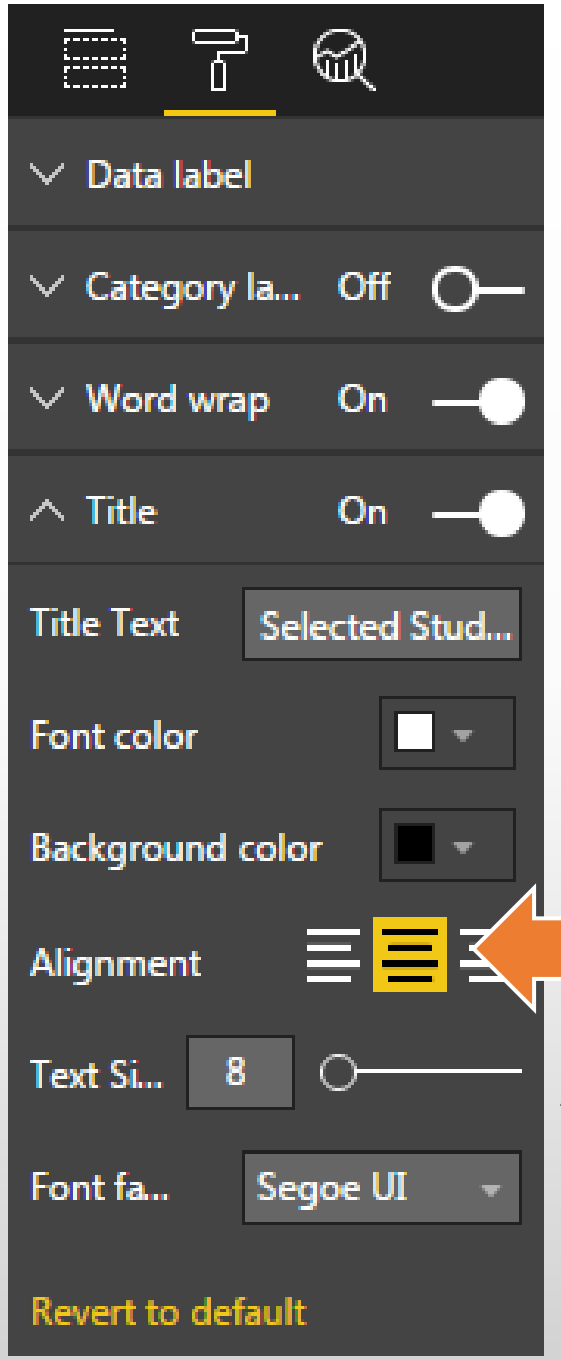


Title Text: Change to *Selected Students.*

Font Color: White

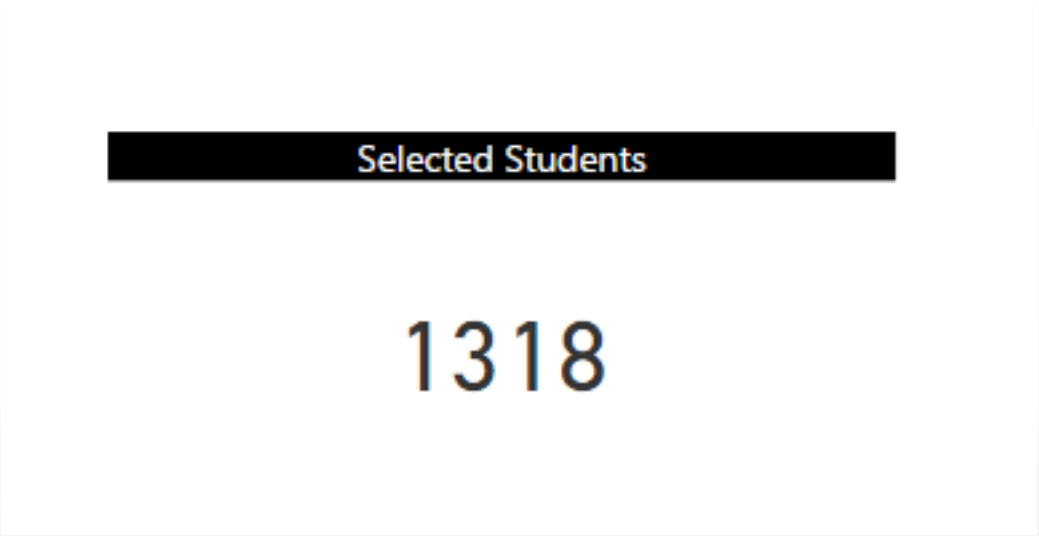
Background Color: Black

Text Size: You can change text size here for title.



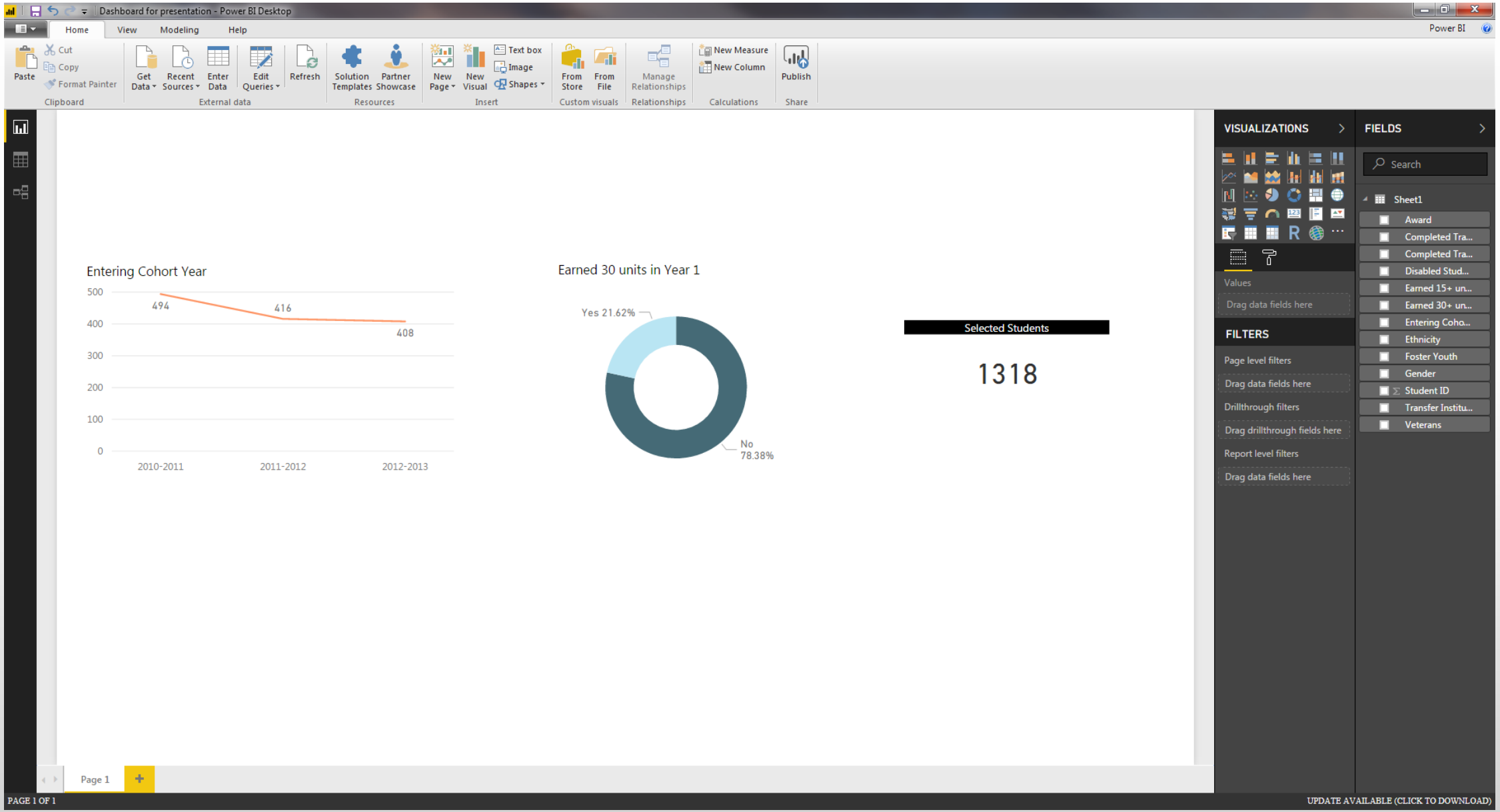
Alignment: Center

Your card should look like this.

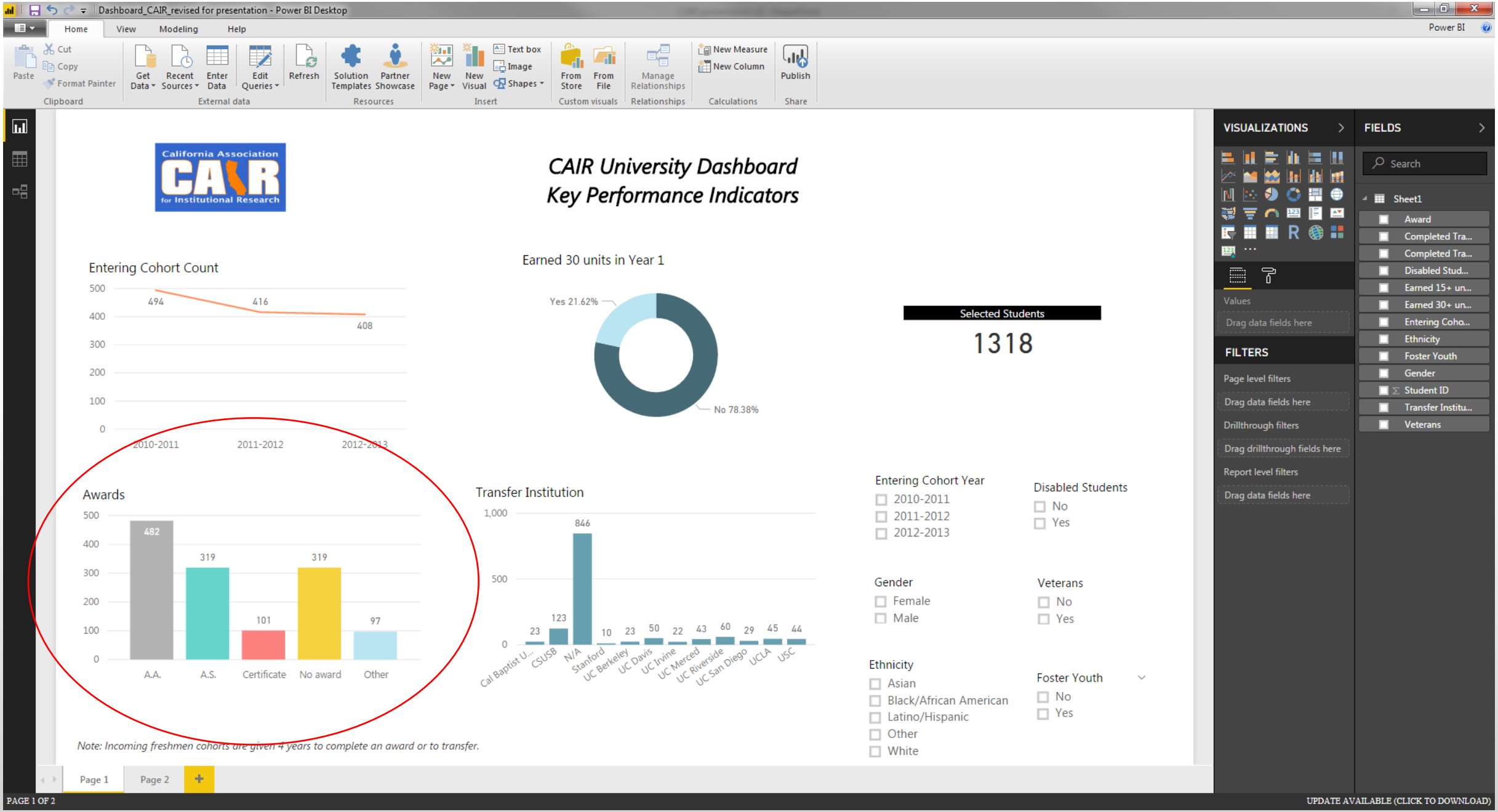


The benefit of having white font with a black background (for title: selected students) is it communicates to user this is an important number.

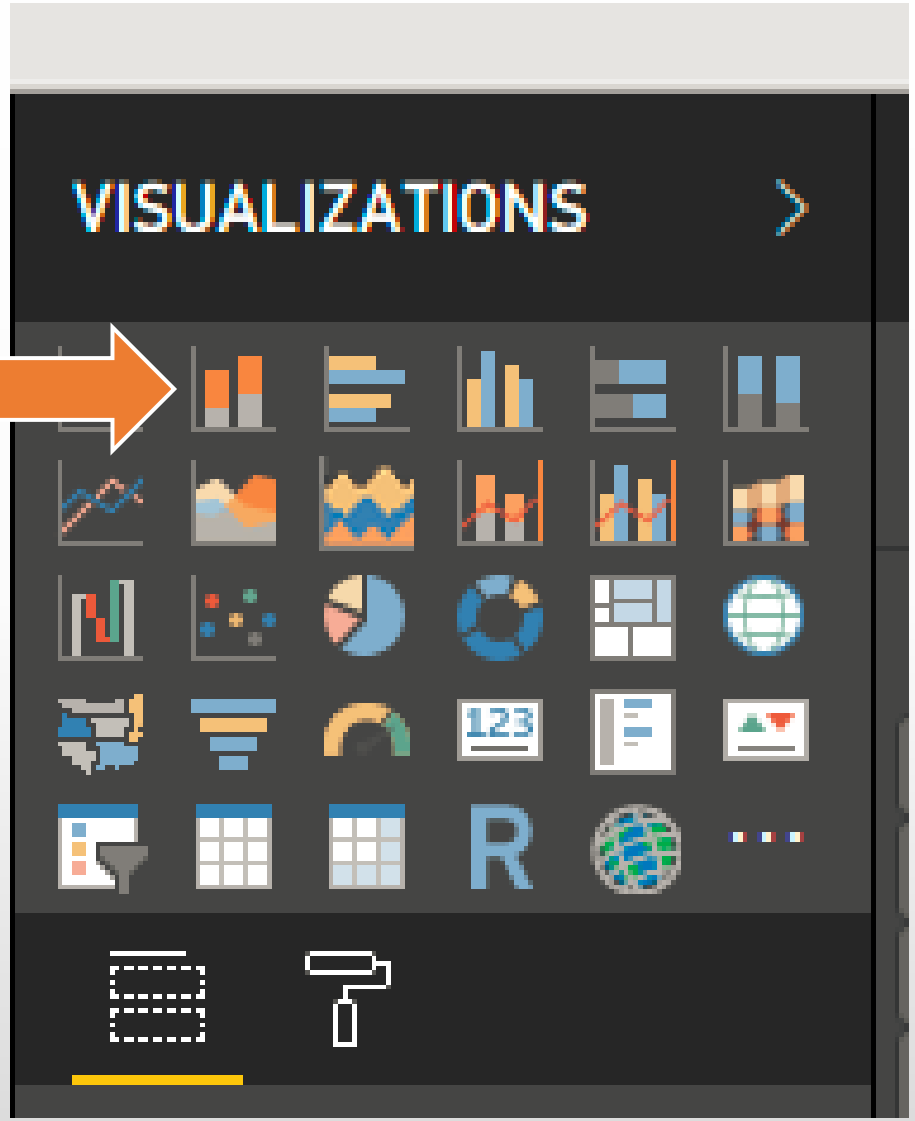
The card and canvas should look like this now.



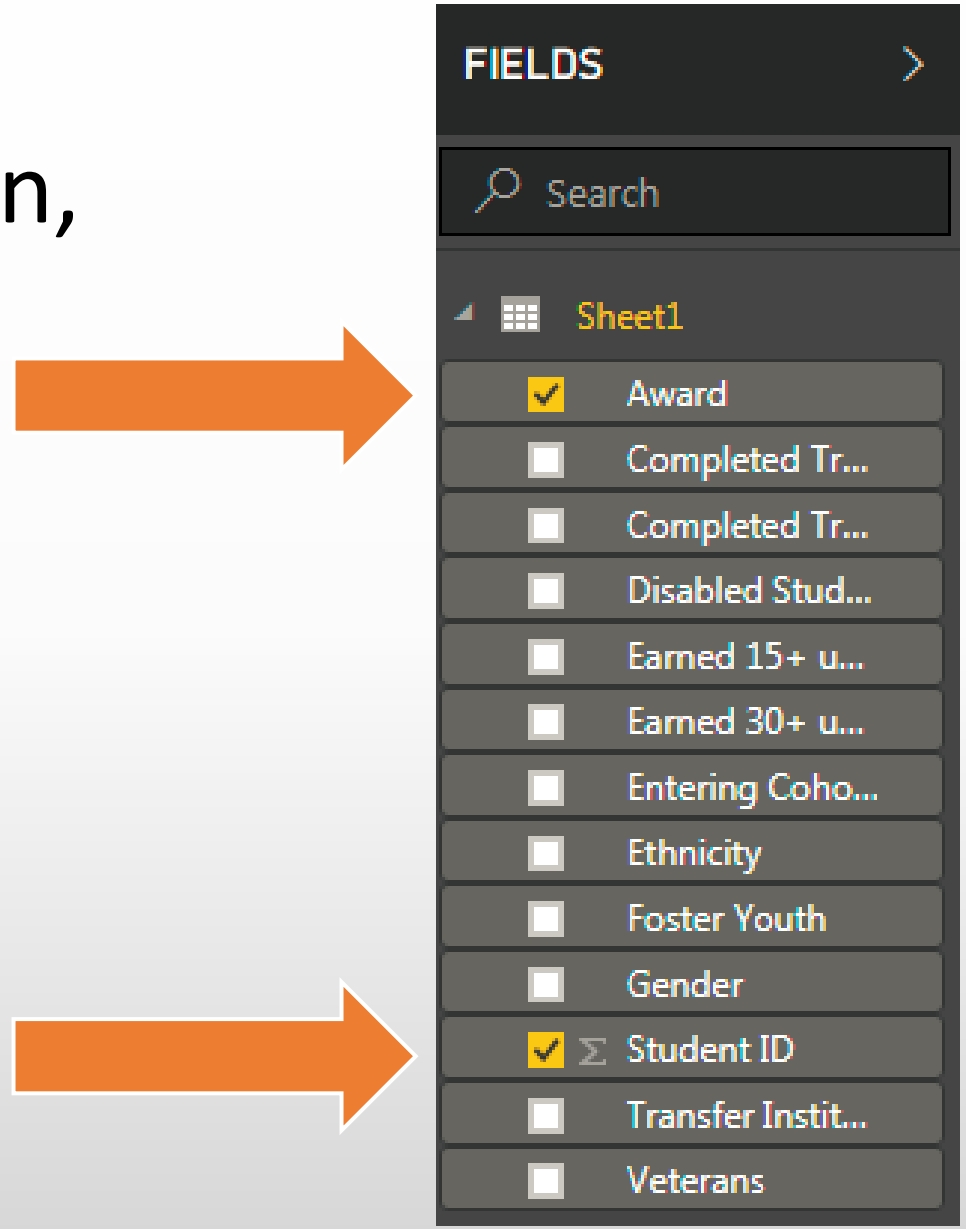
#4: Stacked Column Chart



Click on *Stacked Column Chart*

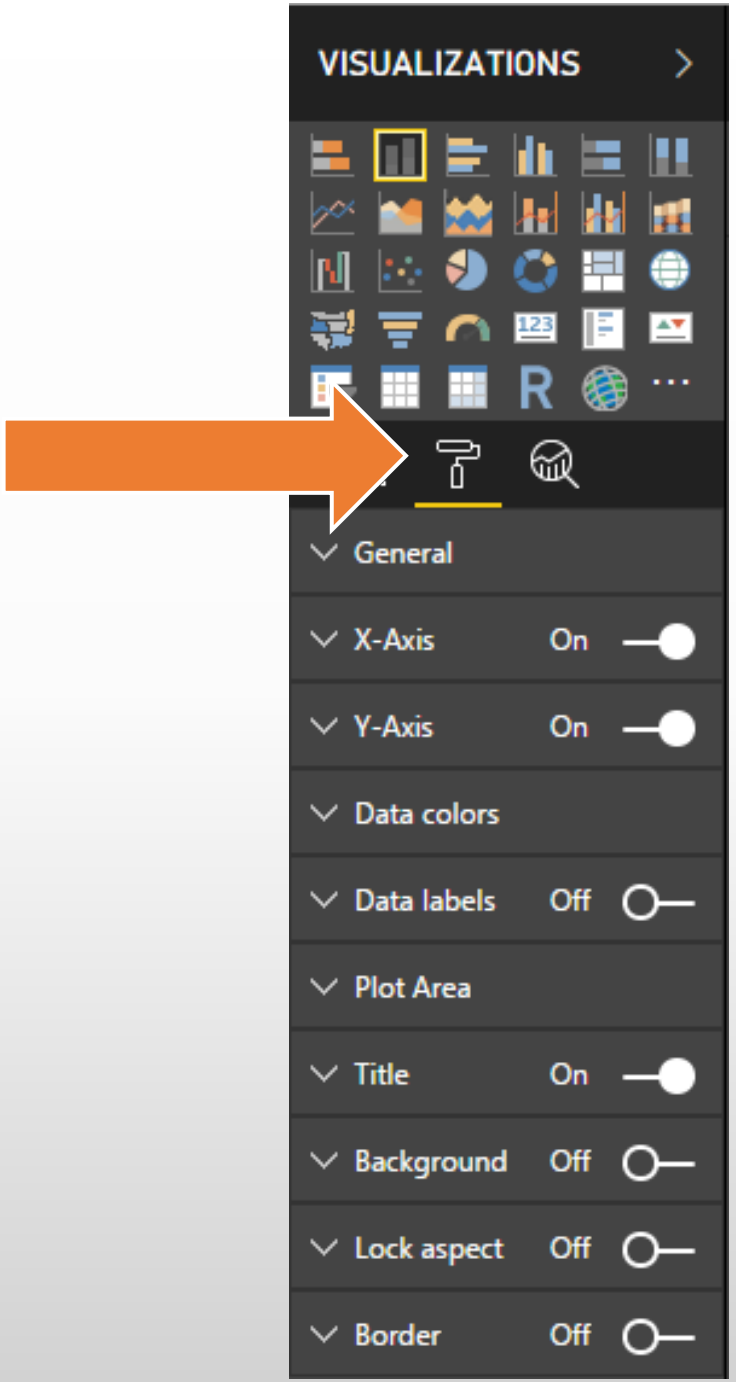


In the FIELDS section, select *Award* and *StudentID*.

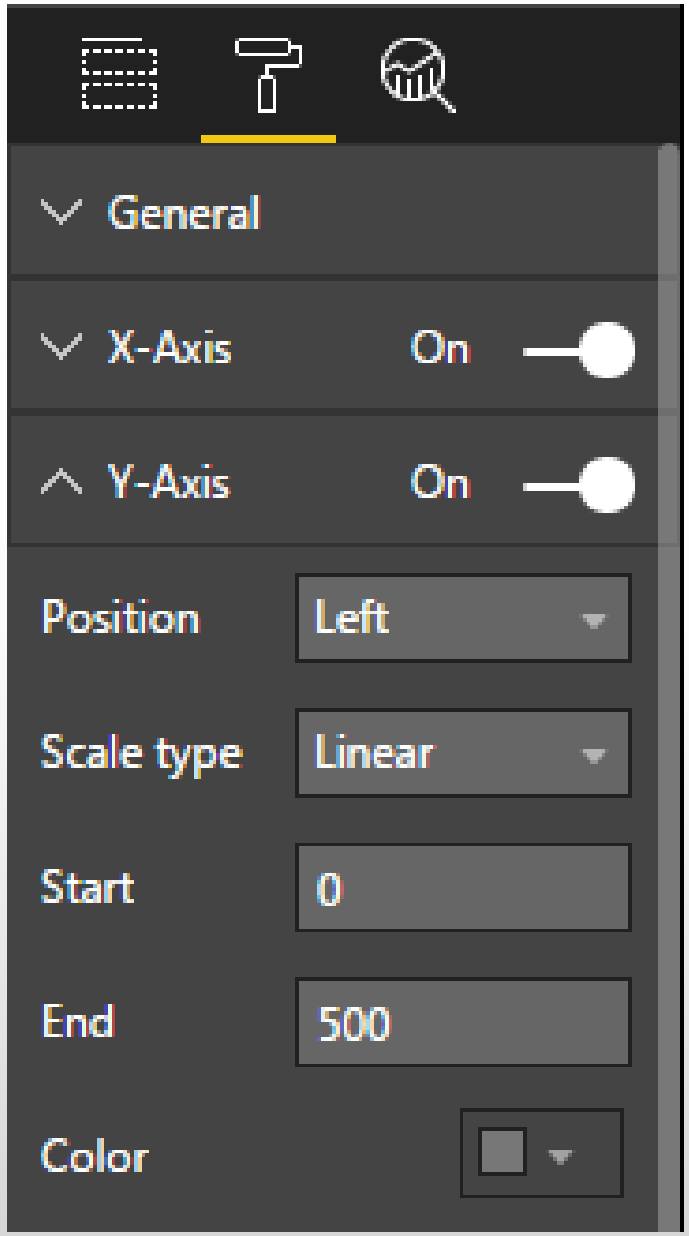


Click on Stacked Column Chart so you see this border.

Under Visualizations section, click on the *Paint Roller.*



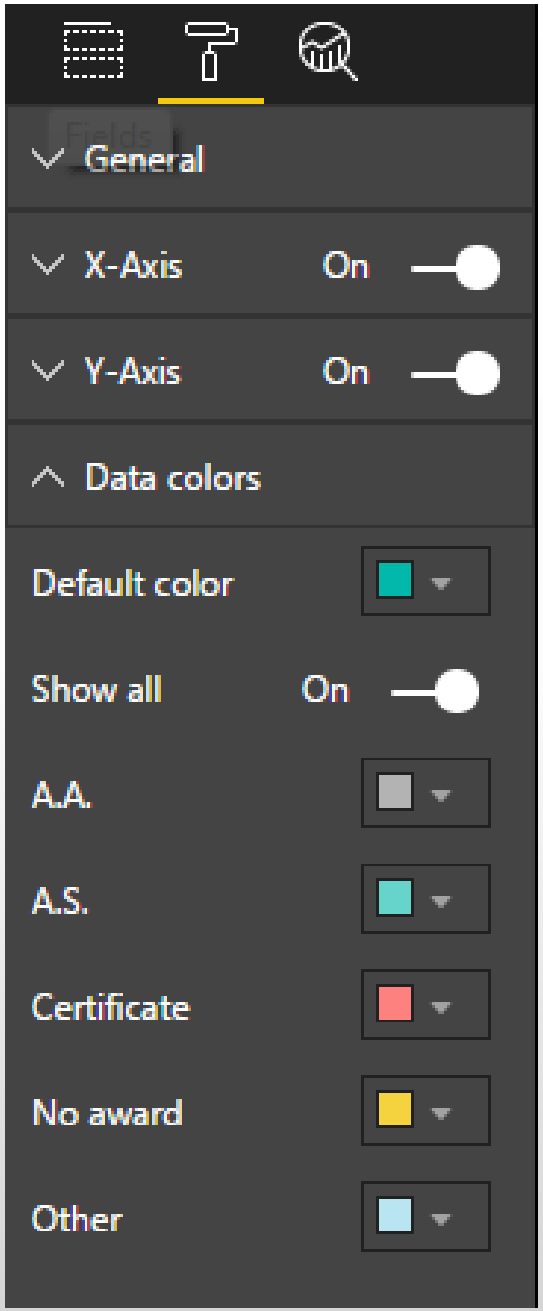
Click on Y-Axis:
- Since the stacked column chart data ranges from 0 to 500, we are going to put 0 in *Start* and 500 *End*.



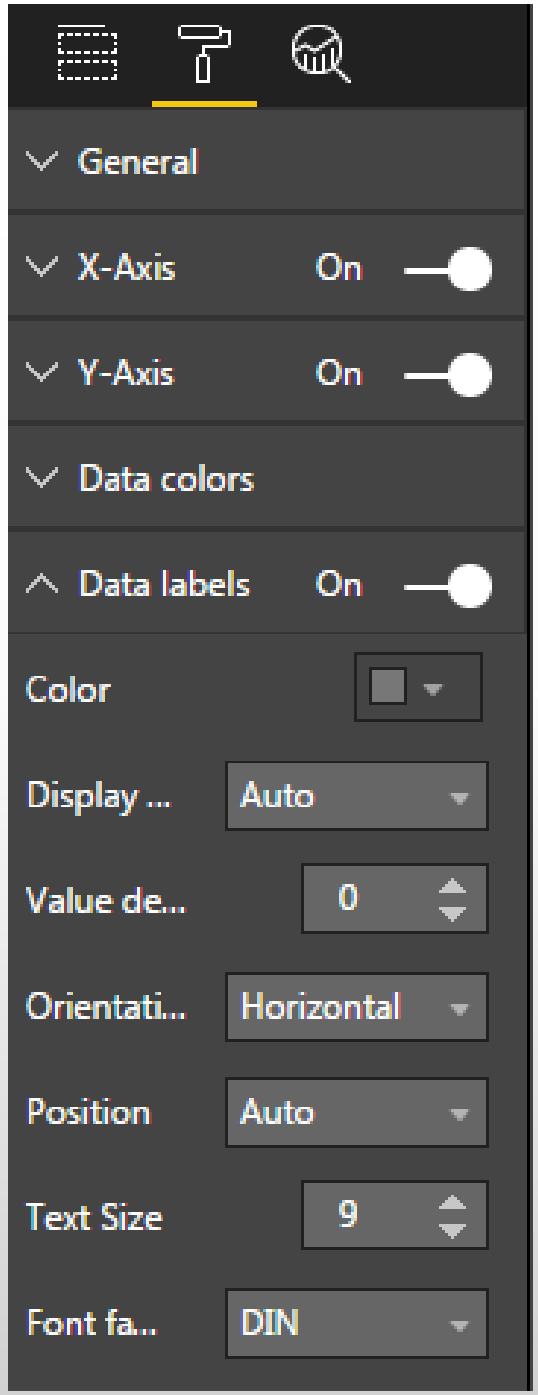
This step is important since it keeps the Y Axis of the chart from changing when criteria is selected on the dashboard.

Data colors:

- Turn *Show all* On. This will give you the option of changing the color of each of the bars.



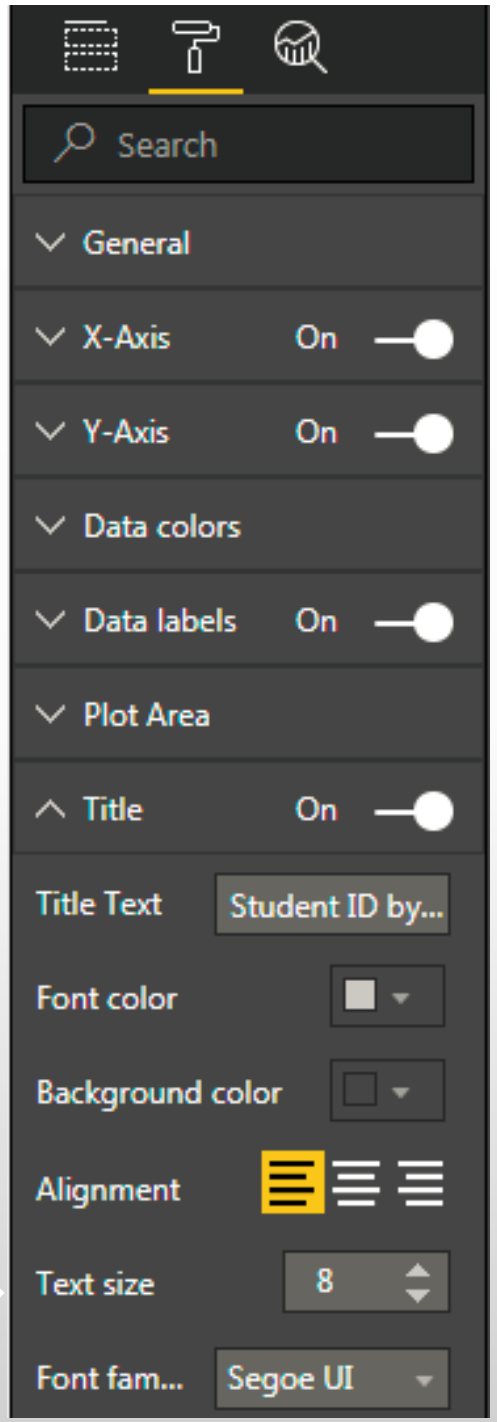
Data labels:
Turn On



Under *Data Labels* you can also change color and size of text for the data labels.

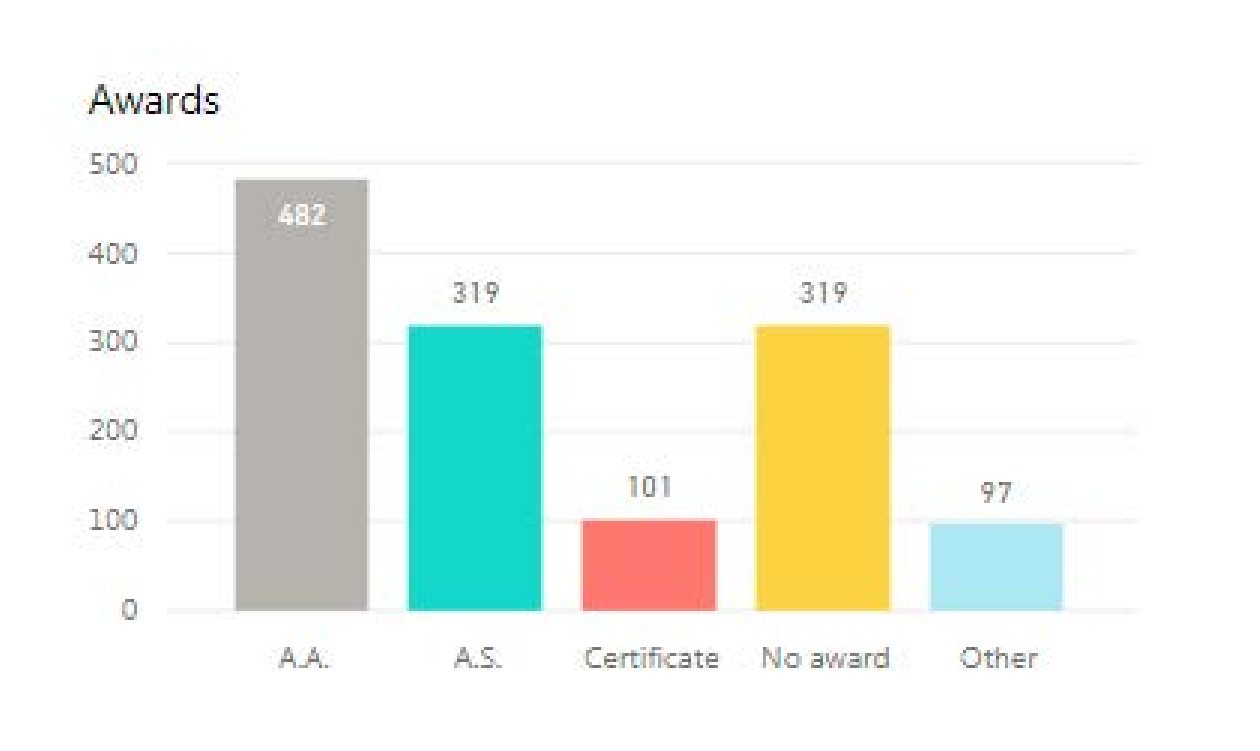
Title Text: Change to *Awards*.

Text Size: You can change text size here for title. I select 11 for chart titles.

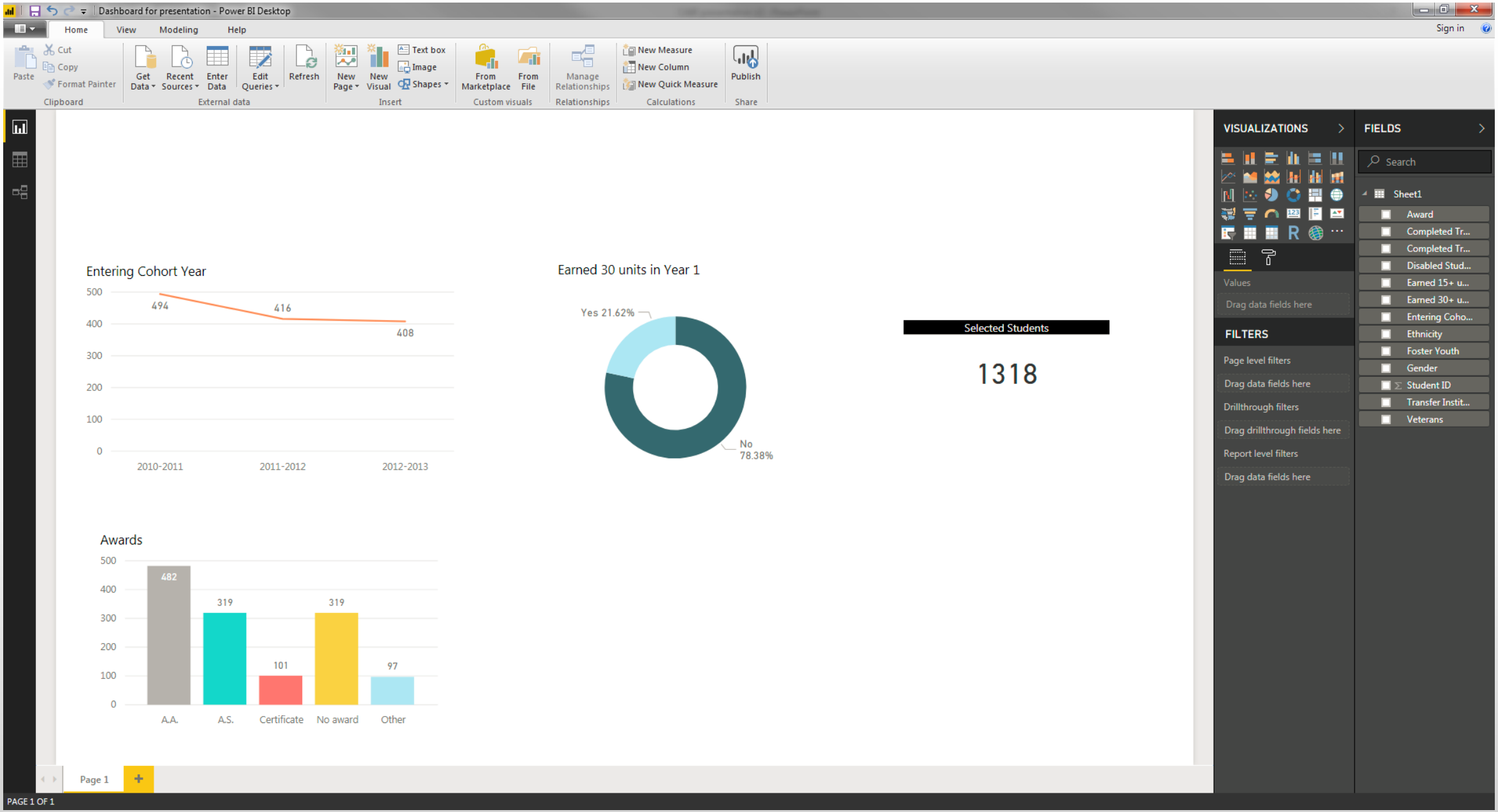


Font Color: You can change color of text for the title.

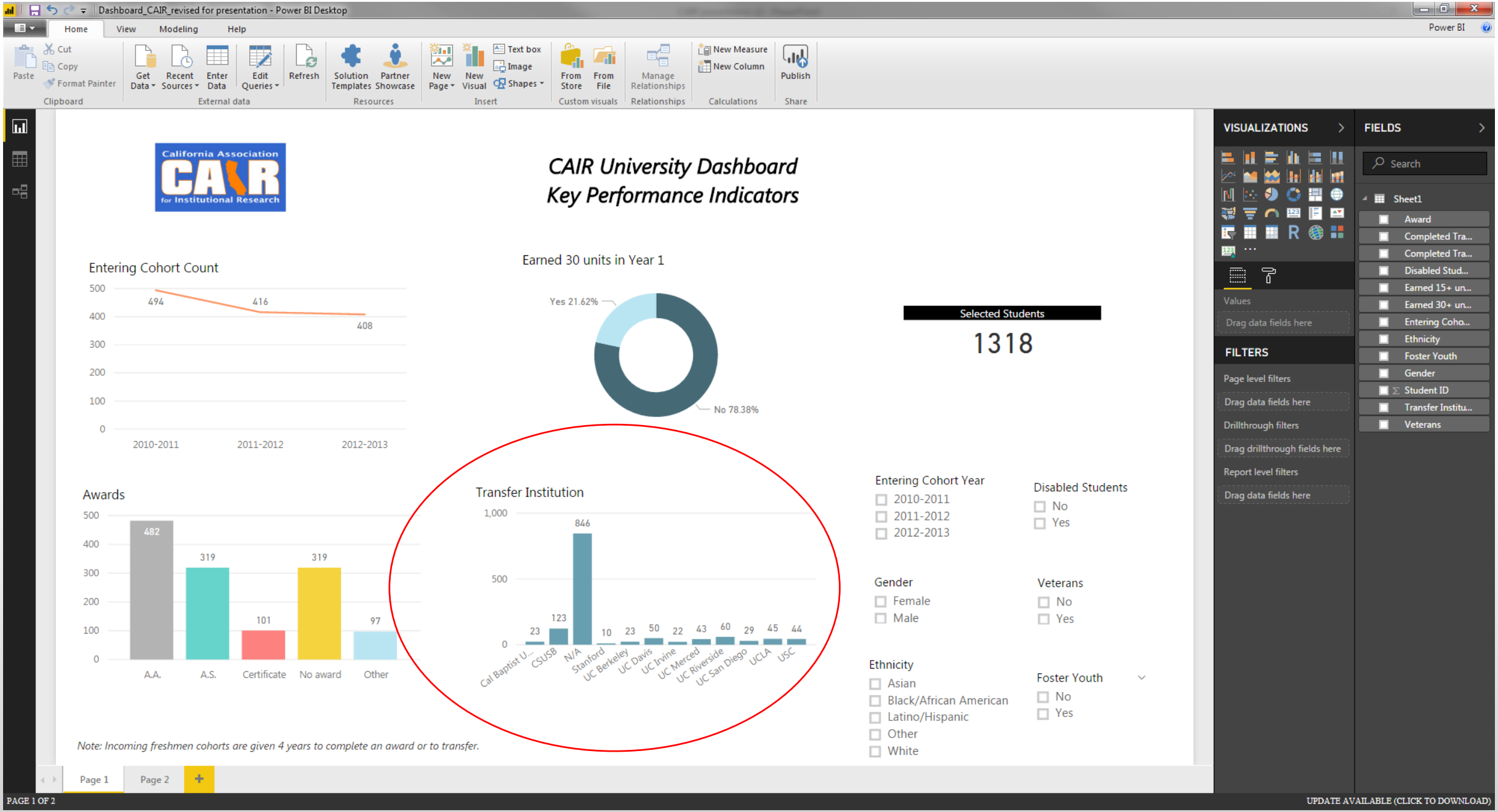
Your stacked column chart should look like this.



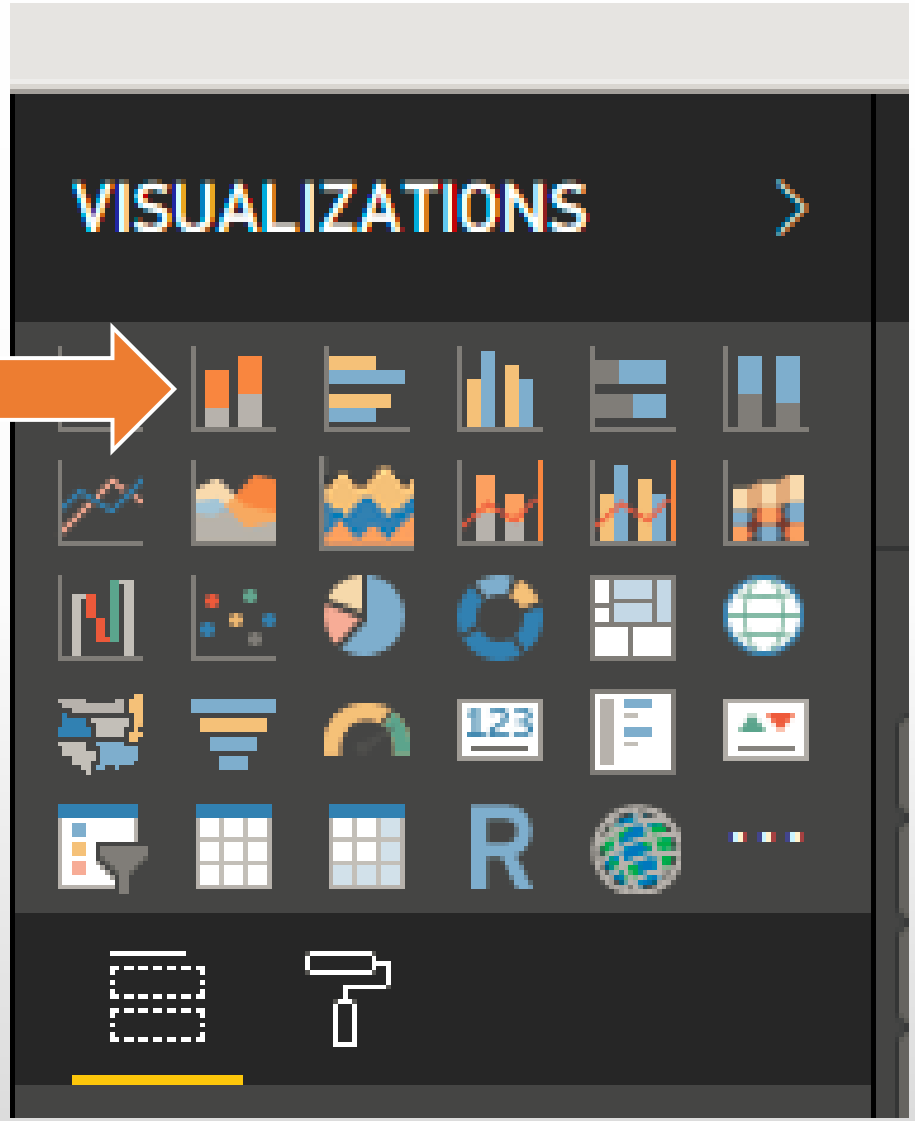
The stacked column chart and canvas should look like this now.



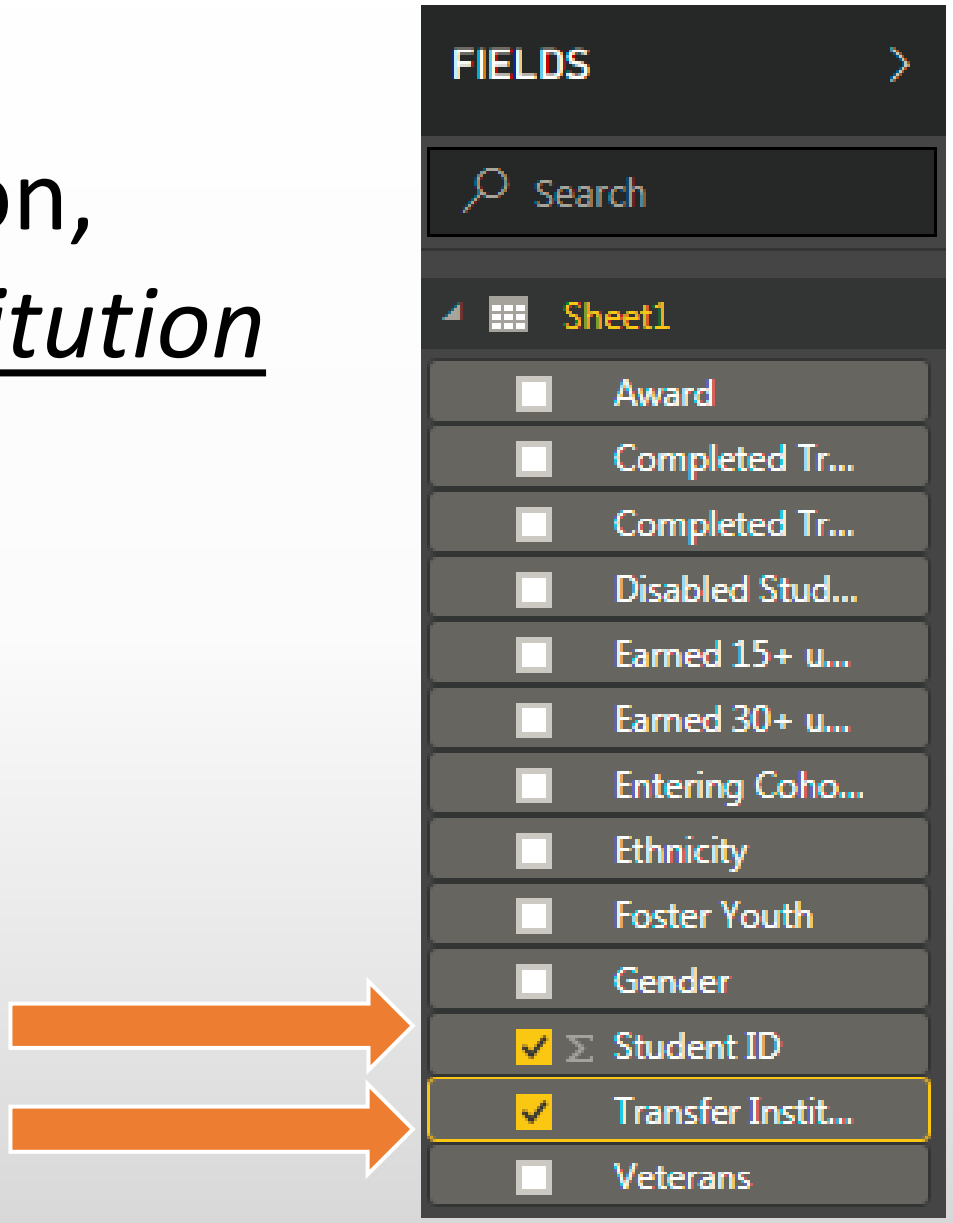
#5: Stacked Column Chart #2



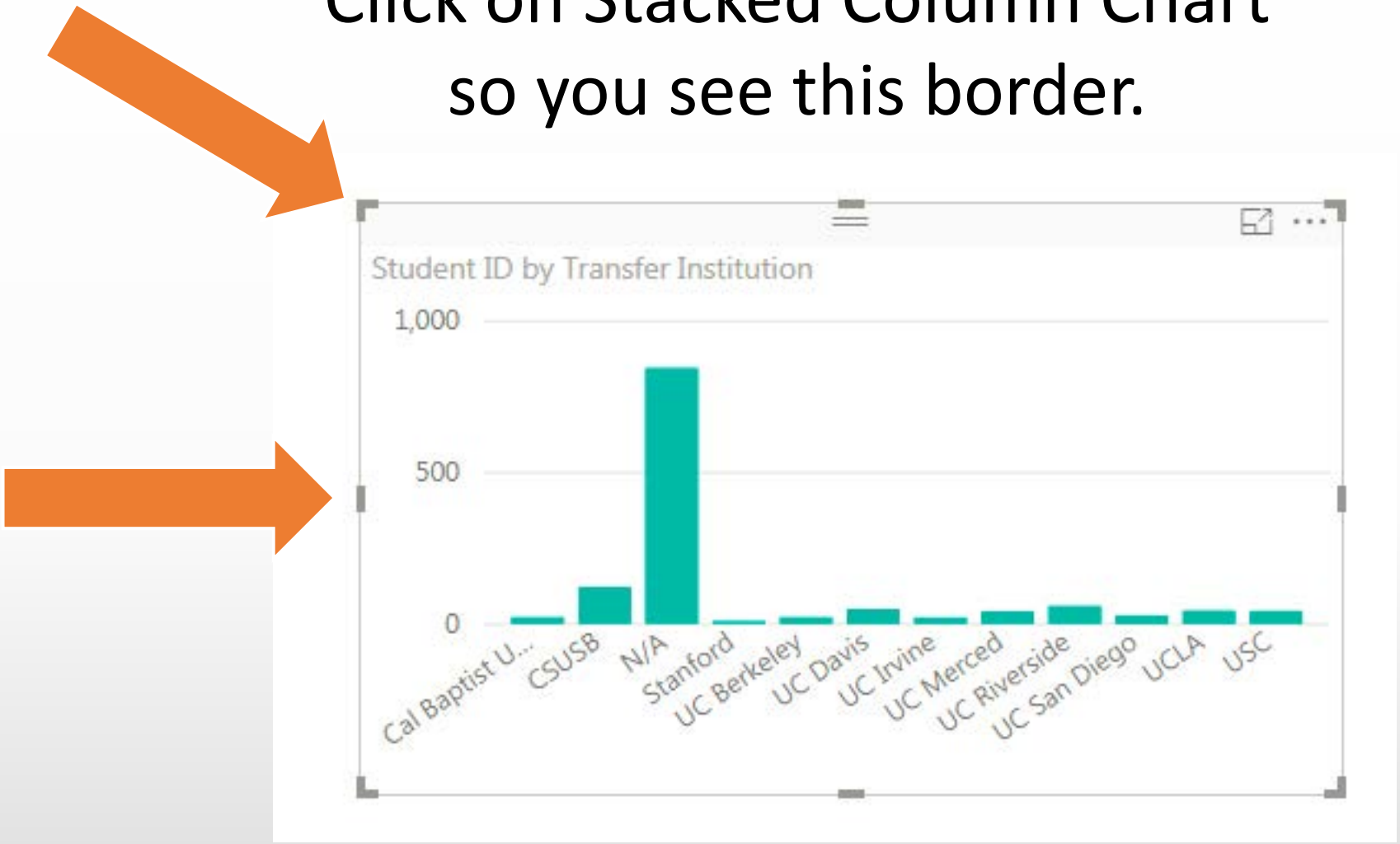
Click on *Stacked Column Chart*



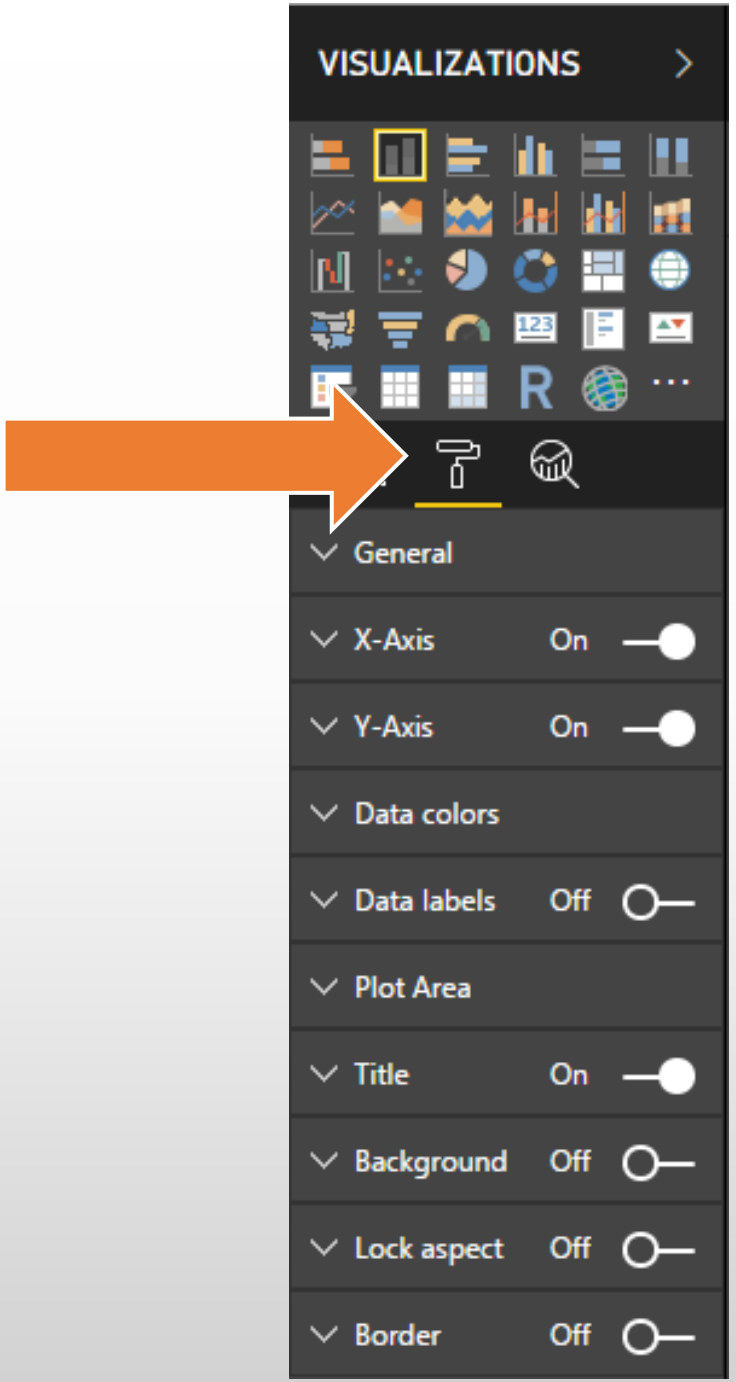
In the FIELDS section, select *Transfer Institution* and *StudentID*.



Click on Stacked Column Chart so you see this border.

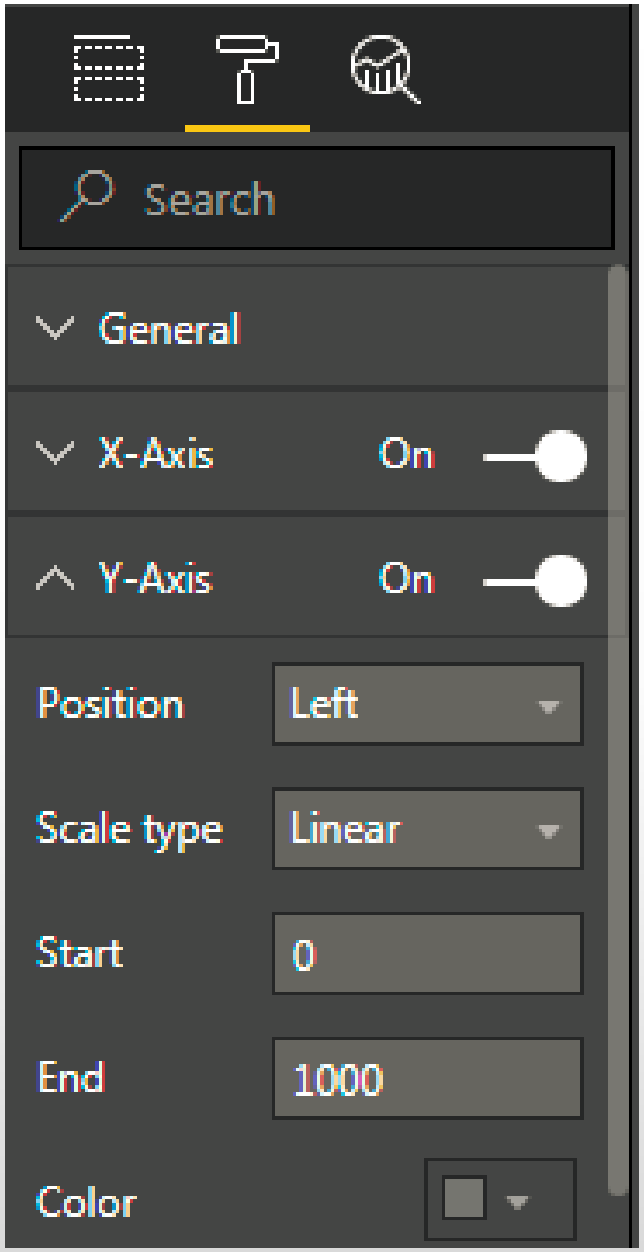


Under Visualizations section, click on the *Paint Roller.*



Click on Y-Axis:

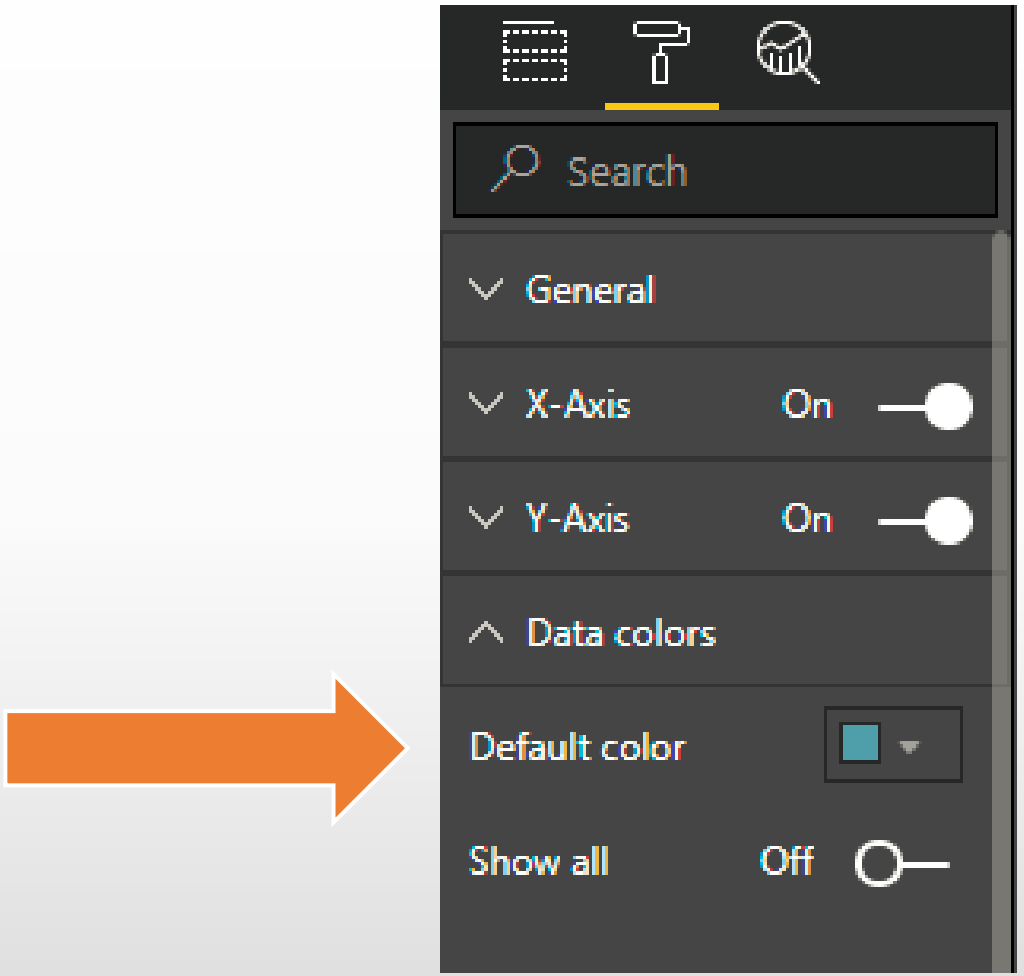
- Since the stacked column chart data ranges from 0 to 1,000, we are going to put 0 in *Start* and 1,000 *End*.



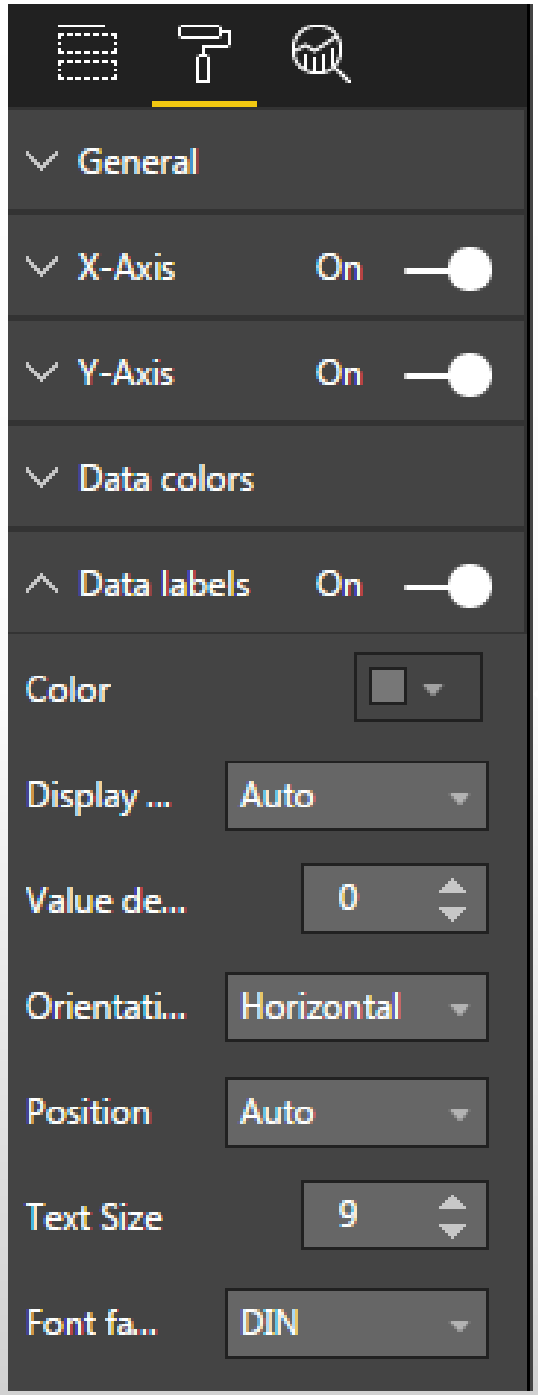
This step is important since it keeps the Y Axis of the chart from changing when criteria is selected on the dashboard.

Data colors:

- Select a color for the bars.



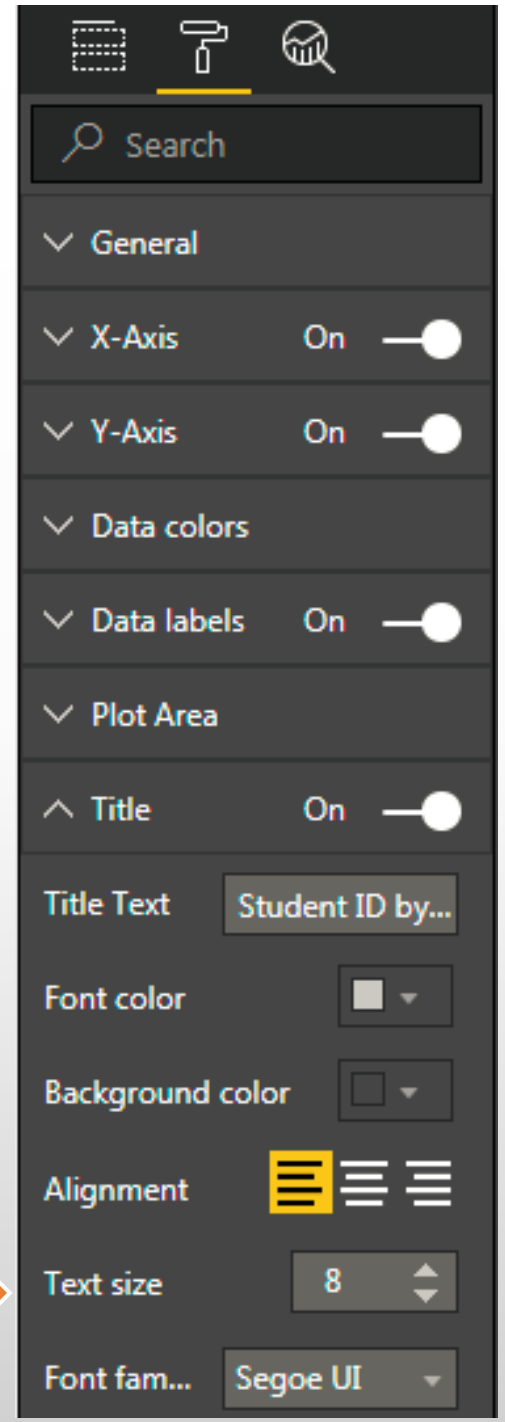
Data labels:
Turn On



Under *Data Labels* you can also change color and size of text for the data labels.

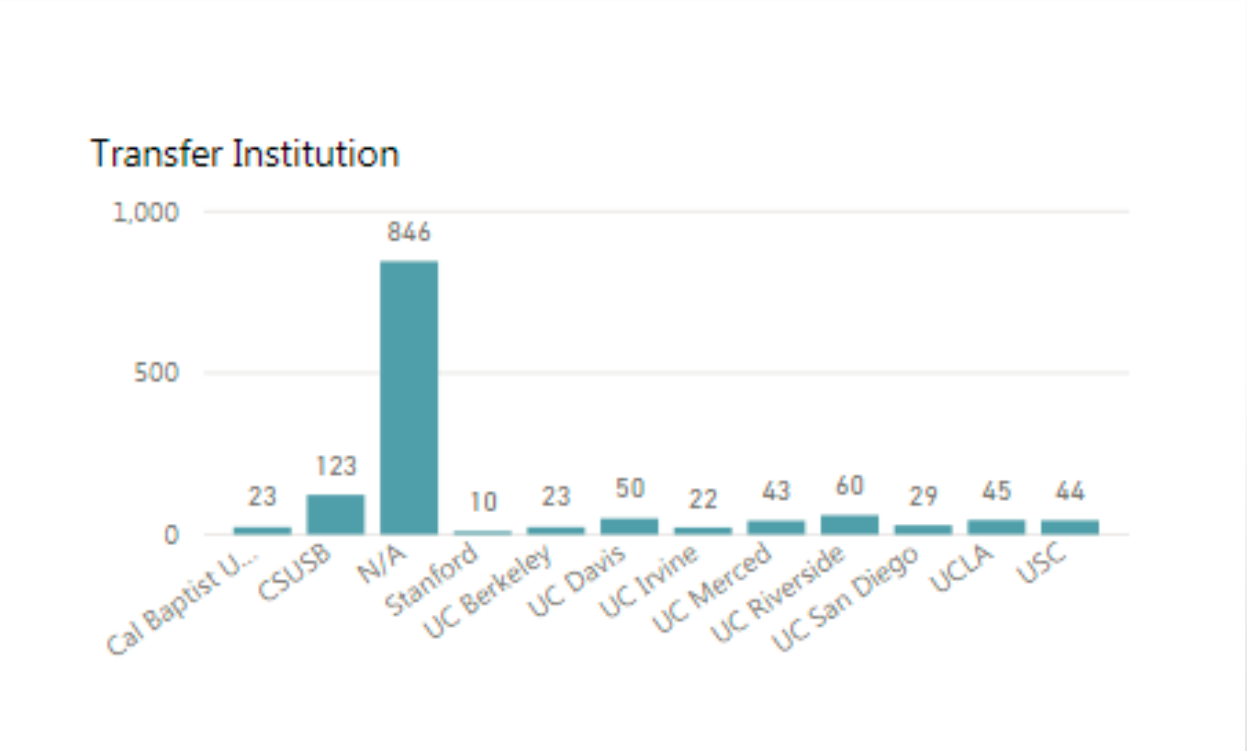
Title Text: Change to *Transfer Institution*.

Text Size: You can change text size here for title. I select 11 for chart titles.

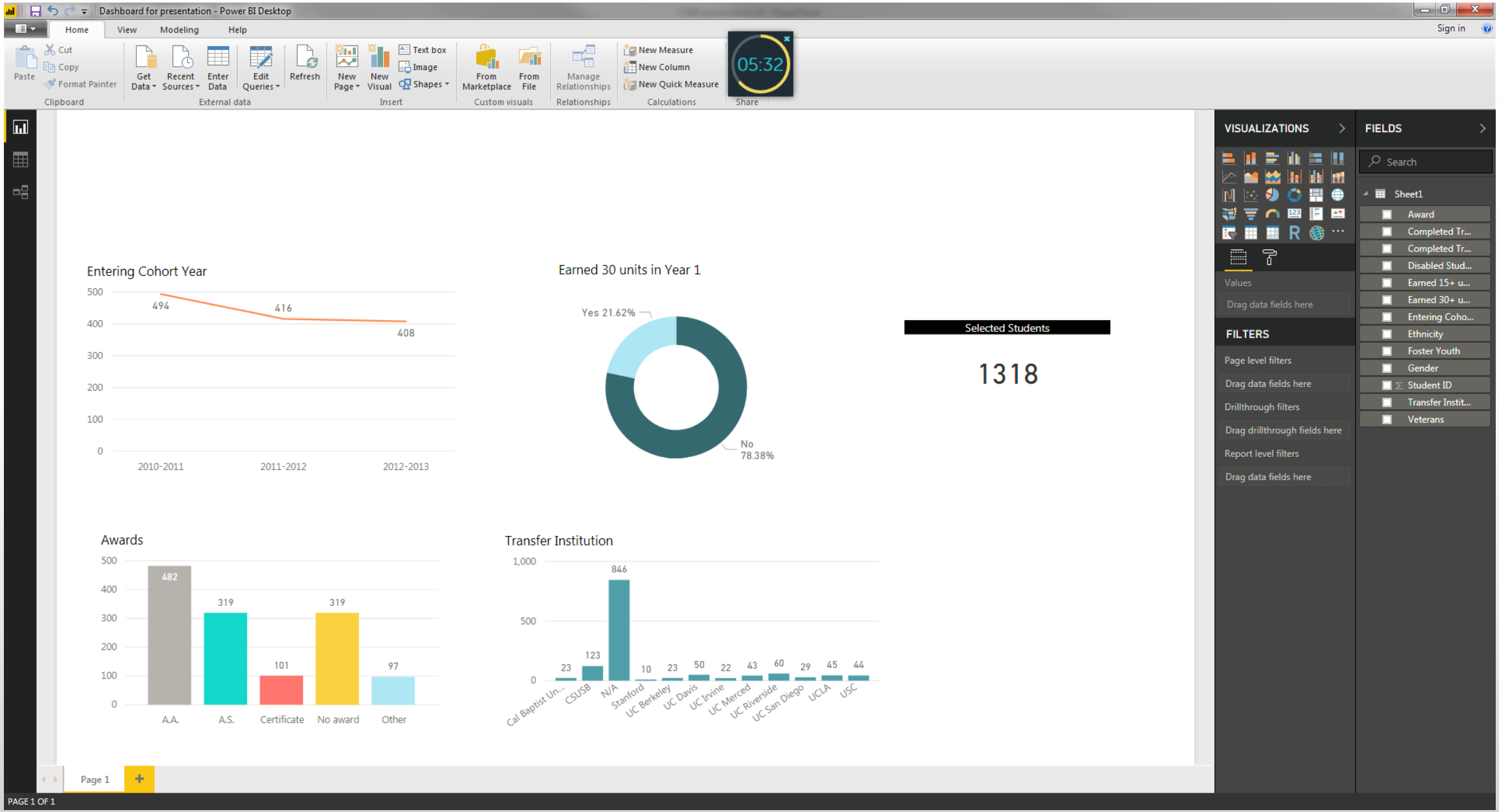


Font Color: You can change color of text for the title.

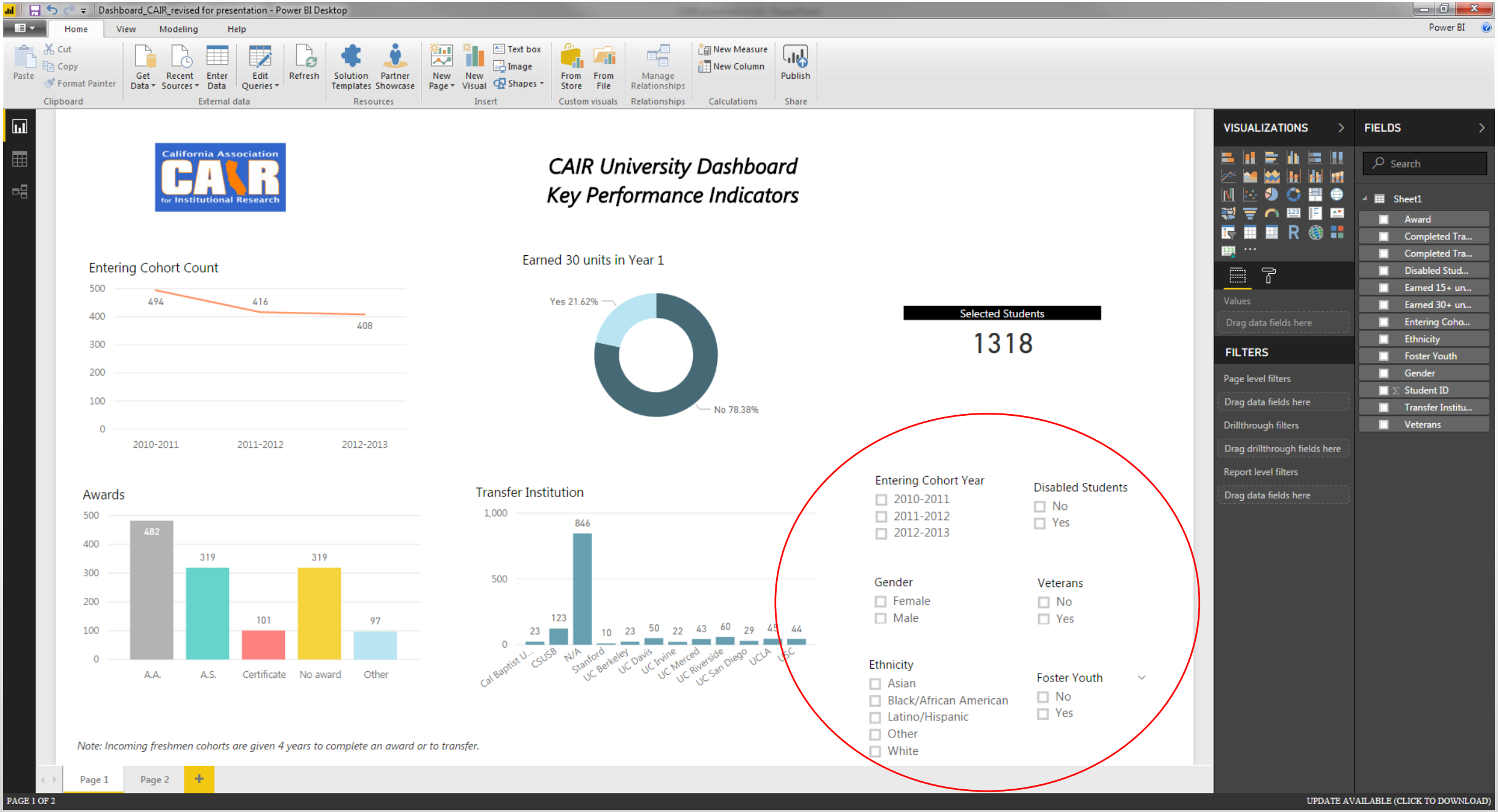
Your stacked column chart should look like this.



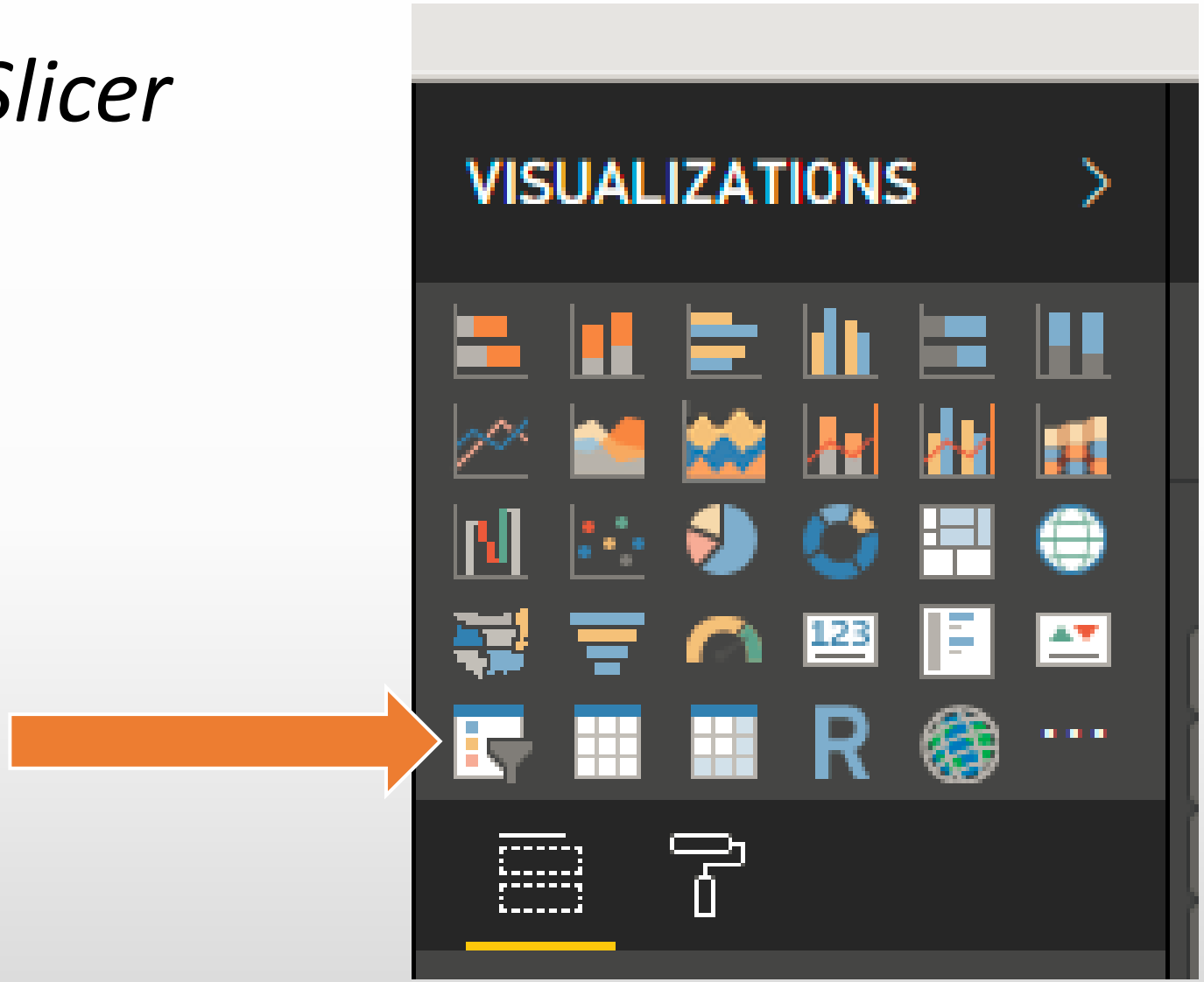
The stacked column chart and canvas should look like this now.



#6: Slicers/Filters

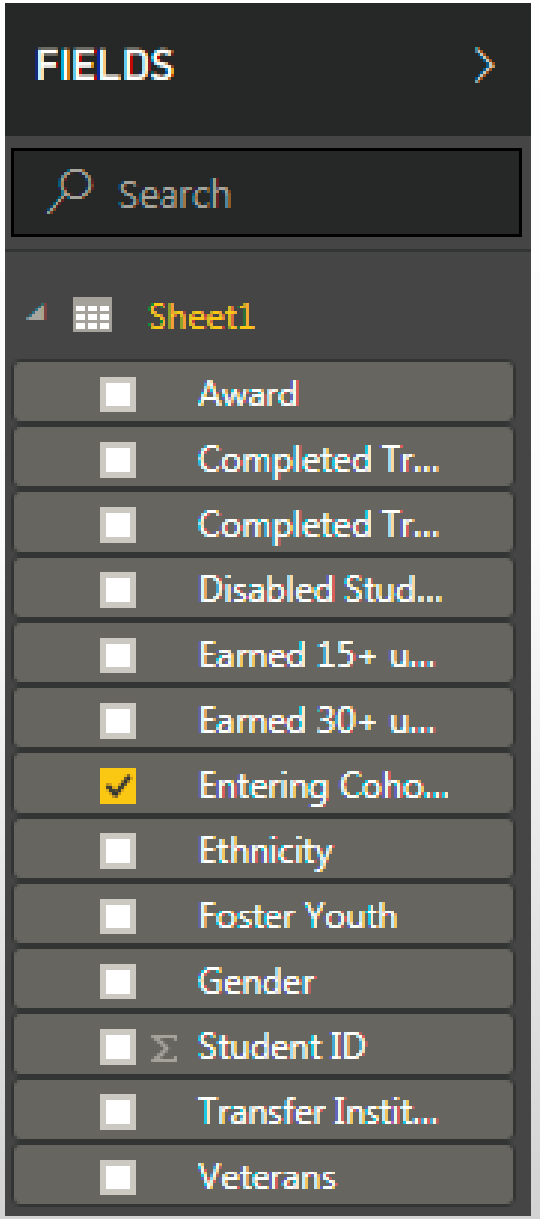


Click on *Slicer*



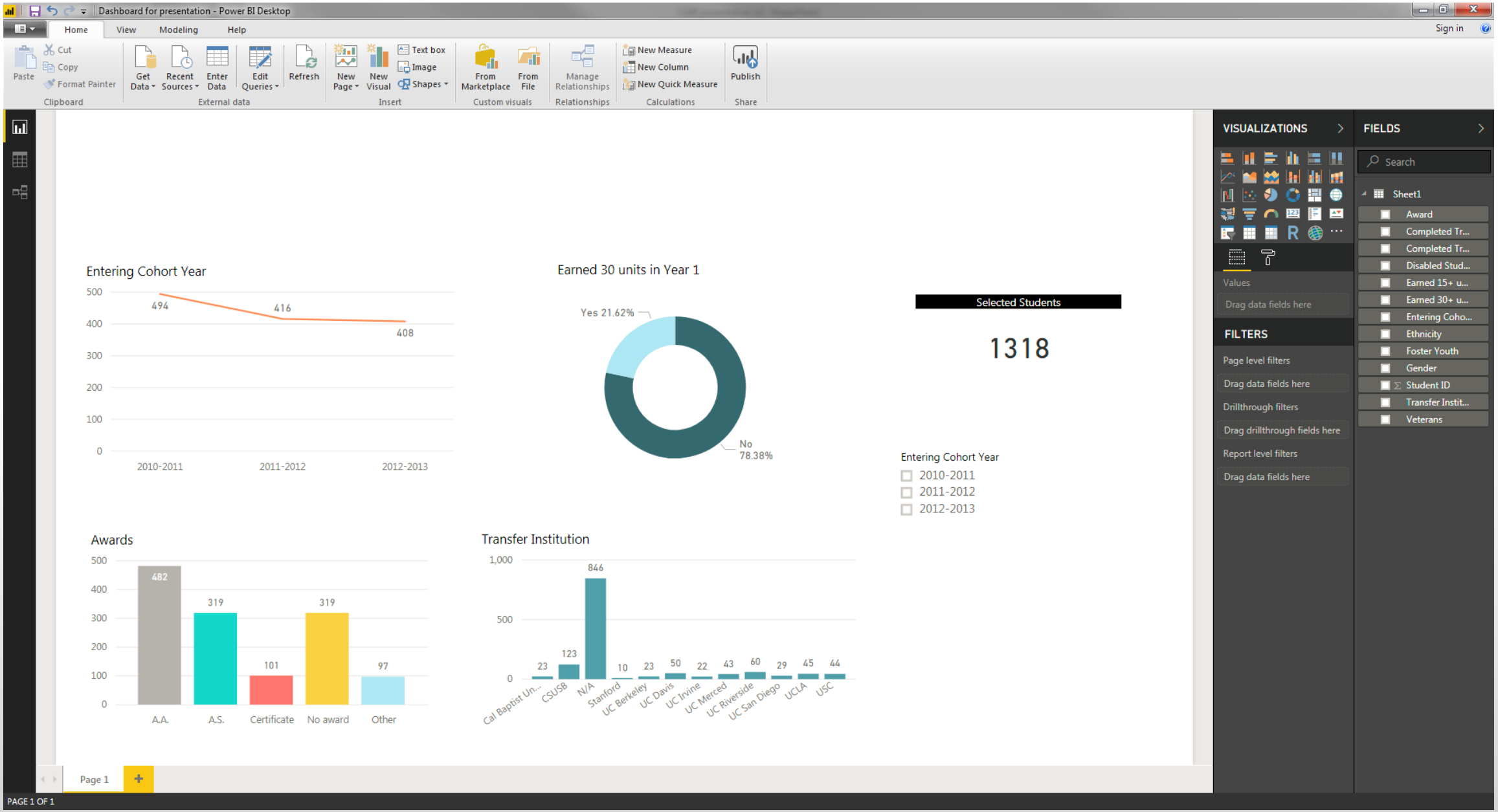
In the FIELDS section, select *Entering Cohort Year*.

Adjust the size and location of slicer/filter.



Your slicer/filter should look like this.

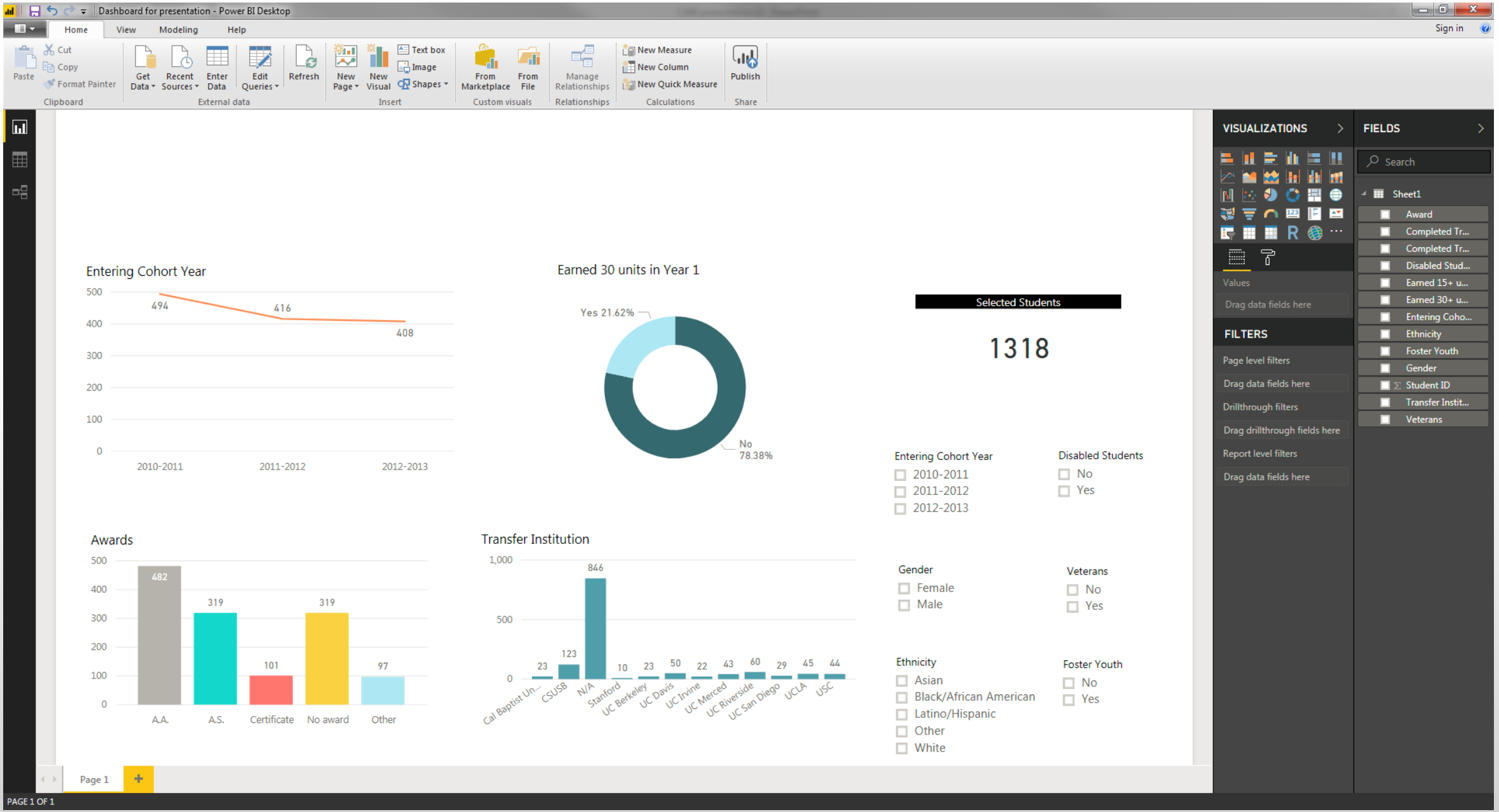
The slicer/filter and canvas should look like this now.



Replicate the same steps used to develop the *Entering Cohort Year* slicer/filter for the following variables:

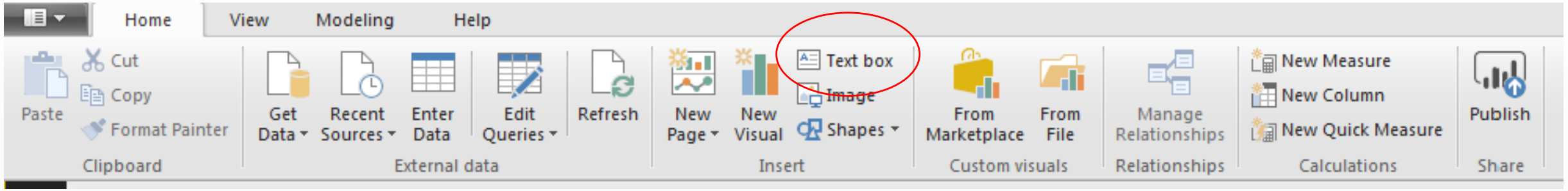
- Gender
- Ethnicity
- Disabled Students
- Veterans
- Foster Youth

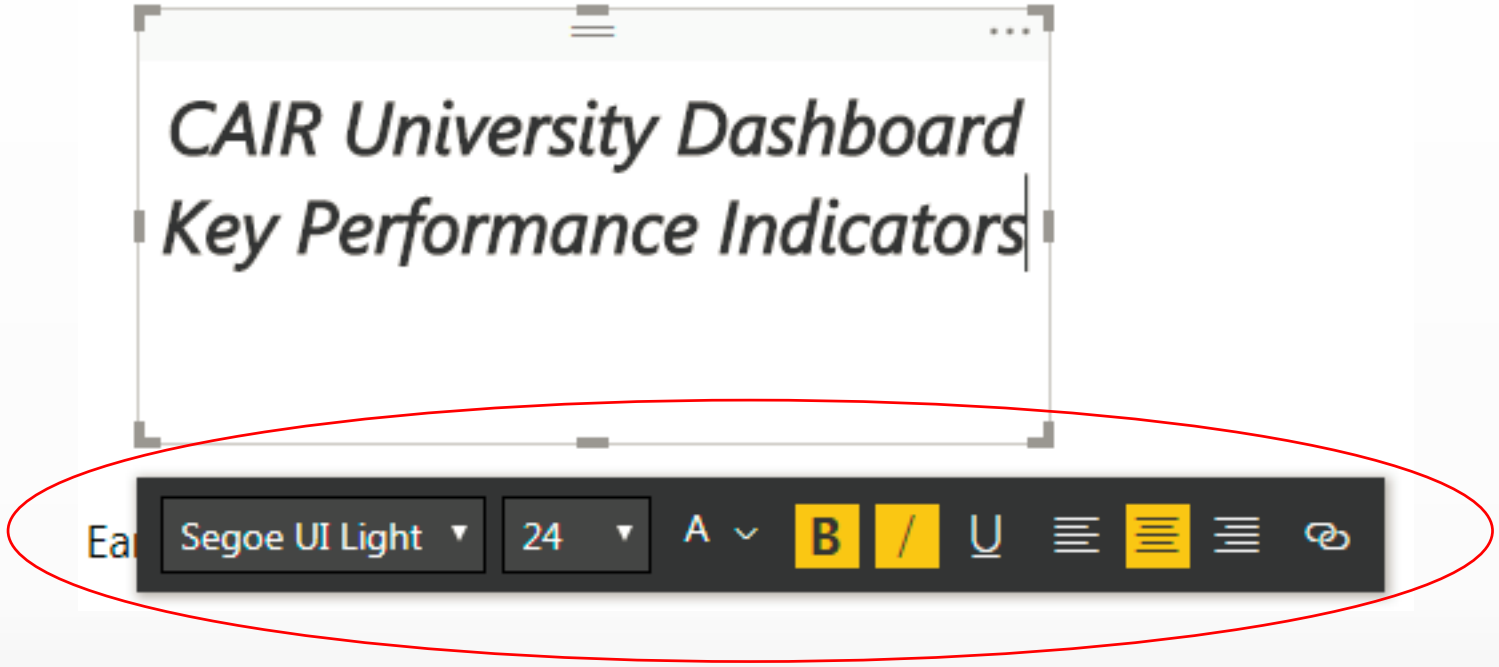
The slicers/filters and canvas should look like this now.



Now add a title to your dashboard.

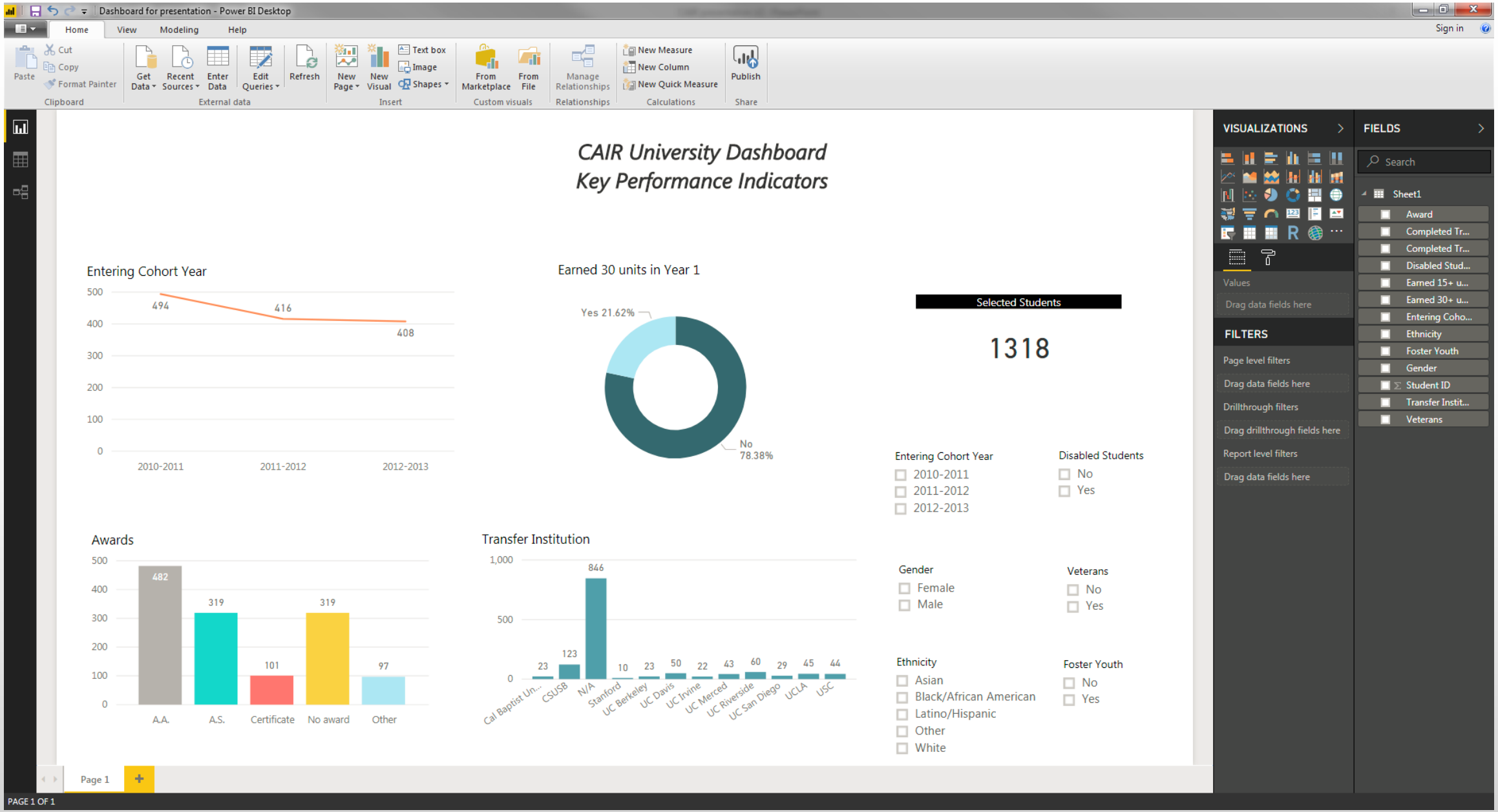
Click on Text box (found on the ribbon).





You can change font, font size, and make additional changes to title.

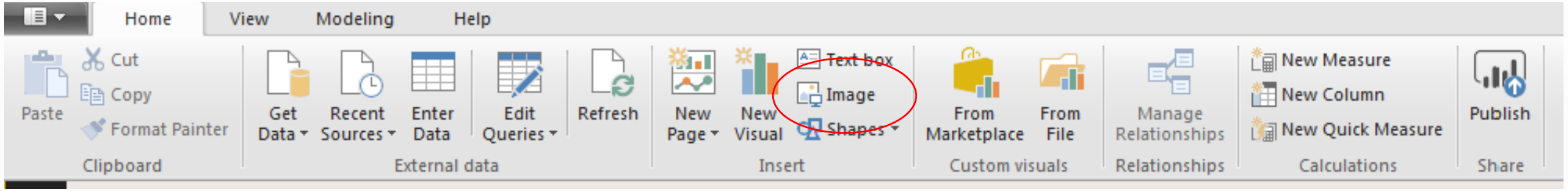
The text box and canvas should look like this now.



You can add your college logo to the dashboard.

Start by saving your logo as a JPEG.

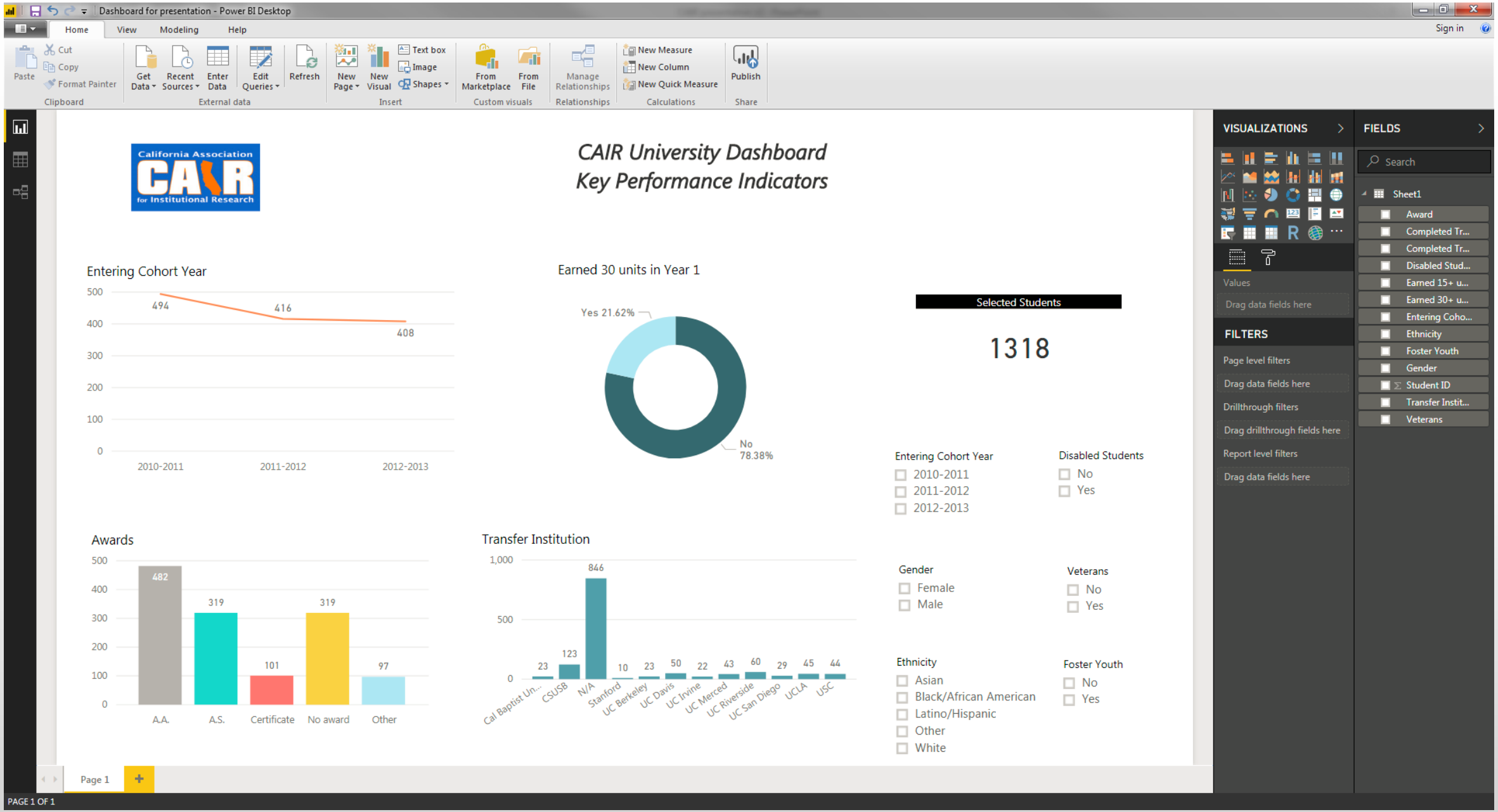
Click on Image (found on the ribbon).



Next step:

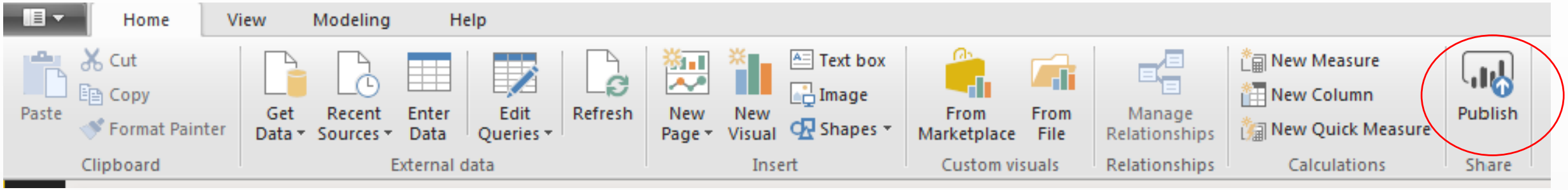
Click on JPEG from saved location and the logo will instantly be uploaded to dashboard. Make adjustments to the size and location of the logo.

The finalized dashboard should look like this.

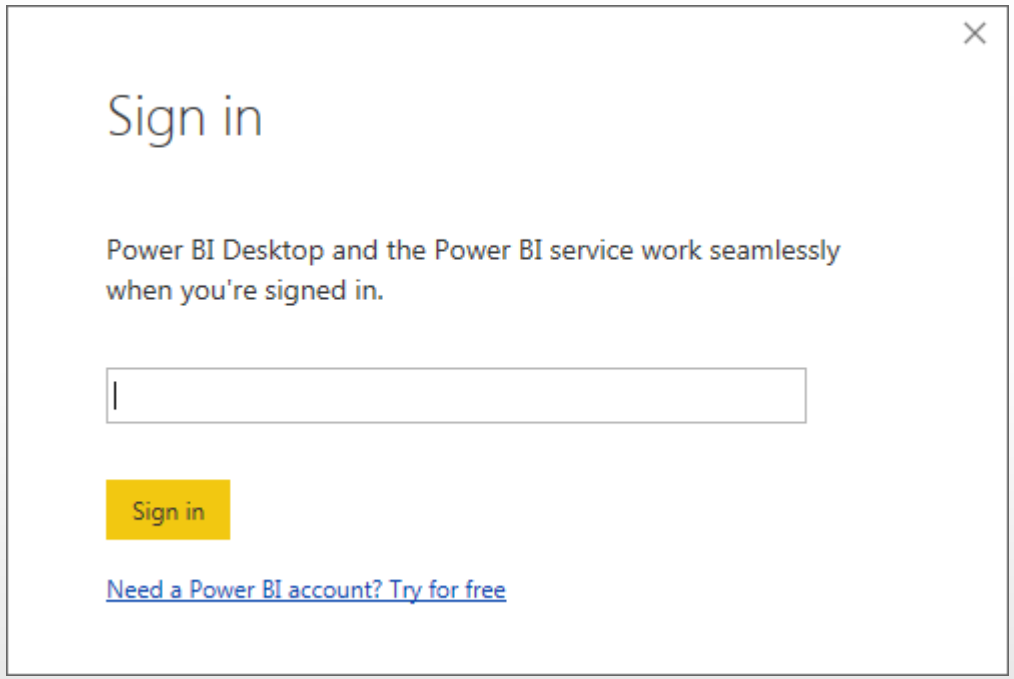


Now publish your dashboard to Power BI service.

Click on Publish (found on the ribbon).

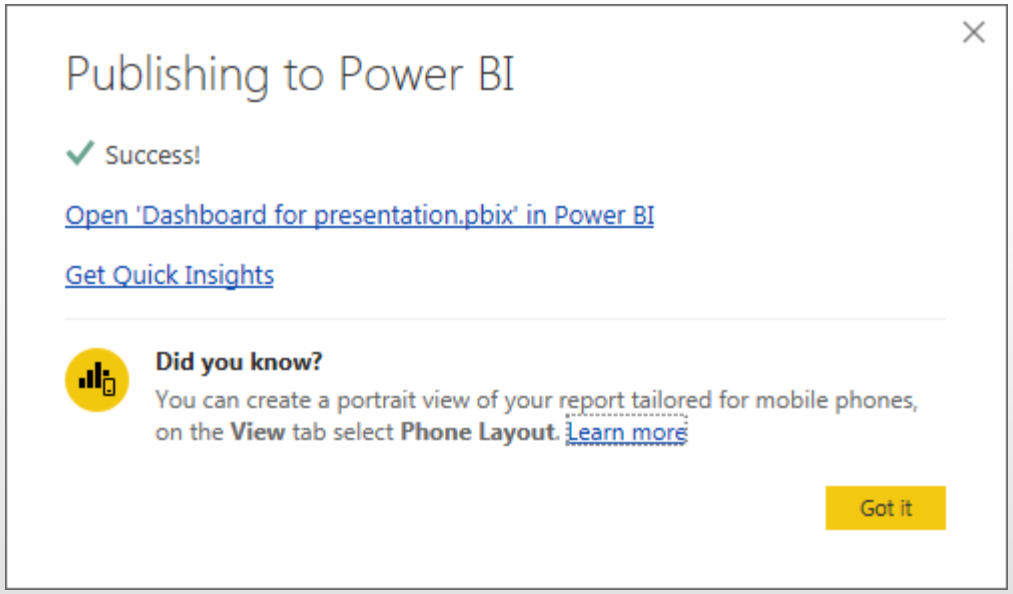


You will be prompted to provide the username and password for your Power BI service account.

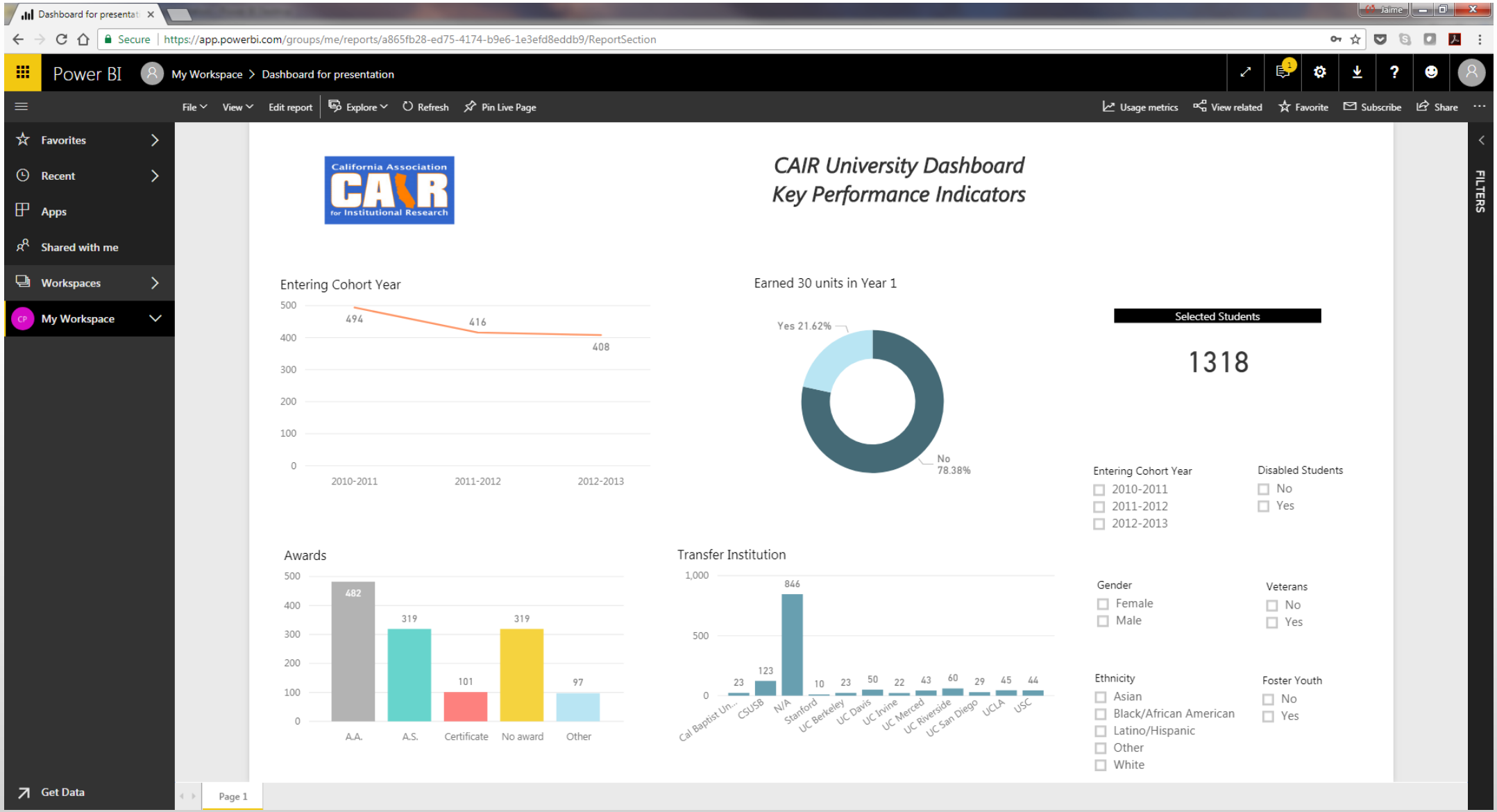


After signing in, you will select a destination for where to publish your dashboard.

You should see this window (below) once the report is published. If so, you have officially published the dashboard to your Power BI service account!



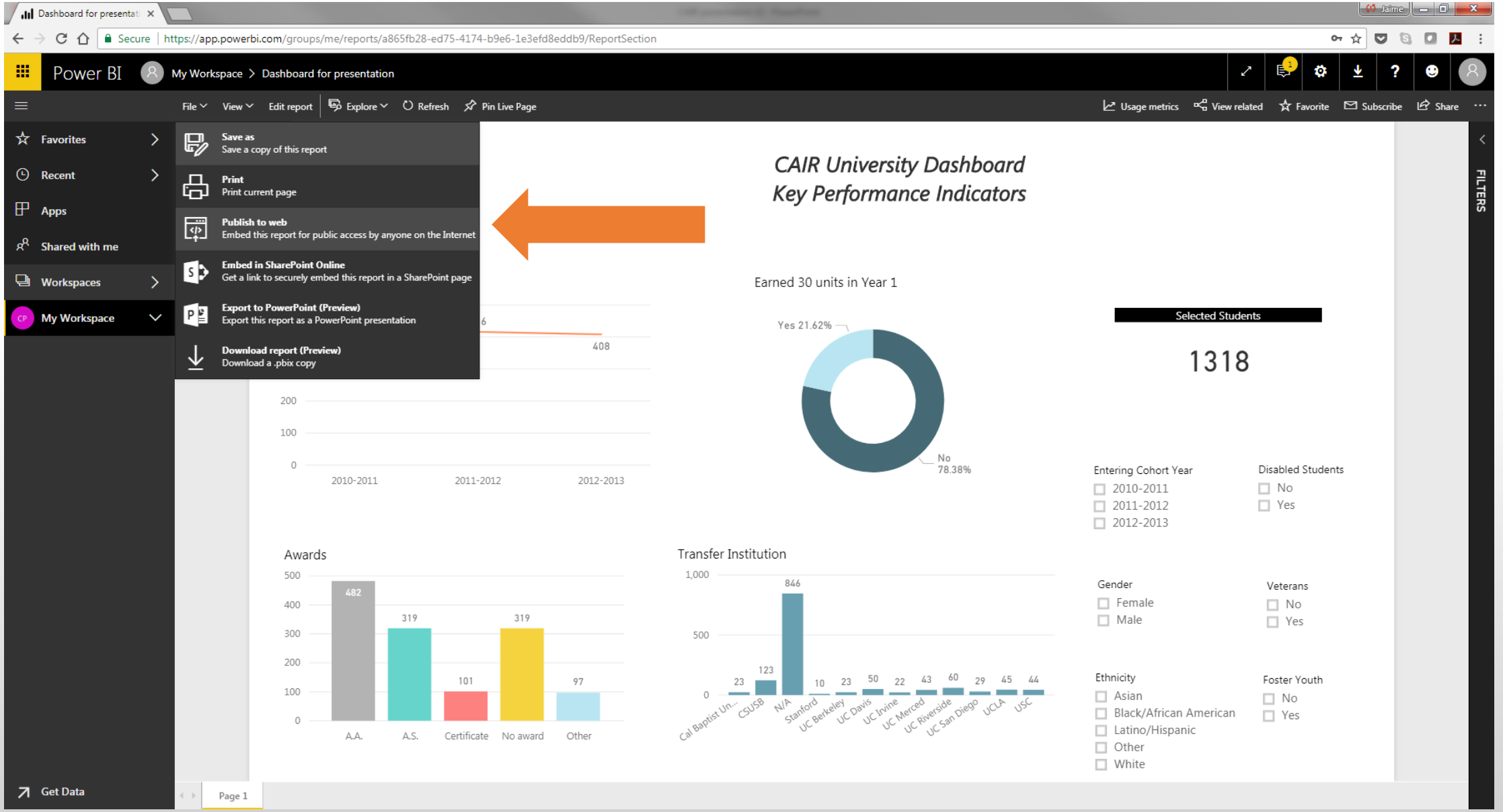
This is the same dashboard now officially published in your Power BI service account.



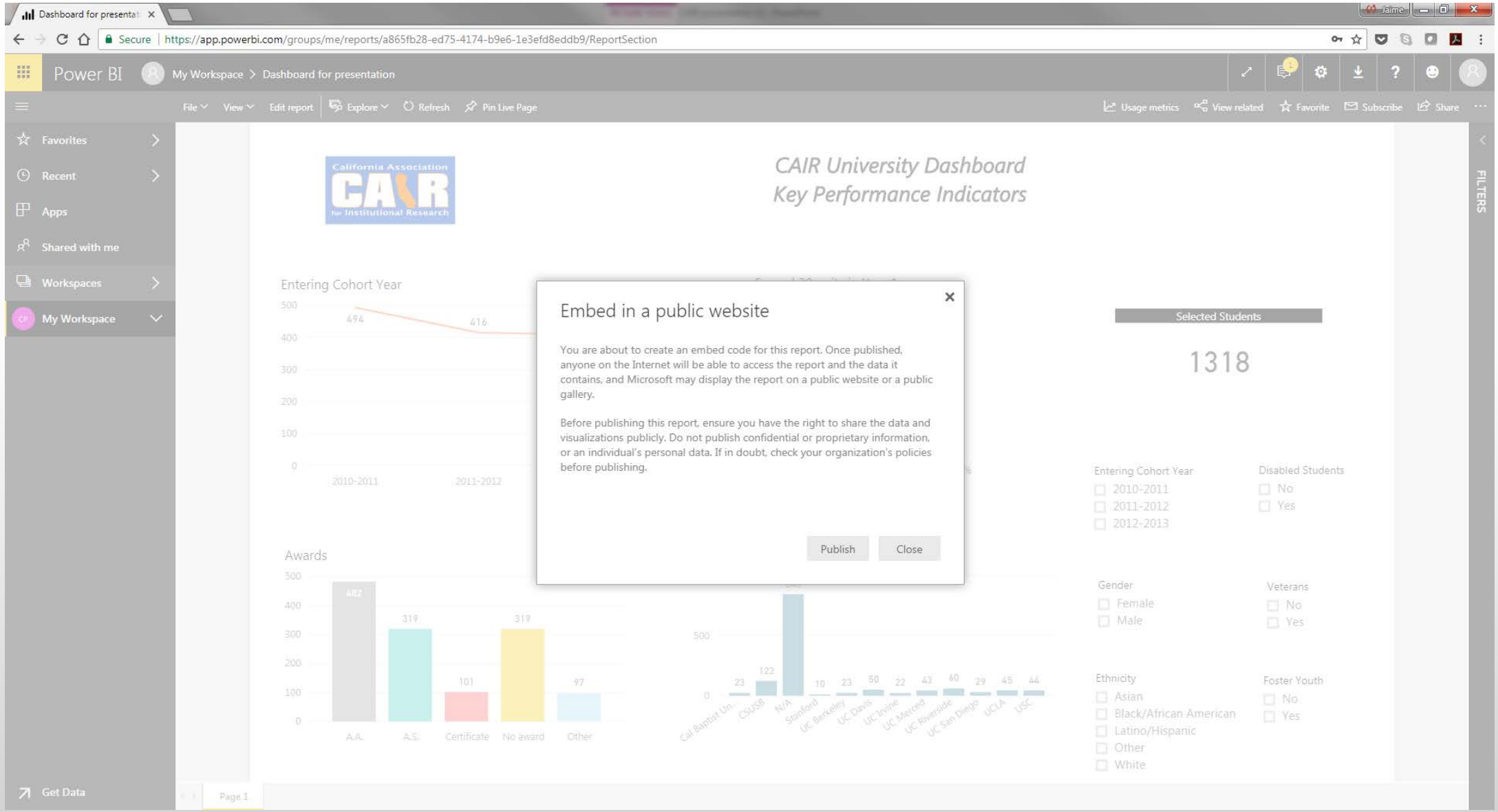
After publishing the dashboard to your Power BI service account you can do the following:

- Share your dashboard with others who have a Power BI Pro account.
- Obtain an embed code (URL) to publish dashboard on your IE/IR website.

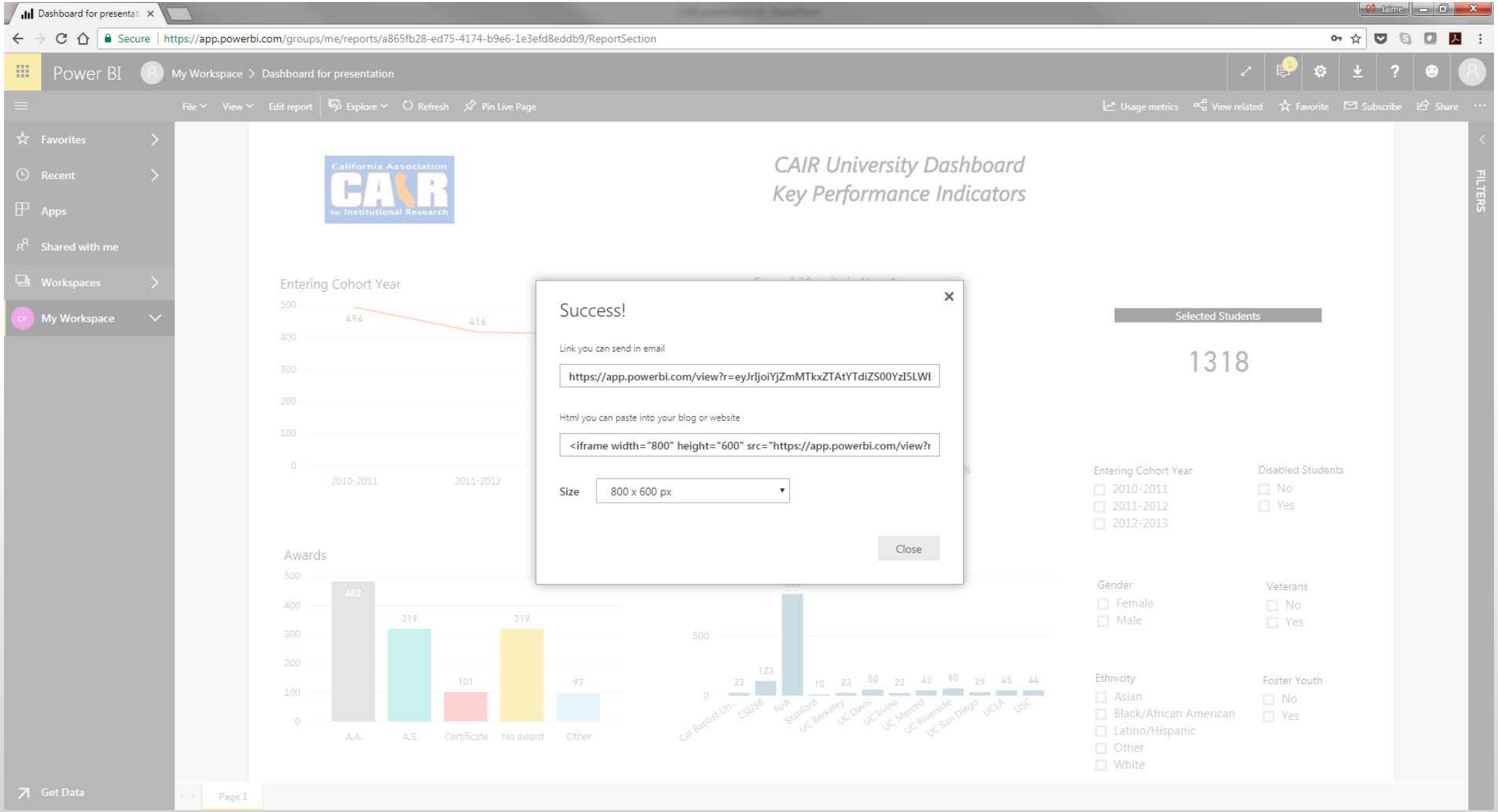
To obtain embed code, click on *File* and *Publish to web*.



VERY IMPORTANT: Make sure you do not share or publish any confidential/sensitive data.



Embed Code/URL! Success!



Power BI Resources:

- Power BI Guided Learning (videos)
- Guy in a Cube (videos)
- 2017 Microsoft Data Insights Summit (videos)

Thank you!

Jaime Rodriguez
jaime.rodriguez@mvc.edu