



## **Accessing and Analyzing Equity Data Using Power BI**

**Background and Activity Booklet**



Riverside City College  
Data Coaching Program

This activity was adapted from the Santa Monica Data Coaching Program.

### Purpose

This activity will familiarize the user with our “Equity Course Success” Power BI report and provide the user opportunities to practice their data analysis skills. Through this activity we hope the user will gain more familiarity:

- Accessing the “Equity Course Success” Power BI report via Power BI Premium
- Manipulating Power BI to find the data of need
- Analyzing data and identifying important trends
- Preparing for conversations surrounding these equity data

### Step 1

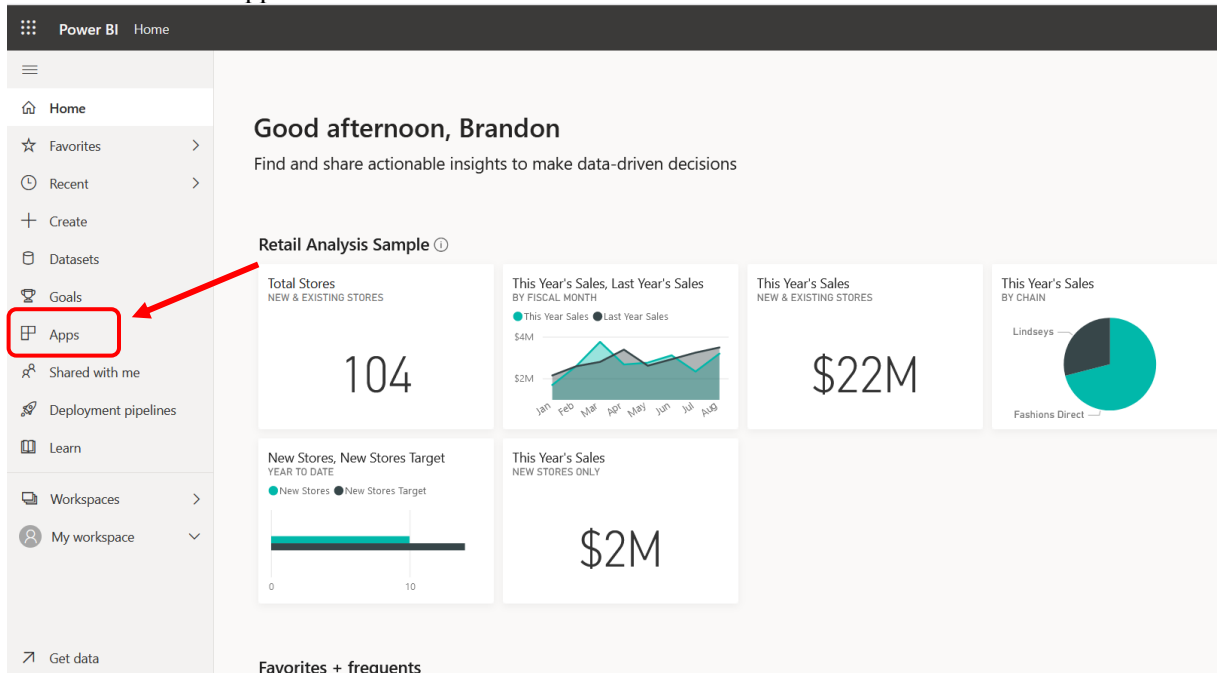
Log onto Power BI:

- Go to the RCCD Single Sign on (<https://go.rccd.edu/>)
- Click on the Power BI icon from the app menu

### Step 2

Access the “RCC Enrollment and Program Review” app:

- Click on “Apps”

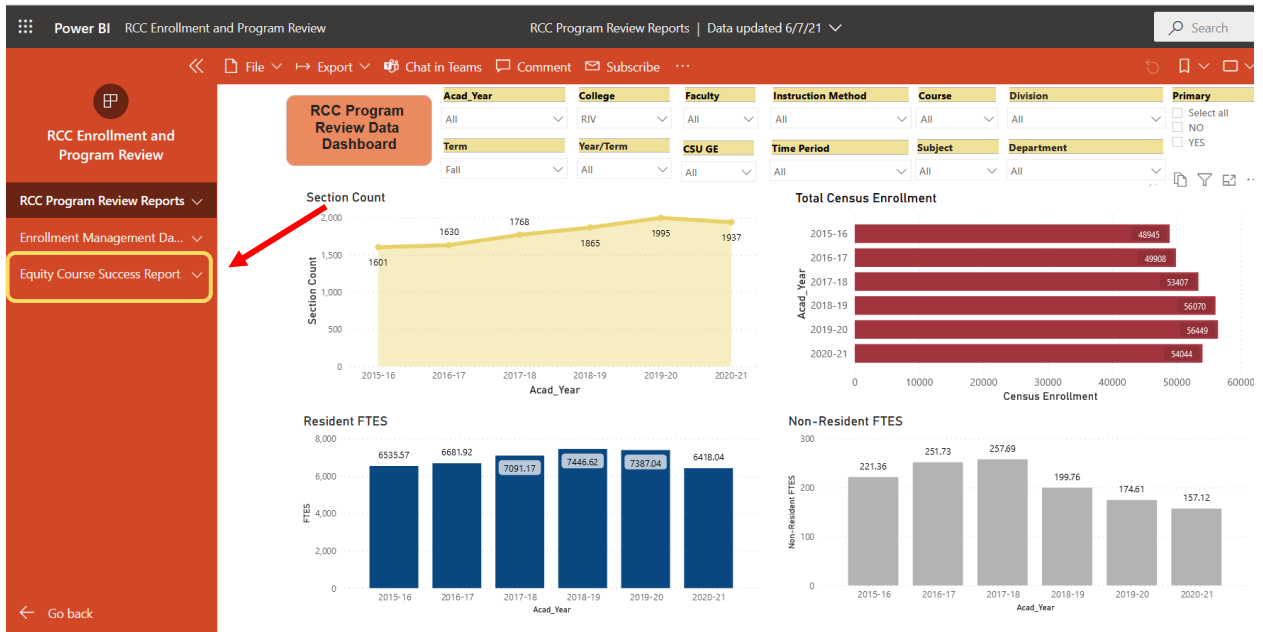


- Click on “RCC Enrollment and Program Review”

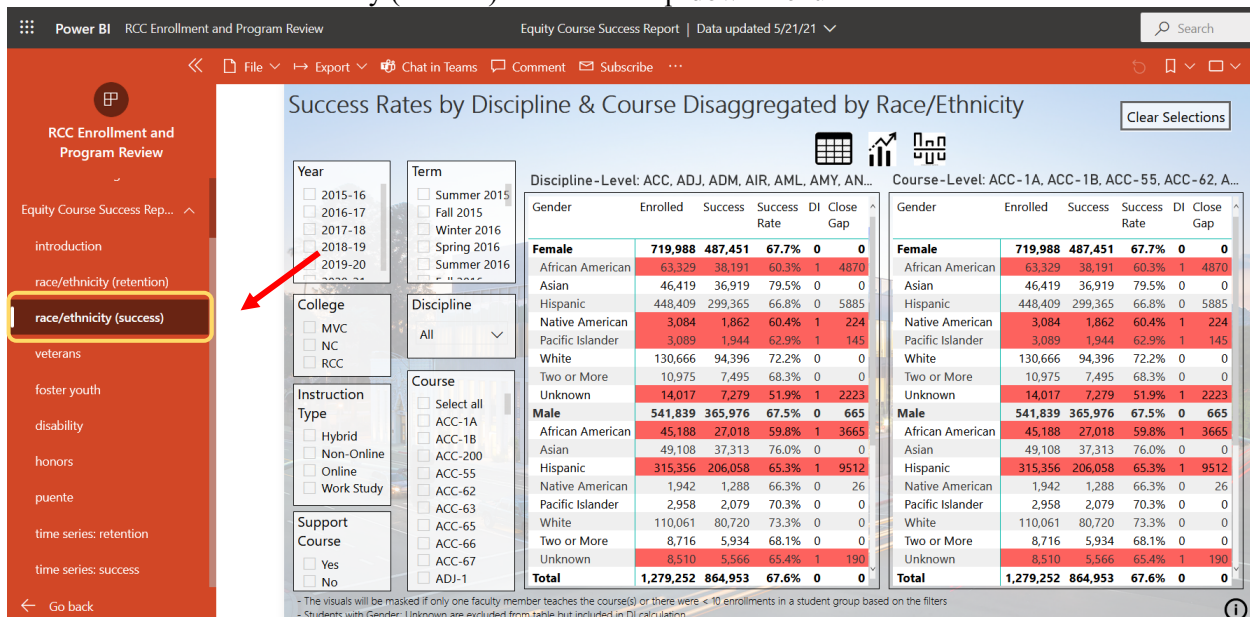
### Step 3

Select Course Success Rate disaggregated by gender and race/ethnicity page

- Click on the “Equity Course Success Report” drop-down menu



- Click on “race/ethnicity (success)” from the drop-down menu



**TIP:** Click on the “Clear Selections” button in the top right to reset the filters when wanting to look at a new course and/or time frame.

## Report Refresher

### Definitions

- *Enrolled:* the number of students enrolled at census
- *Success:* the number of students who passed the course
- *Success Rate:* the percentage of enrolled students who passed the course
- *DI:* a 1 indicates disproportionate impact (will also be in red) and a 0 indicates no disproportionate impact. Disproportion impact is calculated using the Percentage Point Gap methodology (additional details on methodology found [here](#))

- *Close Gap*: the number of additional students needed to completely close the equity gap (if all other variables remain constant). A non-zero “Close Gap” value indicates the group has an equity gap, regardless of the “DI” value (it is possible to have an equity gap but to not be disproportionately impacted).

**Note:** The Enrolled, Success, Success Rate numbers will be masked if only one faculty member teaches the selected course(s).

### Report Layout

Success Rates by Discipline & Course Disaggregated by Race/Ethnicity Clear Selections

**Year**

 2015-16  
 2016-17  
 2017-18  
 2018-19  
 2019-20  
 2020-21

**Term**

 Summer 2015  
 Fall 2015  
 Winter 2016  
 Spring 2016  
 Summer 2016  
 Fall 2016

Discipline - Level: ENG

Gender	Enrolled	Success	Success Rate	DI	Close Gap
<b>Female</b>	<b>719,988</b>	<b>487,451</b>	<b>67.7%</b>	<b>0</b>	<b>0</b>
African American	63,329	38,191	60.3%	1	4870
Asian	46,419	36,919	79.5%	0	0
Hispanic	448,409	299,365	66.8%	0	5885
Native American	3,084	1,862	60.4%	1	224
Pacific Islander	3,089	1,944	62.9%	1	145
White	130,666	94,396	72.2%	0	0
Two or More	10,975	7,495	68.3%	0	0
Unknown	14,017	7,279	51.9%	1	2223
<b>Male</b>	<b>541,839</b>	<b>365,976</b>	<b>67.5%</b>	<b>0</b>	<b>665</b>
African American	45,188	27,018	59.8%	1	3665
Asian	49,108	37,313	76.0%	0	0
Hispanic	315,356	206,058	65.3%	1	9512
Native American	1,942	1,288	66.3%	0	26
Pacific Islander	2,958	2,079	70.3%	0	0
White	110,061	80,720	73.3%	0	0
Two or More	8,716	5,934	68.1%	0	0
Unknown	8,510	5,566	65.4%	1	190
<b>Total</b>	<b>1,279,252</b>	<b>864,953</b>	<b>67.6%</b>	<b>0</b>	<b>0</b>

**College**

 MVC  
 NC  
 RCC

**Discipline**

All

**Instruction Type**

 Hybrid  
 Non-Online  
 Online

**Course**

 ENG-17A  
 ENG-17B  
 ENG-17C  
 ENG-18  
 ENG-1A  
 ENG-1AH  
 ENG-1B  
 ENG-1BH  
 ENG-20  
 ENG-23  
 ENG-25

**Support Course**

 Yes  
 No

Course - Level: ENG-1A

Gender	Enrolled	Success	Success Rate	DI	Close Gap
<b>Female</b>	<b>31,226</b>	<b>19,875</b>	<b>63.6%</b>	<b>0</b>	<b>0</b>
African American	2,678	1,503	56.1%	1	153
Asian	1,776	1,346	75.8%	0	0
Hispanic	21,051	13,046	62.0%	0	0
Native American	121	69	57.0%	0	6
Pacific Islander	156	88	56.4%	0	9
White	4,682	3,340	71.3%	0	0
Two or More	453	288	63.6%	0	0
Unknown	309	195	63.1%	0	0
<b>Male</b>	<b>23,504</b>	<b>13,802</b>	<b>58.7%</b>	<b>1</b>	<b>1155</b>
African American	1,926	988	51.3%	1	205
Asian	1,984	1,388	70.0%	0	0
Hispanic	14,700	8,318	56.6%	1	994
Native American	83	50	60.2%	0	2
Pacific Islander	108	60	55.6%	0	7
White	4,068	2,622	64.5%	0	0
Two or More	337	208	61.7%	0	0
Unknown	298	168	56.4%	0	16
<b>Total</b>	<b>55,470</b>	<b>34,143</b>	<b>61.6%</b>	<b>0</b>	<b>0</b>

- The table on the left (green box) represents the data at the discipline-level based on the courses selected.
- The table on the right (red box) represents the data at the course-level based on the courses selected.

### Buttons

The buttons in the middle of the report under the title allow the user to view the data in different formats. Depending on the page, different data views will be available. Each button shows the data in the following form (can also find the following information by hovering over the button within the report):



Table of course retention/success rates



Bar chart of course retention/success rates



Bar chart of percentage point gaps



Line chart of course retention/success rates (only available on the “time series: retention” and “time series: success” pages

**TIP:** If you prefer having a hard copy when analyzing data, you can export a data view by clicking the “Export” drop-down menu and selecting the format you prefer (suggest PDF, but Powerpoint and Excel also available). The export will include every page of the report, but you can delete these extra pages in Adobe.

**Exercise #1: Overall Course Success Data**

For the following examples, use only RCC data. Select a discipline or specific course that you wish to look at. What are the overall enrollments and course success rates for the following scenarios?

Discipline: \_\_\_\_\_

Course (optional): \_\_\_\_\_

2015-16: Enrolled (#): \_\_\_\_\_ Success Rate (%): \_\_\_\_\_

2016-17: Enrolled (#): \_\_\_\_\_ Success Rate (%): \_\_\_\_\_

2017-18: Enrolled (#): \_\_\_\_\_ Success Rate (%): \_\_\_\_\_

2018-19: Enrolled (#): \_\_\_\_\_ Success Rate (%): \_\_\_\_\_

2019-20: Enrolled (#): \_\_\_\_\_ Success Rate (%): \_\_\_\_\_

Compare the course success rates from 2015-16 to 2019-20, has the rate increased, decreased, or remained similar (< 1%)? How much did the course success rate increase or decrease? Did the number of enrolled students increase, decrease, or remain stable over this time period?

Example: Course success rates in ENG-1A have declined by 13.1 percentage points from 68.0% in 2015-16 to 54.9% in 2019-20. The number of students enrolled in ENG-1A has more than doubled (104.3% increase) going from 2,997 enrolled students in 2015-16 to 6,124 enrolled students in 2019-20.

What trends stand out? Do you have any hypotheses or insights on why you see those trends? What questions could you ask faculty members of this discipline to gain more information and help those faculty identify what is leading to those trends?

Example: There has been a steady increase in the number of students enrolling in ENG-1A starting in 2017-18. Compared to 2015-16, the number of students enrolled in ENG-1A has more than doubled. I know that AB705 has recently been implemented. Do you think this initiative would have helped lead to

these large changes in enrollment numbers? Has there been any other changes that could have led to these changes?

**Exercise #2: Disproportionately Impacted Groups (Course Success Rate)**

For the following examples, use only RCC data. Select a discipline or specific course that you wish to look at (can be the same as exercise #1). Based on the past pre-COVID five Fall terms (Fall 2015 to Fall 2019), provide data for the following questions.

Discipline: \_\_\_\_\_  
Course (optional): \_\_\_\_\_

Which group (n > 10) had approximately the highest course success rate in Fall 2015 (preferably not “Two or More” or “Unknown”)?

Highest Performing Group (HPG): \_\_\_\_\_

Course Success Rate of HPG:

Fall 2015: Enrollments \_\_\_\_\_; Course Success Rate \_\_\_\_\_  
Fall 2016: Enrollments \_\_\_\_\_; Course Success Rate \_\_\_\_\_  
Fall 2017: Enrollments \_\_\_\_\_; Course Success Rate \_\_\_\_\_  
Fall 2018: Enrollments \_\_\_\_\_; Course Success Rate \_\_\_\_\_  
Fall 2019: Enrollments \_\_\_\_\_; Course Success Rate \_\_\_\_\_

Select a disproportionately impacted (DI) group. If there are multiple DI groups, then select one (preferably not “Two or More” or “Unknown”).

**Tip:** Generally, there is more variability term to term when the number of enrolled students is lower so it can be more challenging to identify trends.

Disproportionately Impacted Group (DIG): \_\_\_\_\_

Course Success Rate of DIG:

Fall 2015: Enrollments \_\_\_\_\_; Course Success Rate \_\_\_\_\_  
Fall 2016: Enrollments \_\_\_\_\_; Course Success Rate \_\_\_\_\_  
Fall 2017: Enrollments \_\_\_\_\_; Course Success Rate \_\_\_\_\_  
Fall 2018: Enrollments \_\_\_\_\_; Course Success Rate \_\_\_\_\_  
Fall 2019: Enrollments \_\_\_\_\_; Course Success Rate \_\_\_\_\_

What is the equity gap between the HPG and the DIG?

**Tip:** [DIG Course Success Rate] – [HPG Course Success Rate]  
Fall 2015: \_\_\_\_\_

Fall 2016: \_\_\_\_\_  
Fall 2017: \_\_\_\_\_  
Fall 2018: \_\_\_\_\_  
Fall 2019: \_\_\_\_\_

Describe any trends that you see regarding the HPG and DIG data (course success rates, equity gap between the two groups, number of enrollments).

- Who are the two groups?
- Are course success rates and enrollments increasing, decreasing, or remaining the same?
- Has the course success rate gap between the two groups changed over time?

Example: During Fall 15, the highest performing group in ENG-1A was Asian female students (course success rate: 79.2%). There were multiple disproportionately impacted groups (African American male and Hispanic male students), but the one I will be focusing on is African American male students (course success rate: 40.9%). Asian female students experienced a slight decrease in course success rate from Fall 15 to Fall 19 (-2.9 percentage points); however, after a large drop in Fall 2016 (course success rate: 62.6%) there were increases in every subsequent year. There has been an increase in the number of Asian female students that are enrolled in ENG-1A, starting at 53 students in Fall 15 and ending at 80 students in Fall 19.

Between Fall 15 and Fall 19 the course success rates for African American male students increased by 3.8 percentage points. However, during that time there was a lot of volatility amongst the course success rates. There was a large increase in course success rate in Fall 16 (59.3%), but that also corresponded with a low number of enrolled students (27). There was a large decrease in course success rate in Fall 2018 (33.3%) that was followed by a large increase in Fall 2019 (44.7%). During this time period, nearly three times more African American students are enrolling in ENG-1A (Fall 15: 44; Fall 19: 123).

From Fall 2015 to Fall 2019 the course success rate gap between Asian female students and African American male students has decreased (Fall 15: 38.3 percentage points; Fall 2019: 31.6 percentage points). While the decrease in the magnitude of the equity gap is promising, the gap is still large and the African American male student group is still considered disproportionately impacted.

If you were in a meeting with a faculty member who taught in this discipline or this course, what questions would you ask them to gain more information about why you saw the trends that you identified? How could you introduce the data to this individual to encourage inquiry and not defensiveness?

Example: I would start off the conversation by highlighting one of the promising trends to create a soft opening with the faculty member and to ensure to not push them into a defensive positioning. After initially talking through the data and pointing out the important parts, such as the disproportionately

impacted and groups experiencing equity gaps, some questions I would start to direct the conversation are:

- “The data show that there has been a significant increase in the number of African American male students enrolling in ENG-1A. By chance do you have any ideas or thoughts behind why we may be seeing those results? Has your department made any changes that could be leading to these increases?”

*While I have a good idea that the results are probably largely due to the implementation of AB705, this provides the faculty member an opportunity to provide easy insight and can get the conversation going.*

- “Combined with the increased number of African American male students who enrolled in ENG-1A, between Fall 2018 and Fall 2019 there was also a large increase in course success rate for this student group. Do you have any ideas on what may have changed that could have led to such a drastic increase in success for African American male students?”

I hope that my first question helped jog the faculty member’s memory and they will be able to remember some of the changes that occurred either within the department or within their classroom that could have resulted in these changes.

