



Active Students Report Using Power BI User Guide

Version 1.0
Created: Apr 6, 2020

Active Students Report

The purpose of this report is to answer questions concerning retention and graduation based on students' registration activities. In order to help students retain and complete their degrees, this report aims to identify those active but not registered or under registered students and the possible reasons behind it.

Data overview

The report presents data for current term, which by definition is the term that its active registration window is open for registration. Note that there is a partial overlap window for summer term and fall term registration. When multiple term registration periods are open, multiple terms will be available in the current term slicer and users can select one term at a time.

Student's current person information (name, age, ethnicity), contact information (phone number, email address), academic information (academic level, school hierarchy, total credits, GPA), and financial aid information (FAFSA, unmet_need, Pell Grant) are displayed in the report. Registration activities for the most recent four terms (next term, current term, prior term, and the term before prior term) are also available.

Note that the dataset for this report is scheduled to refresh every morning during active registration windows.

Methodology

The data used in this report for active students come from active academic programs data. The registration data by term is aggregated at student level.

Current term is active from the start date of registration until 10th day of that term. After the end of the active registration window (10th day), the report will be blank until the next registration window opens. The 10th day of the term is used for two reasons: it occurs after the last add/drop day of the term and it allows the Registrar's office adequate time to update any additional data on students.

Notes on Data

Power BI allows users to access and interact with information without having to understand the complexities associated with data merging and transformation. There are, however, some data nuances that are important to understand in order to best utilize the information presented in this report.

The counts of students in these reports are distinct. To illustrate: students affiliated with more than major or program within a particular school would only be counted once **at the school level**. If that same student has a major in two different schools, that student would be counted in both – if the counts are per school. For counts at the department level, students who have a major in two separate departments but in the same school will be counted twice.

We welcome your feedback about both the accuracy of the data and the optimization of report layout.

Power BI Building Blocks

Microsoft Power BI is a collection of software services, apps, and connectors that work together to turn diverse sources of data into coherent, visually immersive, and interactive insights.

Power BI relies on basic set of building blocks to create these insights:

- **Datasets:** A **dataset** is a collection of data that Power BI uses to create its visualizations. The Power BI desktop tool provides an extensive set of data connectors and tools to extract, transform, and integrate data for reports. ITS and IR will provide datasets curated for reporting for most users, although we anticipate that there will be a group of power users who will opt to construct and integrate their own datasets.
- **Reports:** In Power BI, a **report** is a collection of visualizations that appear together on one or more pages. The visualizations in a report in Power BI are collection of data elements and themes that are related to each other.
- **Visualizations:** **Visualizations** can be simple, like a single number that represents something significant, or they can be visually complex. The goal of a visual is to present data in a way that provides context and insights, both of which would probably be difficult to discern from a raw table of numbers or text.
- **Slicers:** **Slicers** are visualization designed specifically for users to select and filter into relevant data.
- **Dashboards:** A Power BI **dashboard** is a collection of visuals from one or more report onto a single page that users can share with others. Dashboards allow for quick insight across multiple reports and provide users an easy way to navigate to different reports.

Overview

Visualizations, Slicers, Toggle, and Interactions

Slicers

Categorical slicers here are organized into lists on top two rows of the page. Users can make selections of interest using the slicers to filter data. Current Term slicer is pre-selected and only one term is selectable when two active registration windows overlap for Summer and Fall. Graduation Application and Leave of Absence slicers are also pre-selected but they are changeable by users.

With the numeric range slicers on left side of the page (Registered Credits and Cumulative GPA), users can either use the slider or type in the values in the boxes above the slider to select an inclusive range or a precise number. When users choose to type in the values in the boxes, click on elsewhere or press the Enter key on keyboard to make the selection work.

Both categorical and numerical slicers are global slicers. They are present on each report page and are synced across the different tabs in this report. **Synced slicers** are connected to one another so, regardless of which report page a user selects, the same slicer selection will appear.

Toggle

Two toggle options are available to present active students data by school and registration status. Users can view data in either count values or percentage values in a stacked bar chart by clicking on the toggle.

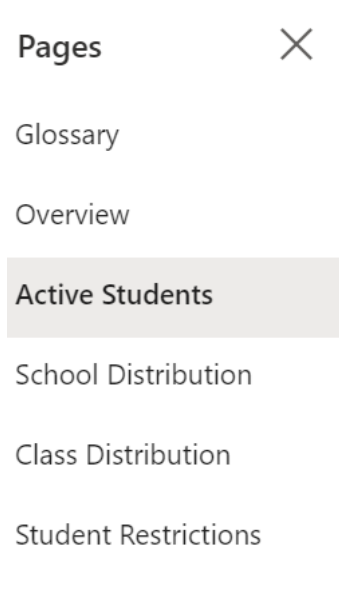


Highlighting and Interactions


Visualization tiles (non-slicers) cross-highlight the data. Selecting an element within a visualization will highlight the associated records with data on the adjacent fields. Users can select anywhere within the visual element on most tiles to highlight data. This includes fields on the axes. Clicking on the white part of the tile to un-select any category/characteristic that has been selected in a tile or any other visualization.

Navigating between report pages

Users can navigate using the report tabs at the bottom of the report.



Additional Options

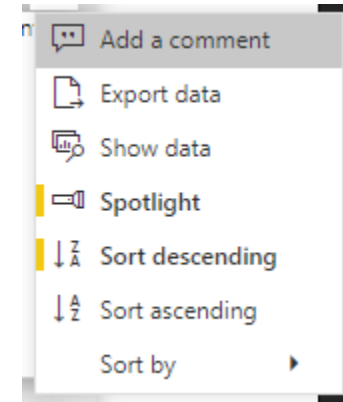
Selecting the ellipsis opens a dropdown with  additional options.

Add a comment: This allows users comment and share on any part of the report. InformSU is currently evaluating this new feature.

Export data: See below

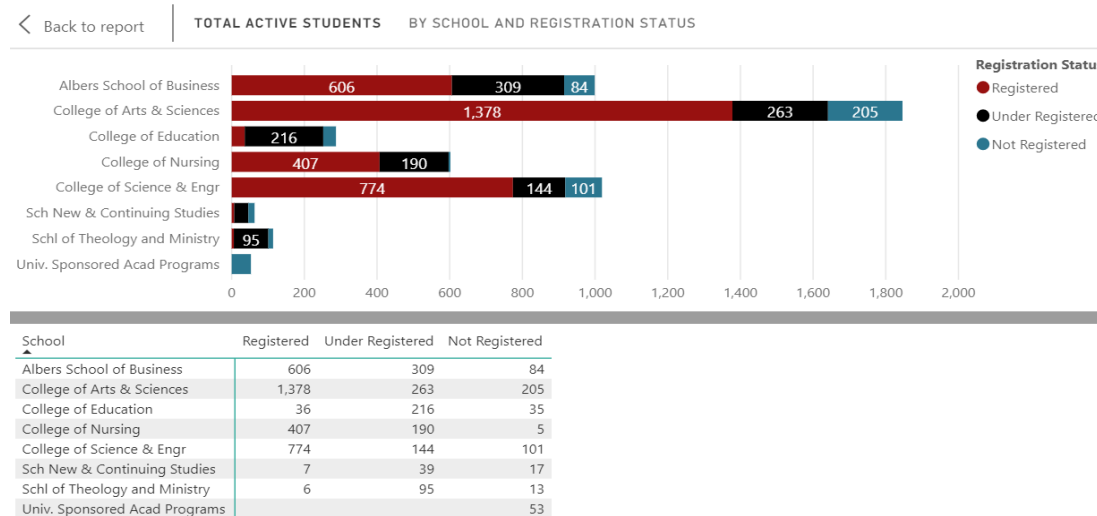
Show data: See below

Sorting Data: User can sort the visuals by variable using the Sort by option and then select descending or ascending order for the data



Show data

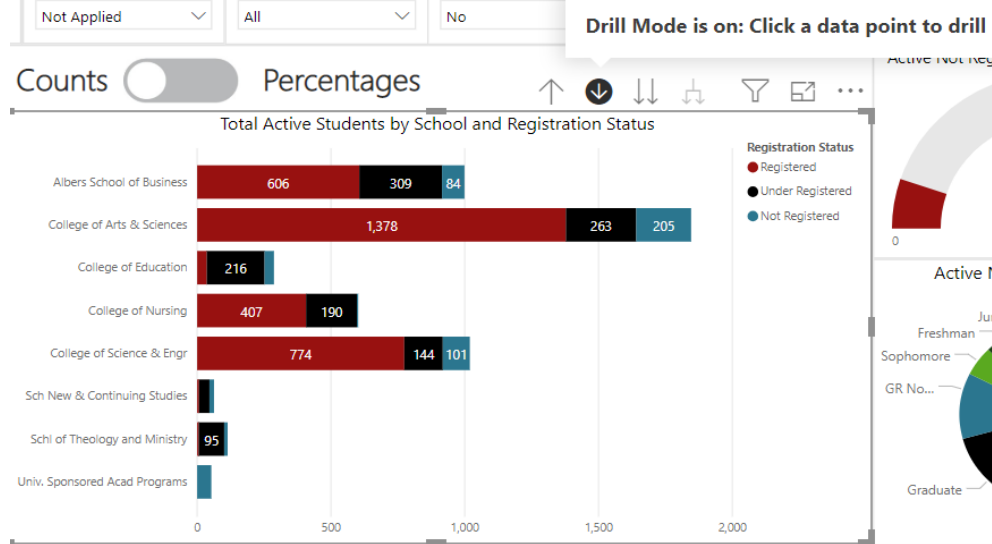
Users can view the chart and the table at the same from the ellipsis dropdown mentioned above or by right clicking on the chart and selecting **Show data**. An example is provided here.



Drill Downs

Enabling drill down

To enable drill down select the main visualization tile and a drill down button menu will appear.



When drilling down into a group with a large number of categories, majors for instance, it is recommended to use the slicers first to limit the visual to a school or a small set of departments.

Drill down menu



Button	Icon	Description
Drill Up		Move up one level of the hierarchy
Drill Mode On/Off		Toggle Drill Mode on and off
Go To Next Level of Hierarchy		Move down one level of the hierarchy
Expand all down one level of the hierarchy		Moves down one level of the hierarchy. Record labels are maintained

Filtered Drill Down vs. All Drill Down

The visual will provide different details depending on how the user drill down into the data.

Filtered drill downs: If a user select a data element within a visual, they will move to the next level of hierarchy while filtering into that selected value.

All Drill Down: If a user uses the Go To Next Level of the Hierarchy option, the visual moves to the next level of the hierarchy without filtering any data.

Report Views

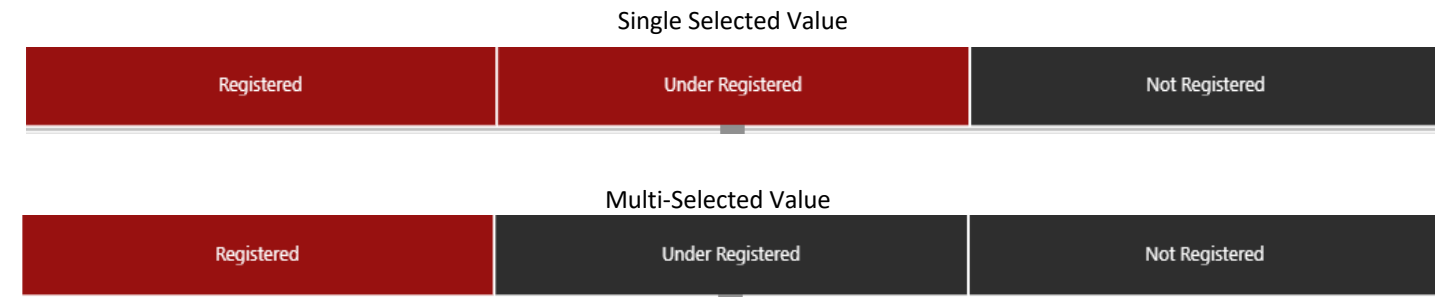
The table in Active Students page lists students' contact information, demographics, academic information, and financial aid information. The following three pages provide a view of the data in detail with respect to school distribution, class distribution and student restrictions.

Visualizations, Slicers, and Interactions

Slicers

In addition to the list slicers, registration status slicer above the bar chart is arranged horizontally. This slicer is also synced across all different tabs in this report except for the overview page.

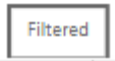
Select registration status of interest and Power BI will slices and indicates the selection.



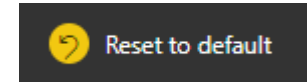
Filtered Views

One of the challenges in Power BI is understanding if a visual is filtered. From slicers, cross-highlighting data from another visual, and drill downs, it is easy to lose track of exactly what is being presented on a report.

Filtered icon



To address this issue each report has a small tile indicating if the data is unfiltered or filtered. Rolling over the tile will provide users an option to reset the visual to the default view.



Resetting Visuals

To reset to the default view, select Reset to default in the ribbon

Exporting Data

Export data

Which data would you like to export?

Summarized data

Underlying data

File format:

.xlsx (Excel)

① Data exports with all applied filters.

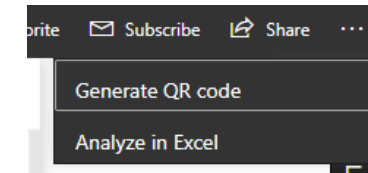
① For large data models, only a limited number of rows can be exported. [Learn more](#)



Power BI enables users to export the underlying data in two ways.

Export Data within a visual is a quick to extract the underlying, summarized data used to create a visual. The data are exported into either an Excel file along with the slicers applied or a Comma Separated Value (CSV) file. There is currently no way to export the visual to Excel.

The **Analyze in Excel** option downloads an Open Database Connectivity (ODBC) linked excel file. An ODBC connection is a Microsoft interface that allows applications to access data in database management systems using SQL as a standard for accessing the data. This option will link an excel file to the Power BI data model. Users can then use Power Pivot Tables to build their own tables and views within Excel. Only fields available in the data model will appear in the excel file. Updates to the data model will appear within Excel file when the file connection refreshes.

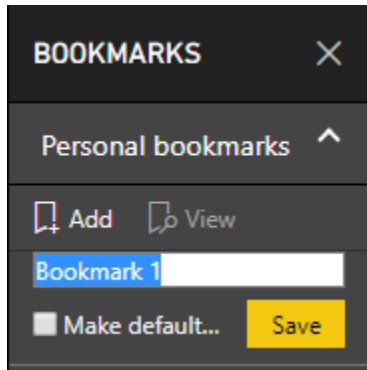


Quick Tip: Export to .xlsx (Excel)

Exporting to .xlsx (Excel) will also export the applied filters to the data. This information is critical for troubleshooting data issues and replicating logic. Use this option to replicate previous data extracts.

Personal Bookmarks

Bookmarks are the way to save a view in Power BI. In the Power BI App Space, users can define **Personal Bookmarks**. Personal Bookmarks save the view exactly how the user has defined. These provide a quick way to return to interesting insight or a commonly used view of the data.



The bookmarks are associated with each page of the report and can be used to navigate to different visualizations. These bookmarks can be used to navigate around the report during a presentation or create a custom ordering of the visualizations.

The Personal Bookmarks are only visible to each user.

When a report is updated with updates or changes, Personal Bookmarks will remain. However, if an element saved in the bookmark is removed or changed, the bookmark may not render the visualization.

Managing Personal Bookmarks

To **update** Personal Bookmarks, select the ellipsis and select update. Updating a bookmark will overwrite the bookmark to current view. Use this option to make adjustments and changes to an existing bookmark.

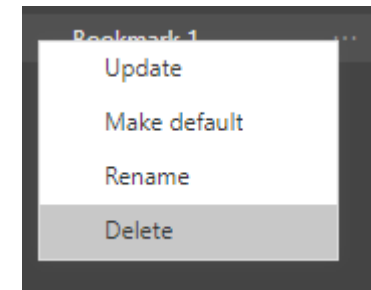
To **delete** Personal Bookmark, select the ellipsis and select delete.

Default Personal Bookmarks

Use the **Make Default View** option to set the book as the default view of the data when opening report.

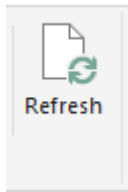
Quick Tip: Name Your Bookmark

Bookmarks are users best way to save views. Because bookmarks save the visuals exactly on user selection and are page specific, it is **strongly recommended** to clearly name the bookmarks.



Power BI Desktop connection

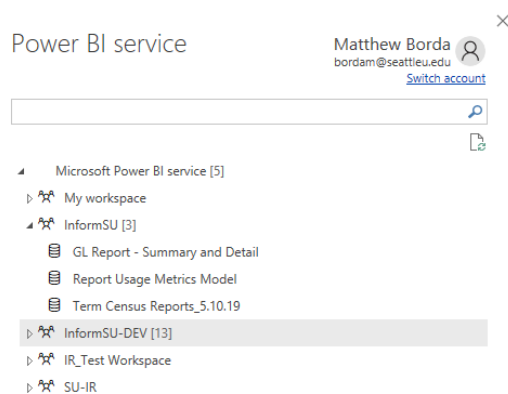
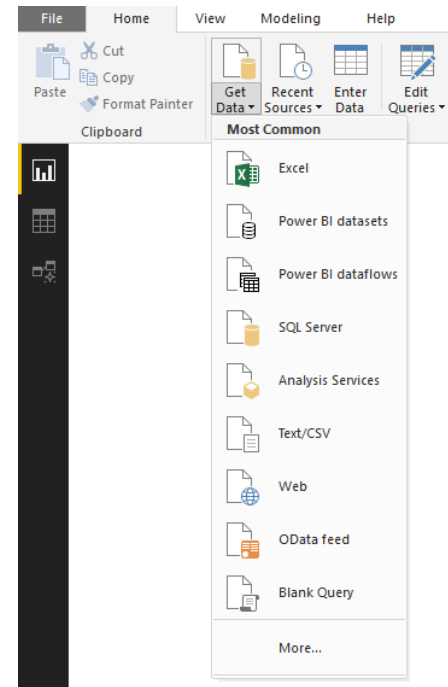
The workspace does not allow users to made edits to the report or build custom visualizations. The data are available to connect to a live excel file, see Analyze in Excel above, or through the Power BI desktop.



These data connection will connect the Power BI data model. Changes or updates to the models will also appear in the connected versions when the user **Refreshes** the data.

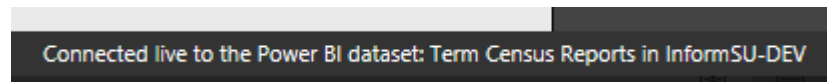
This connection method does not allow users to integrate additional data into the model.

To get data in Power BI, select **Power BI datasets** from the **Get Data** on the home tab of the ribbon.



Next, users will see a list of workspaces. Select the InformSU workspace and the name of the report to connect to the data.

Power BI will automatically connect to the data. Once the connection is made, save the file and the .pbix file will retain that data connection. A confirmation will appear at the bottom of the report page.



Resources

Glossary and Release Notes

The Glossary and Release Notes page comprises a table with the variable definitions for all the fields contained within the data model. There may be some measures created within Power BI that do not get directly included in the report.

The release notes allows users to see when the last release of data was as well as some brief notes on changes made on the report.

InformSU Resources

InformSU: <https://www.seattleu.edu/ir/informsu/>

Training Resources: <https://www.seattleu.edu/ir/informsu/about-power-bi/training-resources/>

Power BI Seattle University FAQ: <https://www.seattleu.edu/ir/informsu/about-power-bi/faq/>

Project Updates: <https://www.seattleu.edu/ir/informsu/informsu-updates/>

Microsoft Resources

Learn Power BI: <https://powerbi.microsoft.com/en-us/learning/> or <https://docs.microsoft.com/en-us/power-bi/guided-learning/>

Power BI Documentation: <https://docs.microsoft.com/en-us/power-bi/#pivot=home&panel=home-all>