

UAccess ANALYTICS

Next Steps: Working with Pivot Tables



COPYRIGHT & TRADEMARKS

Copyright © 2019, Arizona Board of Regents

Record of Changes		
Date	Version #	Description
09/17/2010	1.00	Original
08/15/2019	2.00	Added the cover graphic, updated branding to UAIR; added info about Analytics Office Hours to page iv; updated all images. Brought the entire document into the present.

Table of Contents

<i>About this Booklet</i>	iv
<i>Access to Analytics Data</i>	iv
<i>UAccess Community</i>	iv
<i>Analytics Office Hours</i>	iv
Working with Pivot Tables	1
What is a Pivot Table?	1
Why Use Pivot Tables?	1
More Information.....	1
Adding a Pivot Table	2
Configuring a Pivot Table	2
Pivot Table Prompts	3
Sections	4
Rows	4
Columns	4
Measures	5
Excluded	5

About this Booklet

This UAccess Analytics booklet is designed to help you become familiar with Pivot Tables, one of the many tools available to Analytics users. The demo includes creating Pivot Tables, and dips into some of the configuration that can be done in Pivot Tables.

This demonstration is generic by necessity, but will provide you with the information you need to build Pivot Tables.

Access to Analytics Data

Request for Individual access to UAccess Analytics can be submitted to **<https://request.uaccess.arizona.edu>**.

UAccess Community

The UAccess Community is an online networking resource available to everyone on campus who use UAccess Systems.

If you have an official UA email address, you can establish membership in the UAccess Community. Just go to **<http://community.uaccess.arizona.edu>** and click the Join the conversation link on the left side of the screen.

Once you've established your membership, you'll have access to valuable information about all of the various aspects of UAccess Systems. You'll want to join one or more of the Forums within the Community, because that's where the value comes in.

Please take advantage of the opportunity and become a member of the UAccess Community.

Analytics Office Hours

Schedule some time with an instructor for help with analysis and dashboard creation or other questions. Register for Analytics Office Hours sessions through UAccess Learning. From the Find Learning screen, click the One-on-One link in the left menu bar.

Working with Pivot Tables

What is a Pivot Table?

Any explanation of pivot tables requires a three-sentence explanation of a standard reporting table:

A table is a "flat" data presentation tool, with data organized and simply displayed in rows and columns. A table provides a summary view of data and enables users to see different views of data by dragging and dropping rows and columns. Tables are two-dimensional reporting tools.

A pivot table, on the other hand, can provide a three-dimensional view of data. Pivot tables present the data assembled in rows, columns, and measures, which creates an unweighted cross-tabulation. A pivot table is a great data summarization tool that can automatically sort, count, total, or average data.

Users can set up and change the structure of the data in the pivot table by dragging and dropping fields into different row, column, or measures locations. This rotation or pivoting gives the tool its name.

Why Use Pivot Tables?

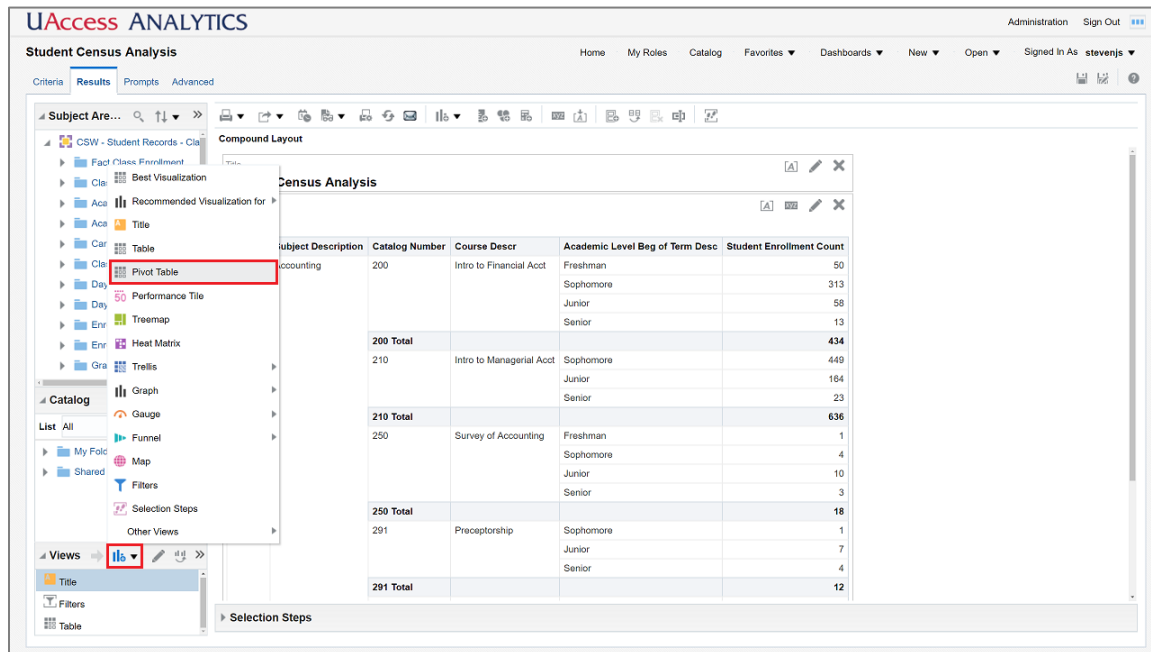
As described above, pivot tables provide a more robust three-dimensional view of the data that can't be found or seen using other reporting tools. They are also a great way to summarize data. Rather than looking at a detailed view of expenses by account over a given period of time, a pivot table can help summarize the expense data into just a few rows. Pivot tables can also breaking up the data by using the values in some other data column as column headers. This is the specific function described in this booklet.

More Information

For additional information, please search for "Pivot Table" in the online **Analytics Help** documentation. There are at least seven specific topics available about pivot tables.

Adding a Pivot Table

Locate and edit the analysis to which you'd like to add a pivot table. From the Results tab of your analysis, click the New View button in the small button bar at the top of the Views pane located in the lower-left corner of your screen. Select Pivot Table from the menu.



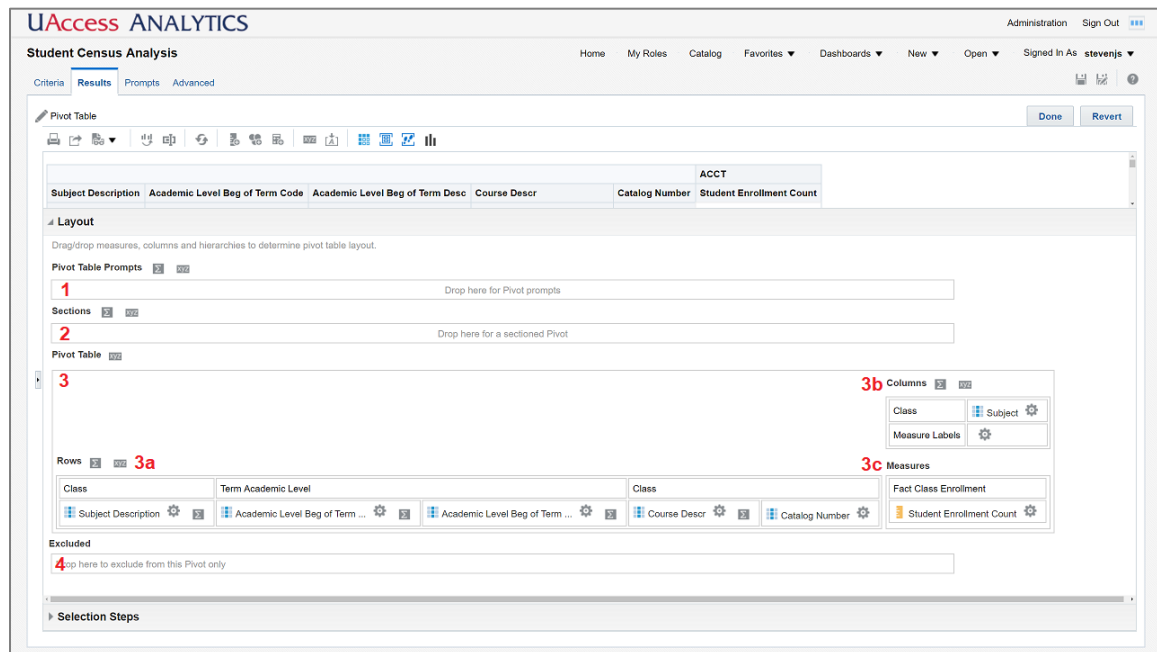
Adding the pivot table to your analysis using this button causes the system to automatically generate the view as best it can, and launches you into edit mode for your new view. It saves you a click or two.

Configuring a Pivot Table

There are several areas into which you may drag and drop the various data columns you've included in your analysis.

#	Position	Description
1	Pivot Table Prompts	Creates a drop-down menu that allows users to select the data they wish to see, with each value in the data column creating a separate pivot table. A combined table can also be included at the top or bottom of the menu list using the Totals button.
2	Sections	For each value in a Section column, a unique pivot table is created, comprised of the columns, rows, and measures defined in the pivot table.
3	Pivot Table	The large box on the screen encompasses the Rows, Columns, and Measures areas, making up the entire pivot table itself. Some formatting can be done.
3a	Rows	Shows data in row orientation. Like columns, pivot tables can contain multiple rows. One row will be created for each of the values that exist in the various data columns used in the Rows area.

3b	Columns	Shows data in column orientation. Pivot tables can contain multiple columns. The values in data columns that are dropped into the Columns area are literally pivoted, creating a column headers for each of the values that exist in that data column. Care should be taken to choose data columns that have relatively few values.
3c	Measures	Populates the section of a pivot table that contains summary data. The Measures area typically contains any data column that includes numeric values.
4	Excluded	Excludes columns from the pivot table results. Columns may exist in the table or other views, but can be excluded from the pivot table to simplify results.

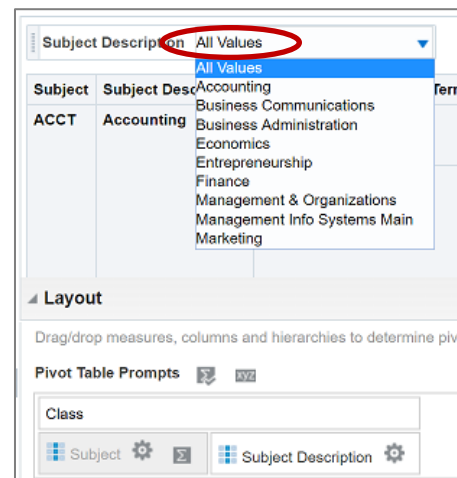


Pivot Table Prompts

Pivot table prompts are especially useful if you have a very large amount of data that can be logically separated into smaller pivot tables, and which would best be viewed one page at a time rather than all at once. Selection of which page to view is made via a drop-down menu called, appropriately enough, a Pivot Table Prompt.

You can add one or more columns of information to the Pivot Table Prompts position in your pivot table. Very often, the first one or two columns in your request are good choices for pivot table prompts. You are not required to add any columns to this area.

This example of a pivot table prompt includes a hidden *Subject* data column which determines the order of the data for the visible *Subject Description* column. The report user is able to select which of those sets of data she wishes to see in the pivot table. Note, too, that an *All Values* option can be added to the prompt selection box. This was done by adding a grand total to that area. The grand total can be placed *before* the other



values in the list, assuming that the user will want to see combined values first, then look at individual values. Alternately, the grand total can be placed *after* the list of other values, assuming that the user would rather concentrate on individual values and only occasionally look at the grand total.

Sections

Dropping a column into the **Sections** area will create a separate, unique pivot table for each value in that column, comprised of the Columns, Rows, and Measures defined in the pivot table. It also expands the analysis to reveal all rows in all sections. This area is best used when the report itself is somewhat limited in scope and the results are, therefore, limited in length. A grand total added to the Sections area will create a separate pivot table devoted to the grand totals. That grand total pivot table can be included either before or after the other individual pivot tables.

Rows

A data column added to the **Rows** area acts as you would expect. You get one row of data per value in that column of information. The Rows position is the default position for most of the data columns in your pivot table. Subtotals can be added, in various positions, to individual data columns included in the Rows area. A Grand Total can be added to the entire area, either before or after the rest of the data. Those features appear in exactly the same way they do in a standard table of data, given the different positions in which you've determined they should be added.

BCOM	Business Communications	212	Comm Essentials in Econ		16	33	11	60
		214	Fundamentals of Bus Comm		394	187	24	605
		314R	Business Communication		17	316	97	430
		315	Management Comm Review			17	17	34
					427	553	149	1129
	BCOM Total							
BMAD	Business Administration	408	Legal & Contract of Business	1408	183	0	1	4345
				572				
			Mktg Research For Mngr				1	1
					1261	1077	1130	1599
			Grand Total					5067

Columns

The **Columns** area is a bit more powerful and useful in configuring your data into some logical order. Rather than leaving a column of data in the Rows position, where the data creates a unique row for each value, you can move that column to the Columns position and you will break the row up into one column per value. This is more valuable if you know there are only a few unique values in the column you put into the Columns position. In fact, there *should be* only a few unique values in that column.

In the analysis displayed at the beginning of this document (page 1), the student enrollment numbers for the various classes in that report are broken down by Academic Level. One row per level, and as many as four rows per class. That view is a standard table view. A two-dimensional view. There's nothing wrong with it, but a pivot table give you other options.

In a pivot table, given the third dimension, you can move the Academic Level data columns into the Columns area with the result seen here:

Subject Description

All Values

Subject	Subject Description	Catalog Number	Course Descr	Freshman	Sophomore	Junior	Senior	Grand Total
ACCT	Accounting	200	Intro to Financial Acct	50	313	58	13	434
		210	Intro to Managerial Acct		449	164	23	636
		250	Survey of Accounting	1	4	10	3	18
		291	Preceptorship		1	7	4	12
		310	Cost + Managerial Acct		3	28	49	80
		391	Preceptorship			2	1	3
		400A	Inter Financial Acct		6	60	32	98
		400B	Inter Financial Acct I			41	55	96
		400C	Inter Financial Acct		6	75	24	105
		420	Principles of Federal Taxation			1	00	01

Layout

Columns

Term Academic Level

Academic Level Beg of Term ...

Academic Level Beg of Term ...

Rows

Class

Subject

Subject Description

Catalog Number

Course Descr

Measures

Fact Class Enrollment

Student Enrollment Count

The values in the Academic Level data columns have been translated into column headers, which breaks the numbers up into columns *and* rows. The results are concentrated into a smaller physical space and you have the option of getting your numbers summed both vertically and horizontally. This, by the way, is where the pivot table gets its name. Subtotals can be added to the data columns in the Columns area, and a grand total can also be included.

Measures

You must have at least one data column in the **Measures** position. The name of that area refers to the values being *measured* for your analysis. Those columns contain numeric information. The system typically places those columns into the Measures position automatically as you create the pivot table. You may also have to identify those columns and manually move them into place. It depends on the nature of the data column itself and how that data column exists in the subject area. The values in the Measures area are aggregated as dictated by the other areas. Measures can be summed, counted, distinct counted, or averaged.

Excluded

All of the columns of data you have in your analysis automatically appear in the pivot table. Sometimes, you'd rather not see all of those columns. You may have wanted them in the table, but not in the pivot table. No worries. You can simply move those columns to the **Excluded** position. The data will remain in the table, if used, but will not be in the pivot table.

Any columns of information you add to the analysis from within the pivot table screen will also automatically go into the Excluded position. You can drag them from there into a more appropriate section as needed.