

# User Guide

The current training, *Demonstrating Results: Developing State and Local Report Cards*, requires the use of readily available software to collect data, create tables and charts, and design report cards for performance evaluation. This *User Guide* has been developed specifically for the training to help state teams create tables and graphs in order to use that information to produce Report Cards.


## Creating Graphs and Charts in Excel:

Open the Excel spreadsheet and determine which data cells you would like to include as a trend or comparison graph or chart that will be placed in the Report Card template. To focus on only this subsection of your data table, create a new data table beside the current table with only the information needed for the graph or chart you will create.


The example below refers to the Contact Hours worksheet in the State Report Card file, specifically the total average hours over the last 3 years. We will use this data to create a bar chart that shows a trend.

	A	B	C	D	E	F	G	H	I	J	K	L
1	<b>State Report Cards</b>											
2	III. Contact Hours											
3												
4		2004				2003				2002		
5		Total Enrollment	Total Hours in Program	Average Hours	State Standard	Total Enrollment	Total Hours in Program	Average Hours	Total Enrollment	Total Hours in Program	Average Hours	
6		#	#	#	#	#	#	#	#	#	#	
7	Contact Hours											
8	ABE	27,642	1,326,816	48	70	28,964	1,562,324	55	26,893	1,195,489	45	
9	ASE	11,271	598,092	52	50	12,990	624,193	48	10,472	504,629	48	
10	ESL	72,930	3,500,640	48	70	75,021	3,604,012	48	71,104	3,201,423	45	
11	<b>Total</b>	<b>111,843</b>	<b>5,413,548</b>			<b>116,975</b>	<b>5,810,519</b>		<b>108,469</b>	<b>4,904,520</b>		
12												
13												
14												
15												
16		Average Student contact hours trend										
17		2002	2003	2004								
18	ABE	45	55	48								
19	ASE	48	48	52								
20	ESL	45	48	48								
21												

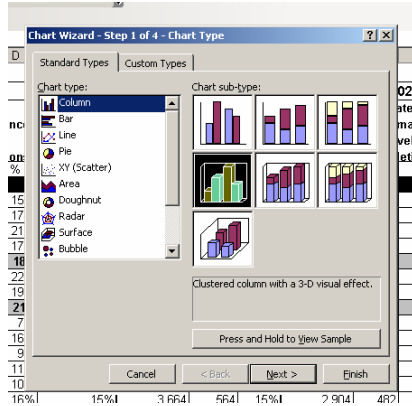
After selecting the data cells including the column and row names, copy that information into an empty group of cells. See above for an example. Note: The new data table is highlighted for training purposes only.

 **Tip: If the cells selected contain formulas, the numbers cannot be copied and pasted from the main data table to the new table you intend to create. Instead, you will need to retype the numbers and format the new data cells to show commas, percentage signs, and so on, as necessary so that the chart or graph you create will also appear in the correct number format.**

To begin creating the graph, select the data cells including the column and row names (not the title of the table) from your newly created data table. Note: The Excel spreadsheets list the current year's data (2004), then continue chronologically back in time. For trend charts, the order of the data presented must be reversed.


Using the standard Excel toolbar, click on **Insert** and then **Chart Wizard** (). Follow the steps that are outlined below to create a bar graph from the data selected in this example.

### Chart Wizard – Step 1 of 4: Chart Type

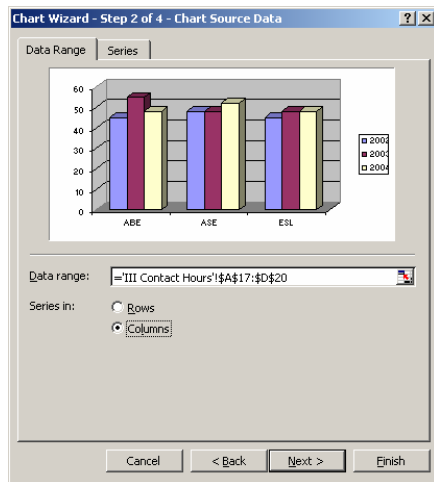


When the **Chart Wizard** opens (as seen on the left), the **Standard Types** tab will be visible on the top left. Select from the options under **Chart type**, in this case **Column**. Next, select the **Chart sub-type**. For this example, the chart sub-type selected is a 3-D graph. (The **Custom Types** tab provides options that are not required for this example.)


Then click “Next>.”

 **TIP: Click and hold the button that says Press and Hold to View Sample to preview your chart.**

### Chart Wizard – Step 2 of 4: Chart Source Data



Since the data in the new Excel table has already been selected, there is no need in this example to choose a data range. However, ensure that the **Series in** selection is **Columns**. Then, click “Next >.” (In this example, no changes will be made in the **Series** tab.)

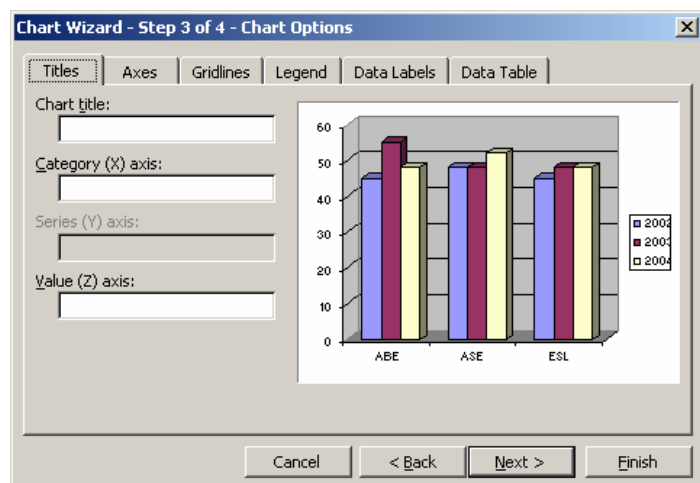
 **TIP: Series in allows you to select either Rows or Columns, which will change the category appearing as the x-axis of the chart. The preview pane on this screen allows you to view what happens when you switch between these 2 options.**

### Chart Wizard – Step 3 of 4: Chart Options

The tabs in this step are used to change the appearance of the chart or graph.

**Titles.** Use this tab to type in the **Chart title** and the subtitles for the axes.

Note: Because the 3-D **Chart sub-type** was selected you will see options for titles of the z-axis instead of the y-axis in this example.



**Axes.** No changes are made to the axes in the current example.

**Gridlines.** No changes are made to the gridlines in the current example.

**Legend.** Check the box for Select Legend so that the legend will appear in the chart. The legend will appear with the coding of the bars in the chart, which is the years 2002, 2003, and 2004 in this example.

Click on Placement: Top.

**TIP:** The legend may be placed anywhere around the chart itself. Experiment with different placements and view those changes in the preview pane. Some placements of the legend may be distracting, while others may take up more space than necessary.

**Data Labels.** In this example, None is selected. However, often it is helpful to include the data label with the numerical value for each bar to highlight the actual value.

**Data Table.** In this example, the data table is not inserted as part of the graph and no check is marked next to Select Table.

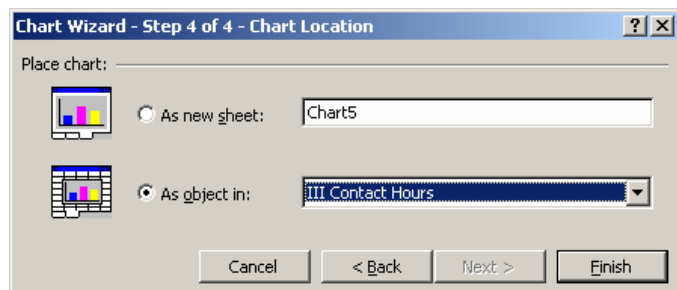
**TIP:** You may choose to include a data table instead of a legend, but there would be no need to include both. If selected, this option will include the data table just as it appears in the Excel spreadsheet. The data table may provide more useful information or it may be distracting. View the graph or chart with and without the data table to become familiar with this option.

Click “Next >.”

### Chart Wizard – Step 4 of 4: Chart Location

The chart or graph that has just been created may be placed in a new sheet within the Excel workbook, or it may be placed in the same sheet as the data in the table that has been created.

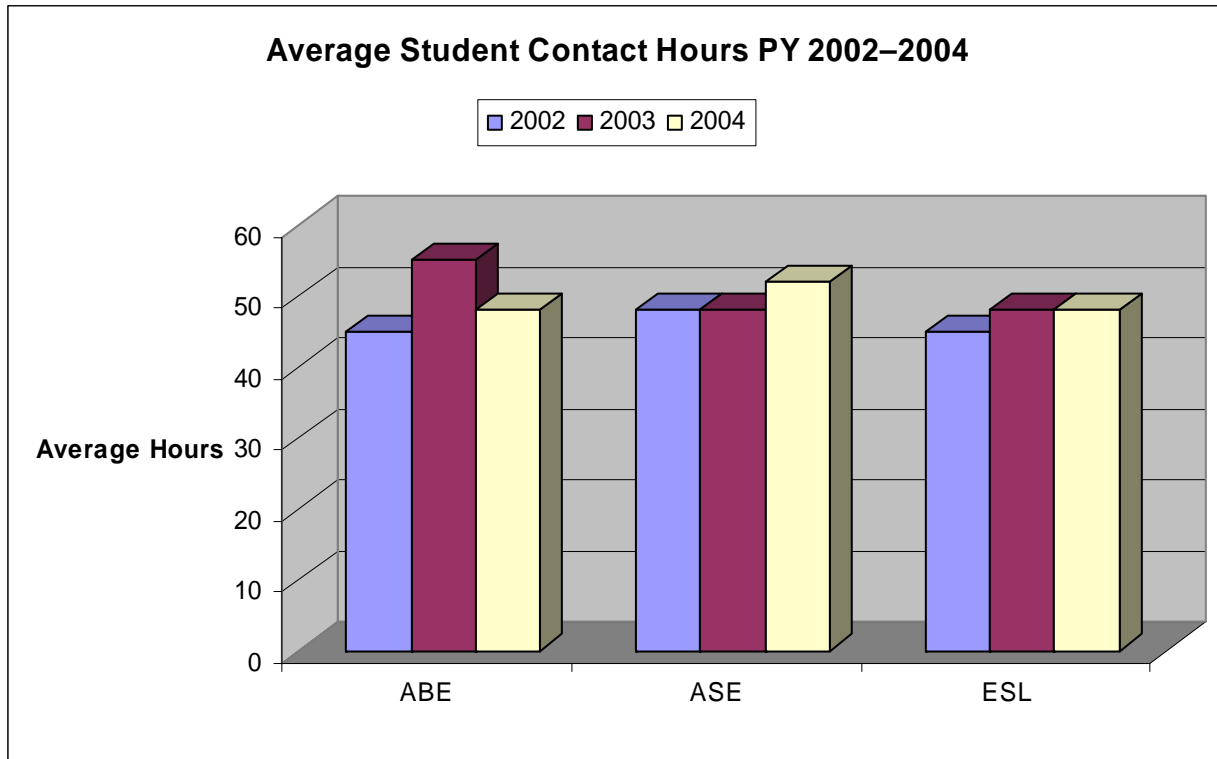
In this example, select the second option:  
As object in: III Contact Hours.



Click “Finish.”

The final chart created appears on the following page.

**TIP:** If your excel worksheets become cluttered with too many charts or graphs, you can place your chart in its own sheet at any time by right clicking your graph, and then selecting: Location. You can choose: Place chart: As new sheet. It is helpful to rename the sheet; in the picture above it is named “Chart5.”

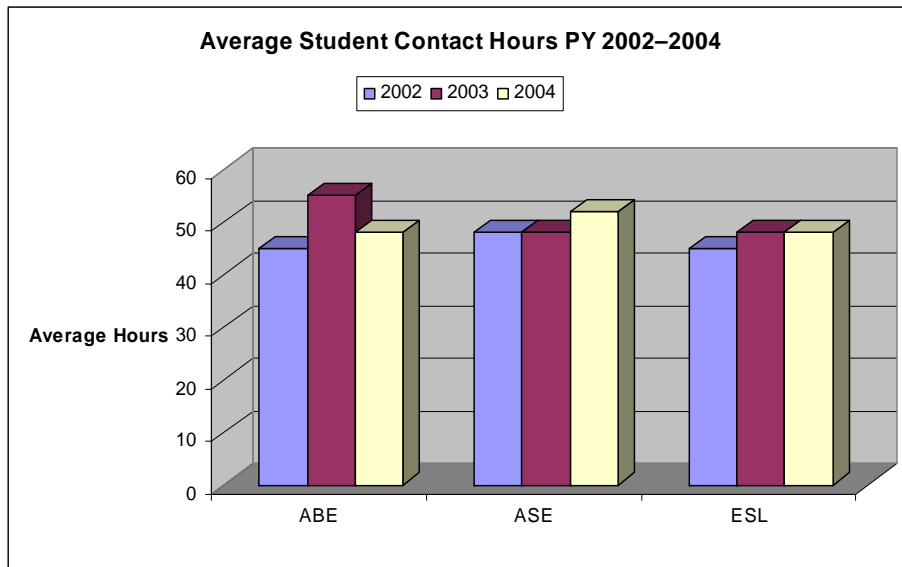


Now that the bar chart has been created, further refinement of this graph is needed before it can be placed into the Report Card template.

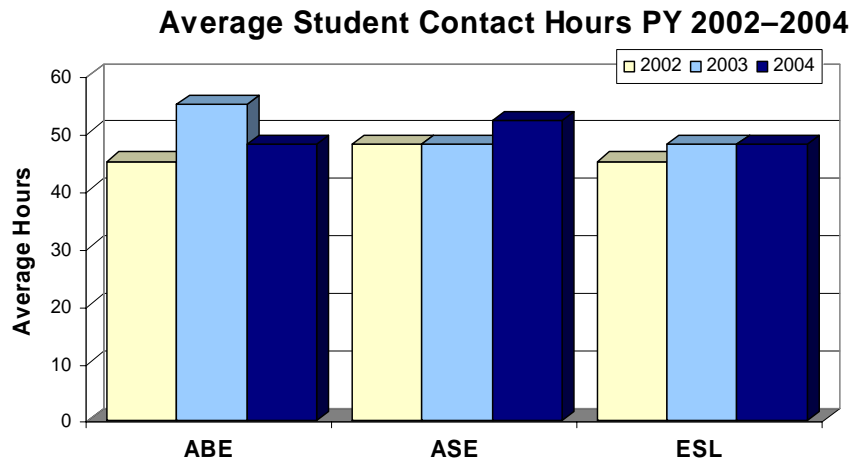
## How to Format Graphs or Charts in Excel:

Below are two examples of the same chart that was just created, but these two graphs are formatted differently. Chart 1 was created using the default formatting of the Chart Wizard. Although this chart is correct, it is not as clear and defined as Chart 2, which has reduced white space, greater definition of shading, and larger font size. The following steps explain how to format the chart created by the Chart Wizard to create a chart that can be placed in the Report Card template.

**Chart 1:**



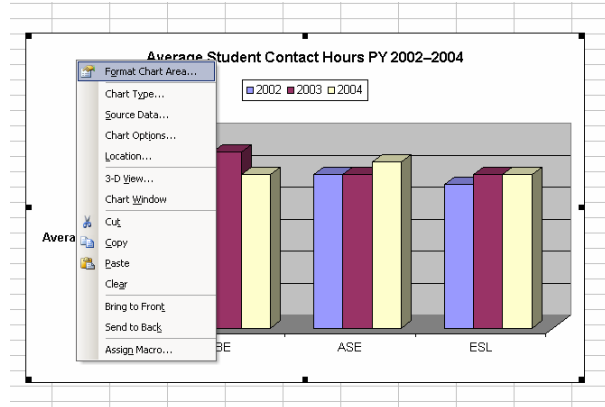
**Chart 2:**



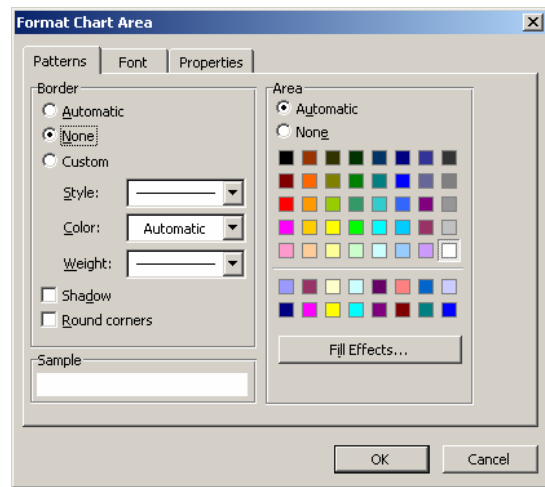
### Format – Step 1:

The border/box around the chart is not necessary and may detract from the flow of the report card, so the first step is to remove the border if it appears.

Click on the chart that has been created. A black handle box will appear around the chart. Keeping the cursor over the chart, right click and you will see the menu as shown in the left image below.



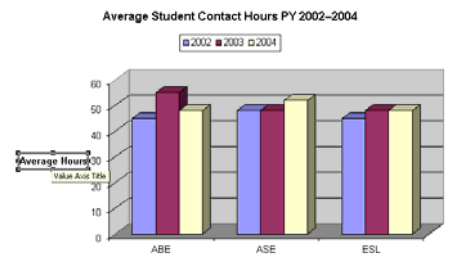
Select the first option in this drop-down menu: Format Chart Area, and the menu below will appear. In the Patterns tab go to the Border settings and select: None. Then click “OK.”



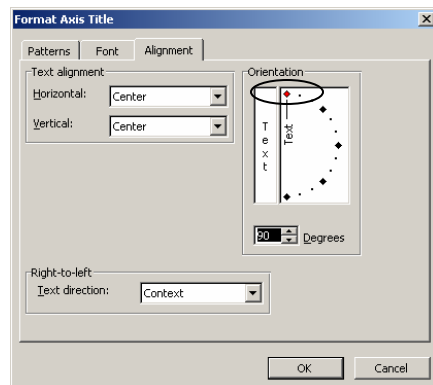
**TIP:** In the first image above, the drop-down menu includes several other options that were described in Steps 1–4 earlier in this *User Guide*. You may make changes to the chart at any time while formatting.

### Format – Step 2:

Another aspect in Chart 1 that will change is the title of the y-axis that is aligned horizontally. Re-aligning the text vertically will save space. To change the alignment, click on the text “Average Hours.” A black handle box will appear around the text. (See image on the right).



Double-click on the border of the handle box and the following menu will appear:



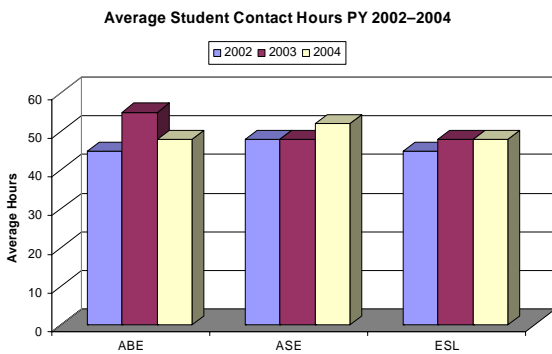
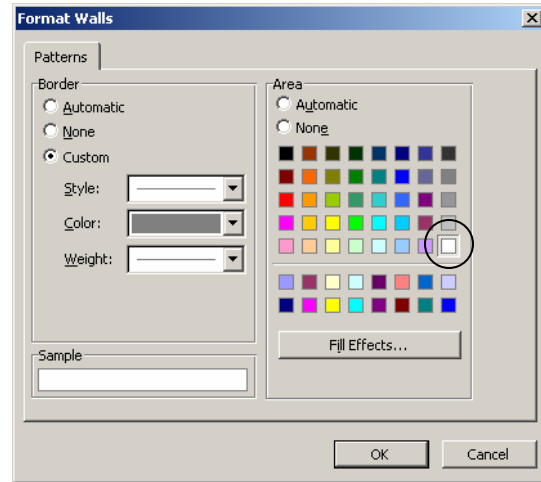
Select the Alignment tab. Under Orientation either click on the top diamond (see circled area in the image) or type in “90” in the Degrees field, and then click “OK.”

### Format – Step 3:

Chart 1 contains gray walls behind the columns. The next step is to format the chart with white walls as shown in Chart 2. White walls help focus on the actual data inside the graph, especially if your report card is going to be printed or reproduced in black and white.

In Excel, double-click anywhere on the gray wall, and the following menu will appear:

Click on the white color square and click “OK.”

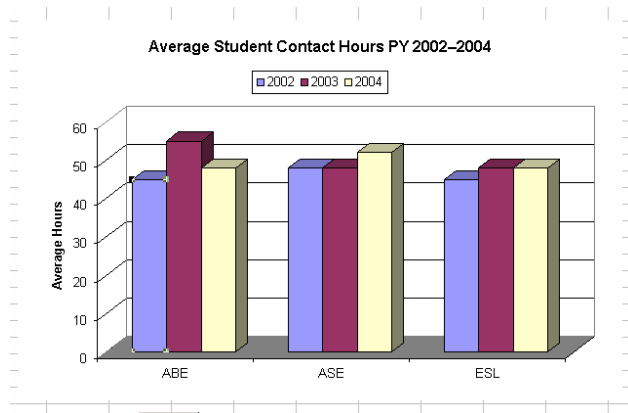


Your Chart should now look like the one on the left.

### Format – Step 4:

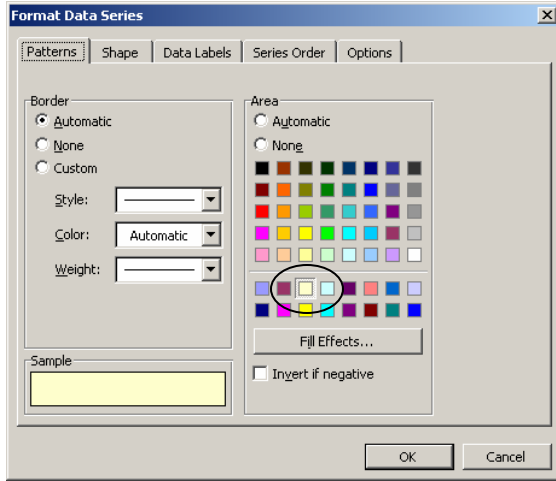
Now we will also change the color of the columns in Chart 1 to display better when printing, particularly for black and white report cards.

**Tip:** The colors you use for the columns are not as important as the contrast between the colors you choose. For instance, we will use light yellow, medium blue, and dark blue for color columns because of their contrast. It is not wise however to choose colors that are all dark such as dark blue, dark green, and red, because in a black and white printout, all colors will look dark grey or black.



First, double-click on the first column on the very left.

The following menu will appear:

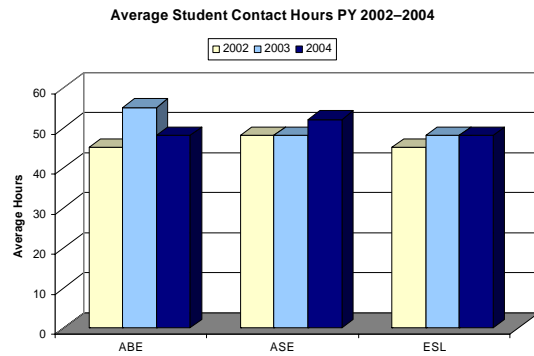


Under the Patterns tab, look in Area, select the pale yellow square, and click “OK.” Note: When you change the color of the first column in the first group, all first columns will be formatted similarly.

Now double-click any of the second columns in the group. Under the Patterns tab, look in Area, select a medium blue color, and click “OK.”

Finally, double-click the last column, select a dark blue color, and then click “OK.”

Your chart should now look like this:

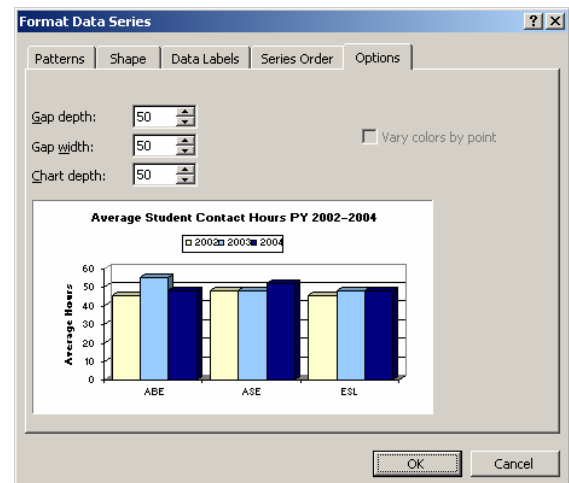


### Format – Step 5:

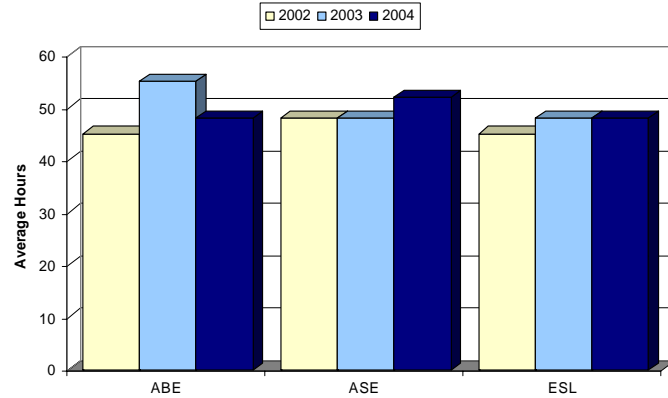
To better use the space in the chart and to keep the eye trained on the data results, we will enlarge the columns, minimize the space between the column sets, and decrease the 3-D depth of the graph. To do this, we will go to the Options tab under the Format Data Series menu we just used.

Double-click any column in order to get open the Format Data Series menu. This time instead of using the Patterns tab, go to the Options tab.

Replace all three options with “50.”  
Click “OK.”



Average Student Contact Hours PY 2002–2004



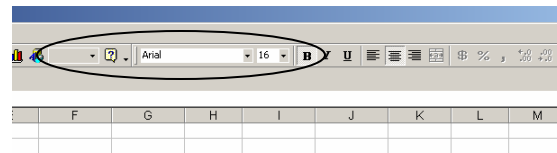
Now your chart looks like this:

**Format – Step 6:**

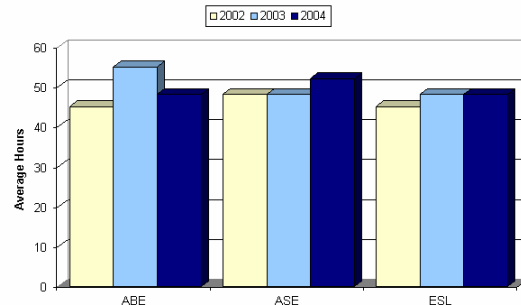
Your charts and graphs will be significantly smaller in your report card than they are in Excel. Therefore, we will increase the font size for the title and axes. This will make the titles easier to read when you resize your charts for the Report Card template.

To change the title:

Click once on the title so that the black handle box appears. While the box is around the title, go to your toolbar and change the font to 16 pt and bold (see circle on image to your right).



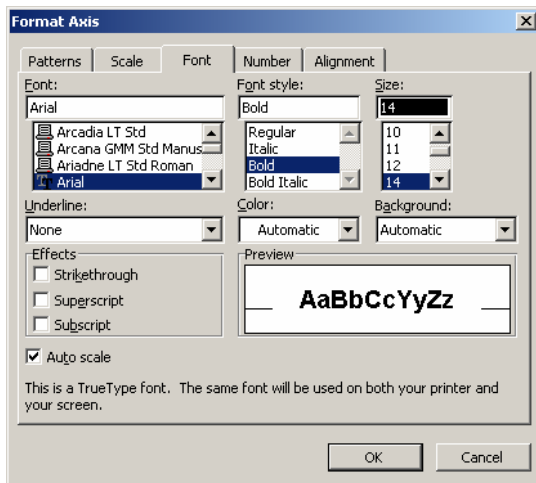
Average Student Contact Hours PY 2002–2004



Next, we will increase the font used on the axes.

Double-click on the any of the x-axis labels, such as ABE.

The Format Axis menu will appear. Go to the Font tab.



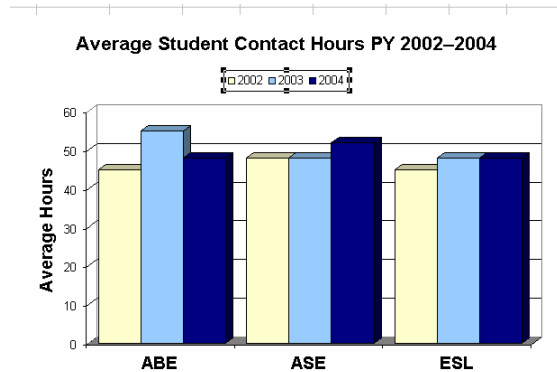
Under Font style: select bold, and under Size: select 14.

Click “OK.”

Repeat for the y-axis by double clicking “Average Hours,” and again increasing the Font style to bold and the Size to 14.

### Format – Step 7:

Our final format step is to change the location of the legend and the chart title so we can minimize as much white space as possible so that your chart will be as large as possible in the space provided in the Report Card template.

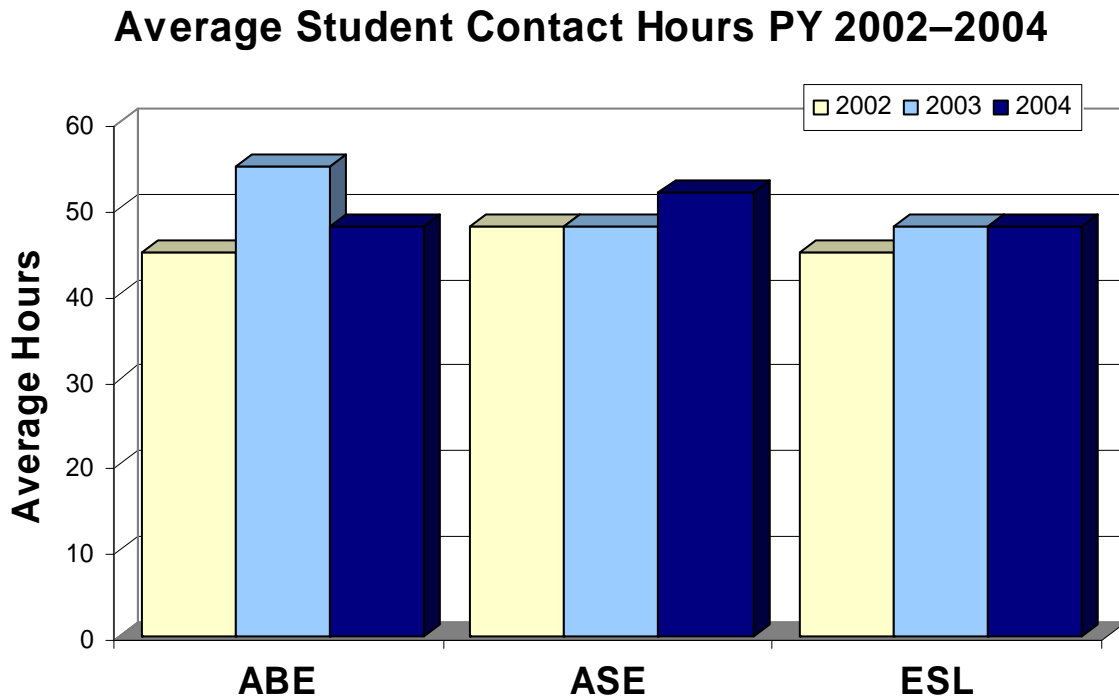


Click once on the legend until a black handle box appears.

To move the legend, click and hold on any line of the black handle box, and drag to your new location.

Then, repeat this step by clicking on the title of the chart. Move the text down, closer to the graph, to further decrease white space.

Congratulations, your chart should now look like the one below:



Now that you have formatted your chart, the final step is placing this chart into the space you selected in the Report Card template.

## Placing a Graph or Chart from Excel into the Report Card Template

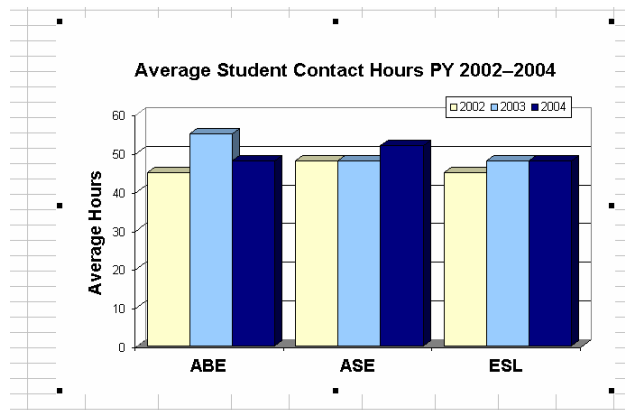
Prior to placing the graph or chart created in Excel into the Report Card template, first open a blank document in Word. You will Copy and Paste Special your chart into a blank Word document in order to resize the chart to fit in the appropriate place you have selected within the Report Card template.

**TIP:** In order to insert your Excel chart into Word as a picture image, Paste Special MUST be used, not regular paste (Ctrl + V).

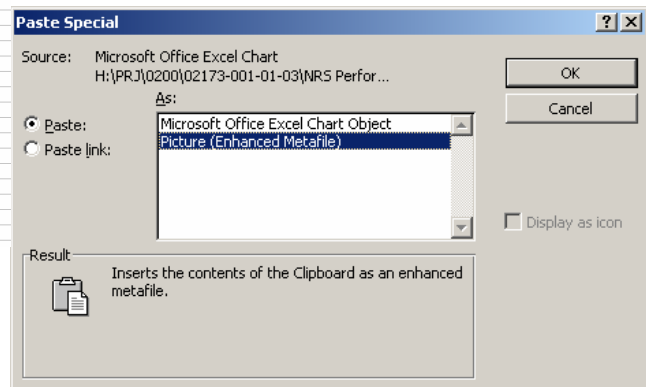
### In Excel:

View the chart or graph created in Excel and ensure that the titles, values, font, format, and so on look as you would like them to appear in the Report Card template. **Any formatting changes must be made in Excel prior to moving the chart into Word.**

Select the desired chart in the Excel spreadsheet. A black handle box will appear around the chart when the entire chart is selected (see image below).



To copy, hold Ctrl+C. A blinking dotted line will form around the chart.



### In Word:

Open a blank Word document first before going to the Report Card template. Using the main toolbar, select Edit and then Paste Special. **Do not select “Paste” or use Ctrl+V.** The image on the right will appear. Select Paste and then choose Picture (Enhanced Metafile). Then click “OK.”

**TIP:** If you find after copying the chart to Word that changes should be made, go back to the Excel spreadsheet and make those changes in Excel. Then copy and Paste Special the revised graph into Word. Only resizing or cropping of a chart can be done after the chart has been inserted into a Word document.

## Cropping:

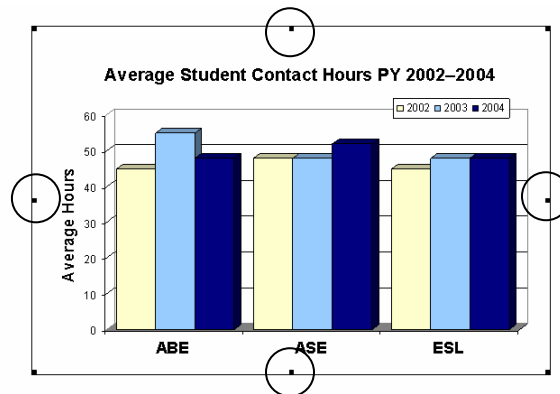
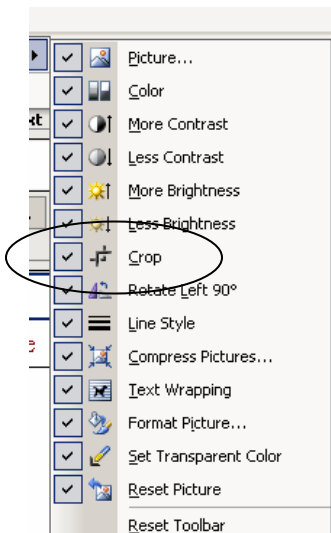
In some cases, the space on either side of the actual chart is empty white space. Cropping is only necessary if you have extra white space in your chart. Certain types of charts, such as pie charts, may have white space that requires cropping. After you Copy and Paste Special into a blank Word document as explained above, but before resizing the graphic, the image can be cropped.

 **TIP: If you need to crop your image, do so before you resize the graph.**

First, select the new chart that has been placed in a blank Word document. Then, go to the main toolbar and select View and then Toolbars. Check Picture and the picture toolbar will appear.

 **TIP: The Crop tool can only be used when a picture in Word has already been selected.**

The left image below is an overview of the options in the Picture toolbar. Look for the Crop tool in this menu. Click on the Crop tool and then click on any of the squares on the black handle box that appear around the chart as shown in the example below.



Hold and drag the square towards the center of the image to reduce the space on either side of the graph.

Now you can resize the chart to fit in the Report Card template as explained in the steps below.

## Resizing:

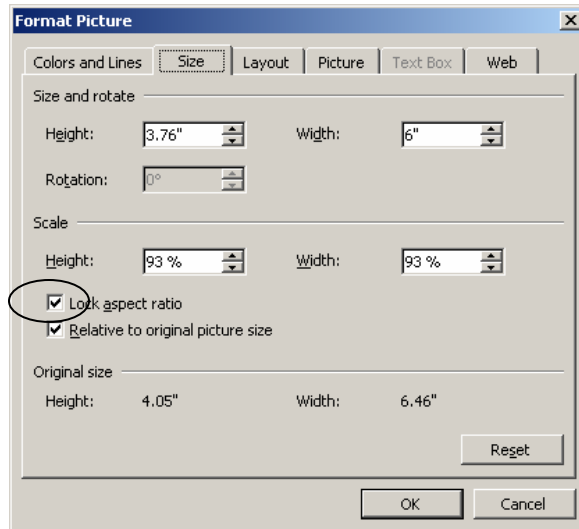
Open the State Trends Report Card template in a new window. Locate the chart or graph that you will replace in the template with your new chart. Double click on the template chart and the Format Picture menu will appear. Go to the Size tab to determine the size (height and width) of the chart that you will replace.

Return to the new chart you just created and placed in the blank Word document.

Double click the new chart, and the same **Format Picture** menu will appear. Go to the **Size** tab.

Note: Be sure to check the **Lock aspect ratio** before you resize the chart so that the height and width of the chart are changed at the same time and do not become distorted. You may not be able to make the chart the same exact size as the chart you are replacing in the template.

Change the size of the new chart to match the space available in the Report Card template as closely as possible and click “OK.”



Copy (Ctrl+C) the new chart and paste (Ctrl+V) into the Report Card template in place of the sample chart.

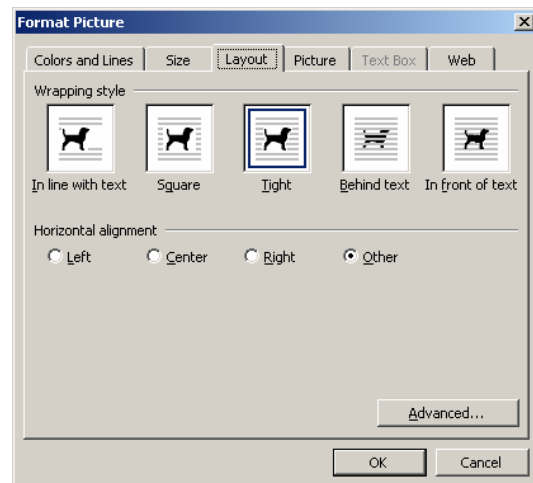
### Layout:

All picture images in Word will default to a standard layout: **In line with text**. This layout not does allow text to wrap around pictures (as seen in this document). In the Report Card template, you may want to have the text wrap around the image to save space.

To adjust the layout, while still in the blank Word document, double click on the graph and the **Format Picture** menu will appear. Go to the **Layout** tab.

If you want text to wrap around your chart picture, choose **Square** or **Tight**.

**TIP:** In the report card, avoid selecting **Behind text** or **In front of text**. Text should not appear in front or behind your charts or graphs.



**Congratulations!** You have just completed the creation, formatting, and placement of your data chart into the Report Card template.