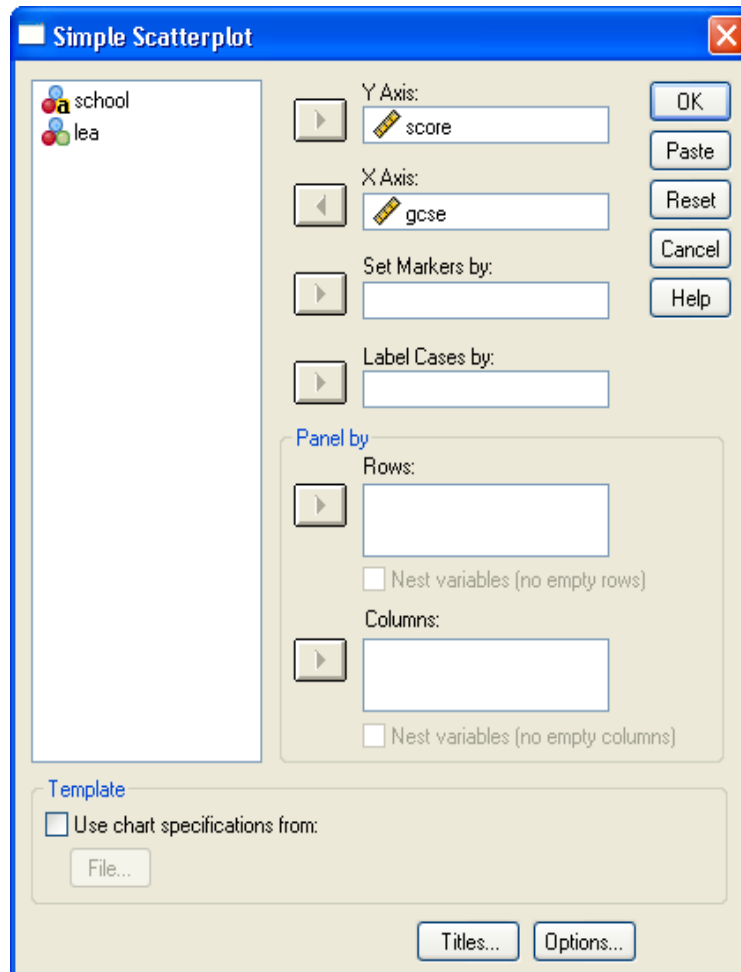


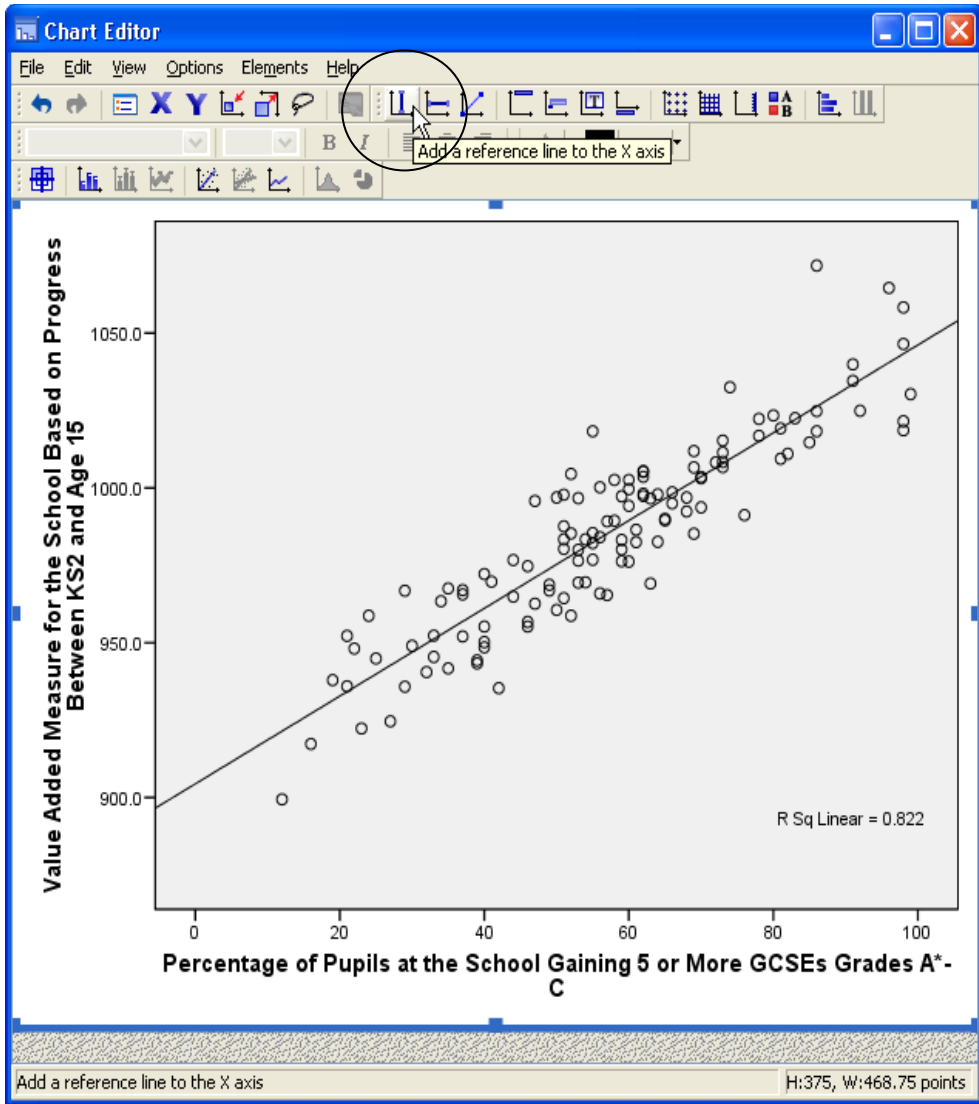
Answers to Exercise 4.3 (p. 134)

The basic scatterplot is created using **Graphs** → **Legacy Dialogs** → **Scatter/Dot...** and then choosing 'Simple Scatter' and running the procedure as illustrated below:



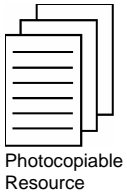
Once you have generated the basic chart, double-click on it to open the Chart Editor window. To add the 'line of best fit', select **Elements** → **Fit Line at Total** in the Chart Editor window. You will see that the line of best fit is then added automatically.

Next, to add the vertical reference line click on the icon in the Chart Editor window as shown overleaf:

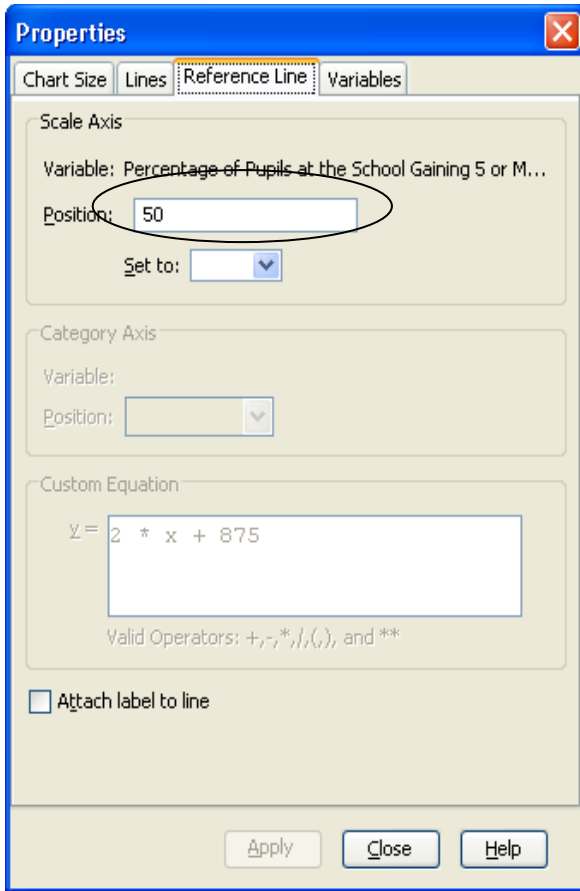


This changes the Properties window to that shown overleaf. Where indicated, simply type in the value on the x-axis where you want the reference line to go (in this case '50') and then click 'Close'.

You can then do the same to add two horizontal lines by first clicking on the icon immediately to the right of the last one in the Chart Editor window. This time you need to do this twice, first to add a horizontal line at position '996.9' and then again for a second line at position '960.6'.

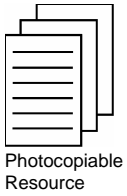


Photocopiable Resource

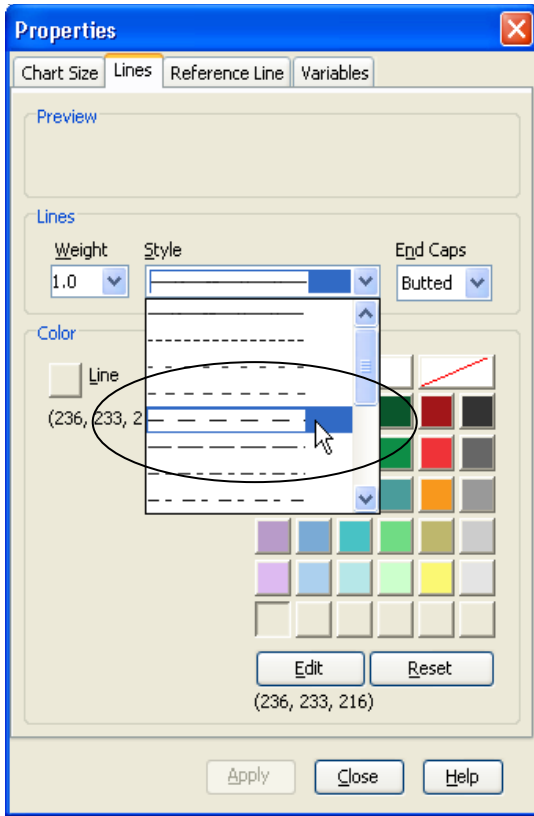


Finally, to change the style of any of these lines you have added, simply click on the line once in the Chart Editor window so that it is selected and then, in the Properties window, you can alter the thickness (weight) and style of the line as shown overleaf.

In this case, you need to change the weight of the line of best fit to '2.0' and also to change the two horizontal lines so that they are dashed as shown overleaf (this was what I intended originally for this chart but for some reason between writing Exercise 4.3 and the book being published the dashed horizontal lines changed back to solid lines!).

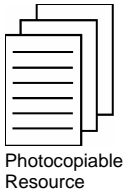


Photocopiable Resource



The only other thing that needs to be done to adapt the chart so that it is in the format shown in the book (p. 101) is to change the x-axis scale so that the intervals are in 10s rather than 20s. To do this click once on any of the numbers on the x-axis to select them all. Once done, click on the 'Scale' tab that appears in the Properties window as shown overleaf and then change the Major Increment figure from 20 to 10 as shown. Click 'Apply' to finish.

The chart should now be as it appears overleaf.



Photocopiable Resource

Properties

Labels & Ticks | Number Format | Variables

Chart Size | Text Style | Scale

Range

| | Auto | Custom | Data |
|-----------------|-------------------------------------|--------|------|
| Minimum | <input checked="" type="checkbox"/> | 0 | 12 |
| Maximum | <input checked="" type="checkbox"/> | 100 | 99 |
| Major Increment | <input type="checkbox"/> | 10 | |
| Origin | <input checked="" type="checkbox"/> | 0 | |

Display line at origin

Type

Linear

Logarithmic

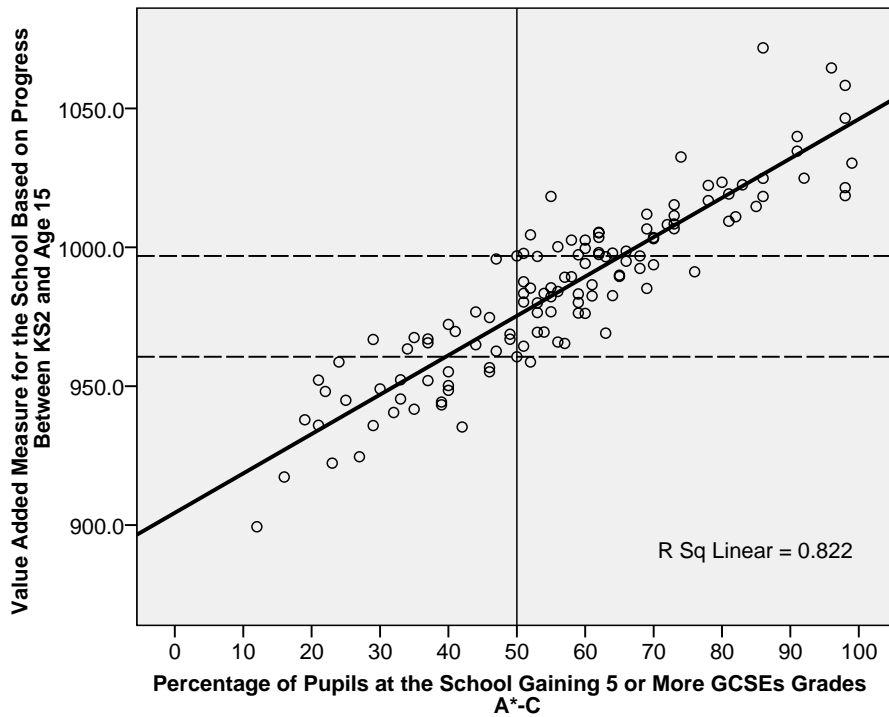
Base: 10 Safe

Power

Exponent: 0.5 Safe

Lower margin (%): 5 Upper margin (%): 5

Apply Cancel Help



Paul Connolly, *Quantitative Data Analysis in Education: A Critical Introduction Using SPSS* (Oxon: Routledge, 2007).