Creating a Vowel Chart in Excel

Excel can be a useful tool for displaying vowel data. The following is a basic guide for how to manage your vowel data and plot it in Excel.

1) Handling Data
   - After you have used Praat to measure vowel formants, either by hand or automatically with a script, you will have a set of formant values that you will need to organize.
   - First, you need to provide labels for the columns where the data will go.
     o Rows – Vowel #1, Vowel #2, etc.
     o Columns – Word, Vowel, F1_T1, F1_T2, ..., F2_T1, F2_T2, ..., etc.
   - Enter the information and measurements for each vowel row.

2) Plotting the Vowel Measurements
   - Insert a basic scatterplot. (This step varies from each version of Excel – generally speaking, an ‘X Y (Scatter)’ plot is one of the options available when you insert a chart.
   - After you've inserted a new chart, right-click the empty box (your blank scatterplot) and select <Select Data>.
Here is how you’ll want to set up your data points in the ‘Select Data’ box:

- Under the ‘Series’ box, click on <Add> to add a data series.
- Edit Series:
  - Series name: ‘Temp Point 1’ (or whatever you want to call your first temporal point data)
  - Series x values: These are your T1-Formant 2 values <select all vowels of that column>
  - Series y values: These are your T1-Formant 1 values <select all vowels of that column>
- Press <Add> in the Select Data Source box
- Edit Series:
  - Series name: ‘Temp Point 2’ (or whatever you want to call your first temporal point data)
  - Series x values: These are your T2-Formant 2 values <select all vowels of that column>
  - Series y values: These are your T2-Formant 1 values <select all vowels of that column>
  - Press <OK>
- Reversing y- and x- axes:
  - Right click what axis you’d like and select <Format Axis>
  - Check the box that says “Values in reverse order”.
  - Do this for both the y- and x-axis.
  - You can also adjust your ranges for either axis.
- Formatting the chart:
  - You can label your vowels by:
    - Selecting a particular series/token and right clicking to select <Add Data Labels>. Measurement values will appear, but you can edit these by double-clicking on them to insert text. You can also move around the text boxes. (Tip: If only one token gets highlighted (not the entire series), it will be the only one that will change.)
You can also adjust the sizes, colors, and shapes of your tokens by:

- Selecting a particular series/token and right clicking to select <Format Data Series>. (Tip: Again, if only one token gets highlighted (not the entire series), it will be the only one that will change.)