Dealing with data

Researching any project involves dealing with data. You know, statistics, measurements, numbers, survey responses, and we need to deal with more and more of this type of information all the time, even for something as simple as choosing which breakfast cereal to buy.

To present it in a project, raw data has to be sorted through, assessed and analysed, generally tidied up. So, how do you do it?

The first thing to know is that there are two main types of data - quantitative and qualitative.

Quantitative data is about quantities, or numbers, and it's produced by taking measurements.

In surveys, it's produced by asking closed questions. Closed questions only have one sort of answer, either a number, yes or no, or true or false. For example, if I ask you, "How many hours a week do you spend online?" your answer would be a number.

Well, it doesn't have to be, you can tell me that your Auntie Joan really likes shortbread, but then we're not really having the same conversation.

Once you've collected your quantitative data, put it into a table or a graph. It still has to be collated, combined and summed up though. And to do that, you need to know your way around averages - mean, median and mode.

Mean evens everything out, by adding all the numbers together, then dividing by how many there were originally.

Median means the one in the middle. If all the results you've got are put in order from lowest to highest value, then median is bang in the middle of the range.

And mode just means whichever value comes up most often, or is the most fashionable, if you like.

The other kind of data is qualitative data, which relates to qualities. Quality doesn't just mean good or bad, it means anything that can be felt or described and that makes it much more broad-ranging.

Qualitative data is produced by asking open questions, questions that open up a conversation. If you ask someone, "How does this music make you feel?" you have no idea what sort of answer you'll get.

One person might give a one word answer, and the next might tell you their life story.

Qualitative data is more tricky to process. Say you're trying to assess how people feel about a new factory being built in their area, you'll have to read through all their responses, and find ways to summarise them.

You could sum up with, "While most people were happy because the factory will create more local jobs, 20% were worried about pollution."

Some of their responses can be boiled down to yes/no answers. This means that your qualitative data can be analysed as quantitative data.

So, whether it's qualitative or quantitative data, if you understand the difference between the two, and present your data clearly and correctly, you won't have to put up with listening to tales of Auntie Joan's shortbread.