THE UNIVERSITY of ADELAIDE

Mastering Excel Pivot Tables

Video transcript: Connecting to an external application

Now that we know how to create a PivotTable from Excel data and we've learnt how to base the analysis on a dynamic range or even an external file, we're ready to look at connecting our Pivot Table to an external program to analyse data that's not stored in Excel.

If your organisation uses an SQL server or an Access database, you can connect your PivotTable directly to the data stored in these programs, to create a dynamic connection that always has access to the most up to date data.

Before starting this activity, make sure you've downloaded the Access database: 2.2(c) External Applications.accdb. No need to have it open, just save it in a location that you can access.

To start with create a brand new blank Excel workbook and insert a pivot table.

As we're not basing our PivotTable on Excel data, we won't select a table or range. Instead in the 'Choose the data that you want to analyze' area, select 'Use an external data source'. This will activate the 'Choose Connection' command button.

Click 'Choose Connection'.

The 'Existing Connections' dialog box will be displayed, listing all existing connections (databases that have already been connected to Excel). The database we will connect to hasn't been connected yet, so we'll click 'Browse for More'.

Use the file browser to navigate to and select the Access database 2.2(c) External Applications.accdb and click 'Open'

As this database has multiple tables, a 'Select Table' dialog box will request selection of the required table. Select the table 'Injuries' and click OK.

Once again we've got some injury data. Let's summarise it, by counting the number of reports.

Drag the Report ID to the Values area.

Hmm That looks a little high to me. I don't think we recorded more than 200 million injuries.

Think back to an earlier lesson when we learnt that as fields are dropped into the Values area of the pivot table, Excel automatically assigns the field a method of summary.

- If the field is a text field, the PivotTable will count of the records in the values field
- If the field is numeric, the PivotTable will sum of the records in the values field

So it looks like Excel might be adding all of the report ID's together, instead of counting them. And the PivotTable title confirms this… "Sum of Report ID". Let's change the 'Summarise Value By' from Sum to Count.

Now we'll add some extra fields into the pivot table. We'd like to break it down into Injuries per injury classification and risk level, so

- Drag the Injury Class field to the Rows area and
- Drag the Risk Level field to the Columns area.

Great! Your PivotTable is all set up and connected to the source data. The last thing we'll do with this one is ensure the data cache updates every time the file is opened.

To customise the PivotTable options

From the Pivot Analyze tab, select PivotTable, then Options to display the PivotTable options dialog box.

There are many options worthy of exploration in this box, all grouped logically according to their function into one of the tabs (Layout & Format, Totals & Filters, Display, Printing, Data & Alt Text).

As we'll be changing a data setting, click the Data tab

Click the checkbox 'Refresh data when opening the file'. This will ensure that every time the PivotTable file is opened, the data cache will refresh and the PivotTable will analyse the most up to date data from the Access database.