Free Training Transcript: Additional Data Blending Topics

Welcome to this video on Additional Data Blending Topics. You can download the Exercises workbook to follow along in your own copy of Tableau.

Data Blending and Calculations

Performing calculations across two different data sources can be slightly different from creating an ordinary calculated field. Our current view shows a state-by-state comparison of sales data from Office City and Coffee Chain. What if we want to view our combined sales for each state?

In order to combine our sales from both data sources, we need to create a calculation. Verify that the Office City data source is selected, tThen right click in the data pane and select Create Calculated Field. Note the indicator tells us which data source we're creating this calculation on. We'll drag in Office City Sales, type a plus (+), and next we'll switch to the Coffee Chain data source and drag in Coffee Chain's Sales.

Working with Aggregated Data in Calculations

Notice that the Coffee Chain Sales looks different from the Office City Sales in the formula. First, the Coffee Chain Sales also contains the name of the data source. This format is designed to help us distinguish between different data sources in a calculation, so we always know where a field is coming from. Second, the Coffee Chain Sales is automatically wrapped in a SUM function. Data from the secondary source must always be aggregated, and SUM is simply the default aggregation. As we can see, we have an error in the calculation, because we cannot mix aggregate and non-aggregate arguments. To resolve this, let's wrap our Sales from Office City in a SUM function as well. Our calculation is valid, so we'll rename this "Combined Sales" and click OK.

We don't see our calculation in the data pane; this is because we're on a different data source than the one the calculation was created on. If we switch to Office City, we now see that calculated field.

Working with Null Values

We're ready to test our calculation. Drag the Combined Sales field onto columns. Hmmm. Notice that the Combined Sales data is not displayed for the states where Coffee Chain Sales are null.

A null (from Coffee Chain) plus a real value (from Office City) will always result in a null, so Tableau is computing this correctly. However, we know that our nulls from Coffee Chain are actually zeros, so we can to adjust our calculation to account for this. Right click on

Combined Sales and Edit. We'll wrap the Coffee Chain Sales in a ZN function, this stands for "zero-null" and tells Tableau to treat the nulls as zeros. Now our Combined Sales column accurately displays the combined sales information for Office City and Coffee Chain.

Asterisks When Blending

Another common scenario with data blending is dealing with asterisks. When data blending, adding another dimension to the view sometimes results in an asterisk instead of the expected values. Why does this happen?

In our current view, we are using Office City as our primary data source, so it's colored blue, and we're blending on State. Area Code is only present in the secondary data source. Because there is more than one area code for most of the states in this data, Tableau produces an asterisk to indicate the multiple values. New Hampshire and New Mexico show values because there is only one area code in each state.

Asterisks Solution: Swap Primary and Secondary Data Sources

How can we address the issue of asterisks when data blending? Try swapping the primary and secondary data sources in a new view. We are now using Coffee Chain as our primary data source, and it's blue. Verify that the Coffee Chain data source is selected and now we'll bring out Area Code out into the view. This is the expected behavior for Area Code, we now have an Area Code listed per state. However, Office City does not have an Area Code field so Sales is aggregated to the level of the blend, State, and that value is repeated per area code.

As an alternative solution, consider if a cross-database join is better suited to your analysis. Check out the videos on cross-database joins to learn more.

Conclusion

Thank you for watching this video on Additional Data Blending Topics. We invite you to continue with the free Training videos to learn more about using Tableau.