Zeus Block 3 Tableau Notes - General

* More introductions might be needed on what Tableau is and an explanation of the different types (Tableau Online, Tableau Desktop, Tableau Public, etc.) and when each is appropriate. More generally, some discussion on what makes Tableau different from R/SPSS/SAS and the goals of dashboard building might help the students get oriented before diving into the Tableau implementation details.
* It might help the students stay engaged with the dryer parts of Tableau if we open the block with a demo of the dashboard that is completed in video 2.10. Jumping directly into implementation details might overwhelm them and there is not a clear sense of what the individual skills are building to until the end.
* Some of the video outros are very abrupt. Spending a little bit of time recapping what was done in the video can help the students prioritize what of what they just saw is most important.
* A lot of time is spent with the professor speaking over a screenshare of Tableau, without anything happening on screen. Making PowerPoint slides to accompany the lesson that outline what is being said could help the students retain more information.
* More emphasis on dashboard and story development is needed. The dashboards are the end product most students are interested in, but only the last three videos focus on this.
* In general, the videos go from abstract concepts to concrete examples. If the students are already apprehensive about learning Tableau or have not worked extensively with data in the past, this could be overwhelming to them. Showing them the end product first, then explaining the abstract concepts behind it, and finishing with a recap of the finished product might be more engaging for the students.
* Adding concept checks along the way could help students verify that they understand the material. Since the data is provided, having then recreate the video examples with a minor variation could be an easy way to do this. It can be a self-check and does not need to be mandatory.
* The video numbers are inconsistent. For example, the first video of module 2 is labeled as video 2.1 in the module view and video 11 in Yuja. This might confuse some students.
* A brief recap of prior videos can help with continuity. For example, in video 1.2 (Tableau) the professor jumps right into joins in Tableau. Briefly recapping video 1.2 (Concepts) can help students make the connection between what they just saw and what they are about to see. Something as simple as “in the previous video we learned about the different types of joins – inner, ROJ, LOJ, and FOJ. In this video, we will learn how to perform these operations in Tableau” can improve understanding a lot.

MAP Project Specific Issues

* The data being used is all very clean. Health data is notoriously messy, and the students need to see methods of handling missing/suppressed values, incomplete entries, incorrectly coded entries, etc. especially for maps. By default, Tableau will fill in missing values as 0 when shading a map. This can be misleading if the person making the map is not already aware of the missing data.
* Many organizations will want to supplement their organizational data with other sources. They can either use the existing MAP dataset to do so or they can merge external sources. It would be worth having a video describing the map dataset, where the measures all came from, how to use the GitHub page and README, and how to subset and/or merge the needed variables. We could also include a separate video on using local, state, and federal data sources in case they would prefer to go directly to the data sources.
* We should decide on a data cleaning/merging strategy to recommend and provide tutorials for it. The Zeus videos show data manipulation in Tableau, but this may not be the easiest way. The MAP data is cleaned and merged in R, and the R code is available on the GitHub page. Teaching some basic R skills would be one option. Excel also has features to support this. Manipulating the data in Tableau is not necessarily easier than these options and it might be easier for the students to understand if we have a clear boundary between data manipulation and visualization.

Zeus Video Specific Feedback

* Module 1
  + Video 1.1
    - It might be helpful to tell students how to switch from measure to dimension and vice versa.
    - Explaining why some numbers like Order ID should be a dimension instead of a measure could also help avoid misunderstandings.
    - Not all measures are continuous. Quantity will be discrete with objects that are sold by count rather than weight. For example, if apples are sold for $0.50 each quantity sold will be discrete (e.g., 10 apples), while it will be continuous if they are sold by weight (4.5 pounds). Clarification that blue values are not always dimensions and green values are not always measures would be helpful. <https://help.tableau.com/current/pro/desktop/en-us/datafields_typesandroles.htm#:~:text=(by%20default).-,Blue%20versus%20green%20fields,%22individually%20separate%20and%20distinct.%22>
    - Abrupt ending
  + Video 1.2 (Concepts)
    - Explaining situations where inner join, ROJ, LOJ, and FOJ are appropriate might help motivate this concept for students. ROJ or LOJ will be used often when augmenting organizational data with other (sparser) sources. This video shows the “how” but does not really explain the “why”.
  + Video 1.2 (Tableau)
    - Might be helpful to show students how to specify the join ID or set multiple columns to the join ID
    - The intro is abrupt. Including a brief recap of the prior video can help students feel more secure in the concepts.
  + Video 1.3
    - If the students have not learned the definition of ‘query’ in a prior module, using it to explain data blending may cause confusion.
    - There are simpler workarounds for merging these datasets. For the date example, parsing the date into three values (month, day, year) and merging on month may be more approachable for students who are inexperienced in Tableau. Including this lesson this early may discourage students.
    - Abrupt ending
  + Video 1.4 (Your First Viz)
    - Abrupt ending
  + Video 1.4 (Color, Highlighter, and Stacked Bar Chart)
    - Abrupt intro. As with video 1.2, a brief recap of what was covered previously can help the students see the connections between the concepts.
  + Video 1.5
    - Abrupt ending
  + Video 1.6
    - The professor says top 10 rows but only highlights the top 8 (3:42 timestamp)
  + Video 1.7
  + Video 1.8
    - Abrupt ending
  + Video 1.9
    - Abrupt ending
  + Video 1.10
    - If the students have not already been exposed to linear regression, briefly explaining the meaning of the coefficients in the linear regression equation could be helpful.
* Module 2
  + Video 2.1
    - Showing the movies dataset as a raw text file and walking the students through the steps of making the initial plot before showing set creation might clarify this example.
    - Abrupt ending
  + Video 2.2
    - Abrupt ending
  + Video 2.3 (Highlight Table)
    - The initial highlight table example is a bit unclear. Is the 2017 value, 2018 value, or a combination of the two being used to determine the color? The example that is worked through after this clarifies, but some students may be confused by the initial example.
  + Video 2.3 (Quick Table Calculation and Simple Calculated fields)
  + Video 2.3 (ATTR and boxplot)
    - Explaining a bit more about why ATTR fixes the error would clarify the example.
    - Abrupt ending
  + Video 2.4 (Parameter Top N)
    - Abrupt ending
  + Video 2.4 (Parameter What If)
  + Video 2.5
    - A “cleaner” example for clustering would be the iris dataset (<https://archive.ics.uci.edu/ml/datasets/iris> ), which produces distinct clusters and has ground-truth labels (flower species).
  + Video 2.6
    - Including a brief overview of Tableau’s built-in geocodes can gives students an idea of what is possible with Tableau maps. For more detail than a world map, you can use state, county, ZIP, etc.
    - Abrupt ending
  + Video 2.7
  + Video 2.8
    - Talking a little bit more about design and layout would be helpful. Specifically, the pros and cons of tiled versus floating and how to get a “polished” looking dashboard in the end.
  + Video 2.9
  + Video 2.10