Essential Design Principles for Tableau

Module 2 Quiz

https://www.coursera.org/learn/dataviz-design/home/welcome

1.

Question 1

The following element would be an example of accessing the reader's short-term memory.

1 / 1 point

A bar graph that contrasts measure of interest with others.

A table that uses percentages instead of values.

A map of China that highlights internet access penetration by grouping the data by regions or types of location.

Any network diagram.

Correct

The map with broad groups is the perfect way for people to remember information.

2.

Question 2

True/False: If you appeal to a reader's iconic memory, it will not be useful for appealing to a reader's short or long-term memory.

1 / 1 point

False

True

Correct

Appealing to iconic memory is a way to draw a reader's attention. They are mutually exclusive.

3.

Question 3

True/False: Eliminate all text to eliminate clutter.

1 / 1 point

True

False

Correct
Text is essential to addressing cognitive load even if there's a little bit of clutter.

4.

Question 4
Of the following, which would be best for reducing cognitive load on a 7 category bar graph?

1 / 1 point

One color for each (7 colors) but no data labels or axis.

Two colors with one identifying the interesting element but no text of anywhere.

One color, no axis, but data labels.

One color, no axis and no data labels.

Correct
One color for each (7 colors) but no data labels or axis would work in a pinch, but is not good from a cognitive load perspective. This answer is the only one that has an acceptable level of detail and reduces cognitive load.

5.

Question 5
A scatterplot that has two colors identifying categories of data is a good example of this type of Gestalt perception:

1 / 1 point

Proximity

Similarity

Closure

Enclosure

Correct
Scatterplots can also use proximity, but the key to the question is "categories of data." These must be differentiated in some way.

6.
Question 6
Suppose you want your audience to see how income per GDP for a set of countries has changed over the past 50 years so you do a line graph. What Gestalt principle are you applying here?

1 / 1 point

Similarity

Proximity

Connection

Closure

Correct
Even though it seems trivial, a line graph uses the connection principle between points to allow time series to be shown.

7.
Question 7
True/False: It is always superior to use many colors than using shades of gray and one additional color.

1 / 1 point

True

False

Correct
There are times when many colors are acceptable, but contrasting gray with one other color is better most of the time.

8.
Question 8
Which of these would be a poor application of a strategic use of contrast?

1 / 1 point

Using different colors for each category and highlighting the important element with black.

One bright color contrasted with gray.

Using a bright blue for the important element but much lighter shade for other elements.

Bolding text in a table.

Correct
Black is just another color for a category and will add nothing other than an extra color to a visual.

9.

Question 9
Visualizing data in three dimensions with a bar chart is appropriate only in the following circumstance.

1 / 1 point

Always, because that's the trend in visualization best practices.

When data are expressed in such a way that visualizations must be done in three dimensions because graphing in two dimensions would be inappropriate.

Whenever you feel that the graph might look prettier or visually appealing.

It's something that everyone else in my company does.

Correct
Even thought apps like Microsoft Excel offer 3D graphing capabilities, there are very few circumstances where you will need 3D graphs. It's better to stay way from them altogether.

10.

Question 10
True/False: Eliminating clutter is more important than having a visual that is understandable because cluttered visuals have too much useless information.

1 / 1 point

True

False

Correct

Although it is true that cluttered visuals are problematic. However, an uncluttered visual that's not understandable is worse than having a cluttered but understandable visual.

11.

Question 11

Providing a reference line with shading on one side allows to highlight a group of values in a visualization. Which Gestalt principle is this?

1 / 1 point

- (•) Enclosure
- ( ) Symmetry
- ( ) Closure
- ( ) Proximity

Correct

This is the definition of the Gestalt principle of enclosure.

12.

Question 12

Suppose you must include a table with numbers in a visualization to a large audience. What's the one thing listed below that you should not do to it?

1 / 1 point

- ( ) Leave it uncolored.
- ( ) Highlight the insight with one color and leave the others uncolored.
- ( ) Make the values in the table large enough for people to read.
- (•) Put a contrasting color in each box.

Correct

Even though it won't be that great, leaving the table uncolored is still an acceptable way to show a table. Highlighting with one color and making the table larger are ways to improve the effectiveness of a table. But putting a contrasting color in each box will be very distracting and likely come off as very ineffective.

13.

Question 13

True/False: Sorting your data so that the values are in order is essential to any decluttering of visualizations.

1 / 1 point

False

True

Correct

This is the bare minimum task that should be done to help declutter a visualization. You can do other things, but always do this with your data.

14.

Question 14

One of your audience members in a small committee is color blind and you have decided to stick with only black and white in your visualizations. Which is the best way to provide a pre-attentive attribute in a scatterplot that has two categories?

1 / 1 point

Use circles and fill one category and leave the other unfilled.

Make one category a square and one a triangle.

Change the intensity of one category by making it more gray and less black.

Make one category bigger than the other.

Correct

Making a category bigger than another, assumes that one category was numerically bigger than the other. Using squares and triangles may work, but it would have to be carefully executed. Filling one category with black and the other as an open circle is the best option.