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Message, Medium & Audience, and communication goal:

This is a visualization which is designed to present data from a taste test aimed at analysing consumer perceptions of various attributes of a food product. The medium is a graphical representation that should be suitable for a general audience or the actual company, interested in feedback to improve their product. The goal is to show a balance of opinions about whether each attribute is at an acceptable level, too little, or too much.

Visual encoding method used:

The chart uses horizontal bars to represent percentages. This is an effective way of expressing proportions. However, the poles are stacked end to end and don't start from a common baseline, which makes it difficult to compare lengths. This can lead to misinterpretation of the data, especially in the "just right" category, as the length differences become less obvious.

Use of Colour, Layout and Other Visual Elements:

The use of colour in the chart helps differentiate the three response categories. However, the colours chosen (red, blue, and green) may be problematic for viewers with suffering from colour-blindness etc. A layout with clear labels and legends is helpful, but the overall design could be improved with

higher contrast and lower saturation to improve readability. The chart overall is visualised okay, but the curves around the bars seem useless and just make the chart look more confusing that it should.

Use of Attention:

The colour of the “just right” category being red doesn’t help in the visualisation. Generally, when we think of the colour red it signifies great importance or warning, so viewers may confuse this and the “too much” or “not enough” categories. The most important category “just right” could be displayed in a better way.

Rating based on Evergreen’s Criteria:

According to Evergreen's Data Visualization checklist, this chart could perform poorly in terms due to its use of colour and potential confusion caused by difficult to compare bar arrangements. The clarity and accuracy of data representation may also be affected due to the frankly useless curves around some bars.

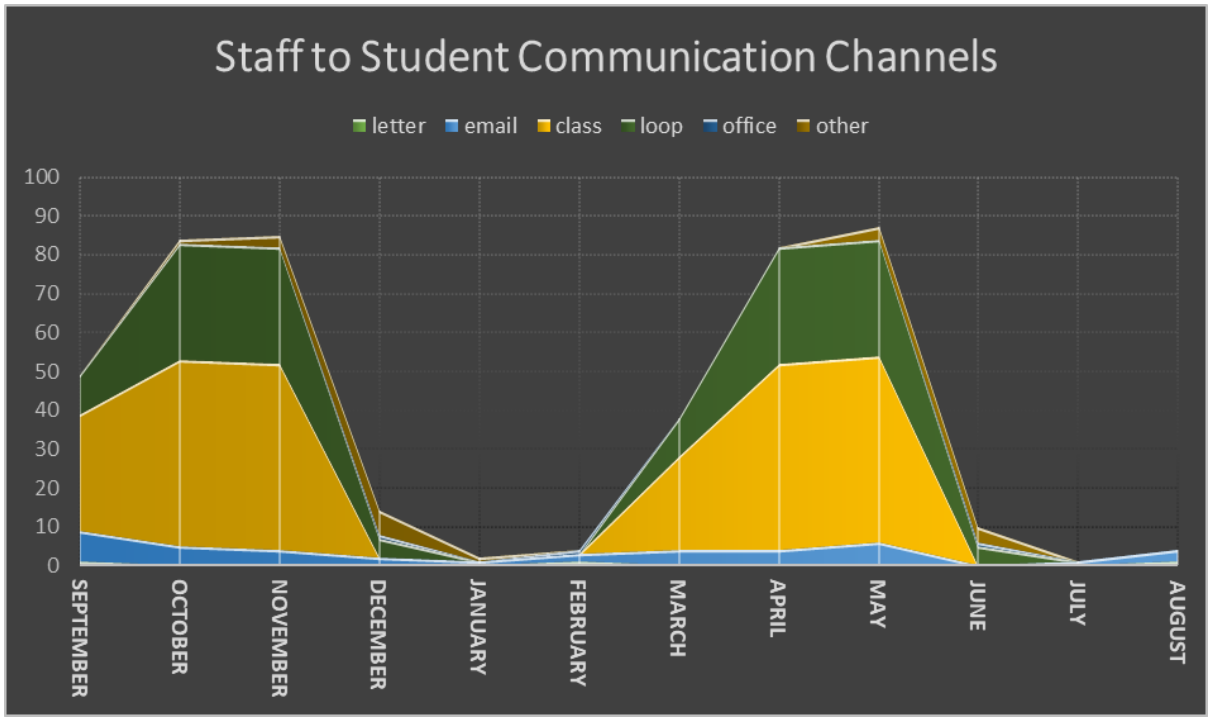
My opinion on the chart’s effectiveness:

The visualization conveys basic information but leaves room for improvement. Simplifying the colour scheme, using a better and more traditional bar chart layout with a common baseline, and increasing contrast for better readability, will increase the charts effectiveness. Greater emphasis on the “just right” category would be better for the communication goals, with this being the best result in taste tests.

References:

Edward Tufte & Stephen Few - Chart Design and Data Integrity principles

Storytelling with Data by Cole Nussbaumer Knaflic



Message, Medium & Audience, and Communication Goal:

This graphic illustrates the variations in staff-student communication across several forms of media over the course of an academic year. (September – August). The School Board who may be examining communication patterns can use this medium. The purpose of this research is to find out the most popular forms of communication at various periods, so that communication can be made improved.

Visual Encoding Methods Used:

The area chart allows for the comparison of many categories within and is a useful tool for presenting volume over time. It can be difficult to see the precise figures for each category, though, when there is a lot of overlap across the sections.

Application of Colour, Design, and Other Visual Components:

Because they are distinctive, the colours help distinguish between the many forms of communication. Darker shades of colour on a dark background, however, could make text less readable. Time is plotted on the x-axis and volume is plotted on the y-axis in this simple layout. However, I'm not certain on what the Y-axis represents. I'm assuming it means that, for example, classroom communication was 50% of the overall communication in October, but there should be a % sign on the Y-axis just to make sure and clarify for the viewer. A grid is used, however it may not be as it just causes visualisation to become more complicated and could distract from the primary data displayed.

Use of Attention:

The graphic highlights communication peaks, during the months of the academic year when communication is most common. But because the sections are piled and the colours are highly saturated, it seems that emphasis can be moved from specific channels to the overall effect.

Score According to Evergreen's Criteria

Using Evergreen's criteria, this visualization might receive a lower score because of the stacked areas potentially being misinterpreted, because it might be hard to distinguish between separate category volumes when they overlap, and due the ambiguity behind what the Y-axis represents. Clarity may also be reduced by using dark colours on dark backgrounds.

My Opinion on the chart's Effectiveness:

Though it could be better, the chart does a good job at showing trends and patterns throughout time. To make individual channels easier to read, a line chart or stacked bar chart for each month could be a better representation. A clear indication of the Y-axis and a more evident division between the total and individual channels would also help in making the chart more effective.

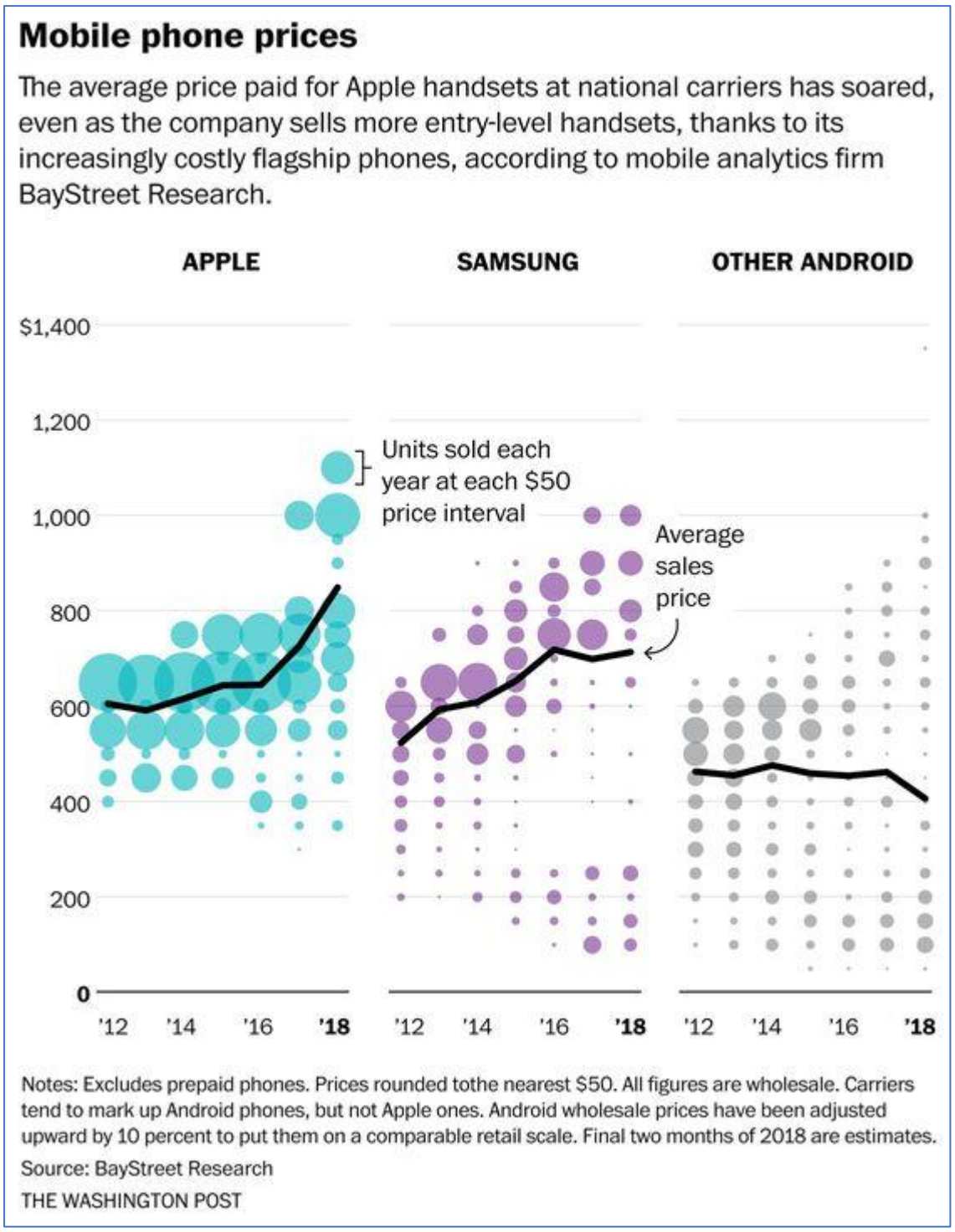
References:

WCAG Contrast and Colour Requirements

*Same as previous:

Edward Tufte & Stephen Few - Chart Design and Data Integrity principles

Storytelling with Data by Cole Nussbaumer Knaflic



Message, Medium & Audience, and Communication Goal:

The graph displays the trend of mobile phone prices over time among different manufacturers. It is intended for people interested in market trends, such as consumers or analysts. The goal is to illustrate the price dynamics and possibly correlate them with units sold at different prices. "Mobile phone prices," compares the average price paid for Apple, Samsung, and other Android phones over the years (2012 – 2018).

Visual Encoding Methods Used:

This dual encoding method allows for the analysis of two variables: the quantity of units sold and the average price over time. The graph uses a scatter plot to represent units sold at different price intervals over time, with a line graph to show the average sales prices.

Use of Colour, Layout, and Other Visual Elements:

The colours are used in a consistent way throughout the series and are well-chosen to distinguish between the three categories (Apple, Samsung, and other Android phones). The layout is clear and compact, with time on the x-axis and price on the y-axis. The average price lines help in tracking the price trend.

Use of Attention:

The graph directs the viewer's attention to the average price lines, being the boldest elements. The different sizes of the dots represent the units sold, larger dots meaning more sales. However, the density of dots can be overwhelming and distract from the overall trend.

Score According to Evergreen's Criteria:

Using Evergreen's checklist, this visualization might receive high marks for having a clear title and sourcing, but it might receive lower marks for having overplotted data points. The selection of dot size as a sales volume representation introduces a level of intricacy that might not be immediately apparent.

My Opinion on the chart's Effectiveness:

The primary goal of the graph is to effectively display the general trend in prices. Because of the scatter plot's clutter, it can be challenging to extract exact information about unit sales at price points. Increased clarity could be done by streamlining the presentation or adding a feature that allows viewers to concentrate on a single price range at a time. The visualization itself might use some clarification in labelling important points so they can stand out against the busy scatter plot.

References (same as before):

Edward Tufte & Stephen Few - Chart Design and Data Integrity principles

Storytelling with Data by Cole Nussbaumer Knaflic

WCAG Contrast and Colour Requirements

Recommendations for improving the "Mobile phone prices" graph:

Reduce Overplotting:

- It is hard to see individual data points on the current graph due to the large number of overlapping dots.
- To better visualize the density of data points without losing information on less dense areas, use transparency for dots.

Make Dot Sizes Simpler:

- Although the graph may appear cluttered and confusing, the different dot sizes are intended to indicate volume.
- Use a sidebar or mini histogram within the graph's margin to show the volume of sales at each price and standardize the sizes of the dots. This separates the two bits of data and could make the visualization easier to understand.

Improve Readability:

- The price trend lines can be overlooked in the scatter plot.
- To make the average price trend lines stand out against the scatter plot background, make them thicker and maybe add a dash or dot pattern.

Highlight Important Information Points:

- Finding data points or shifts in trends is difficult in the chart.
- Mark important point, such as significant price increases or decreases.

Digital Interactive Elements:

- There isn't enough room on the graph to clearly display all the information that is needed.
- Include features in a digital medium, such as hover-over information for individual dots, so that users can view exact unit sales and pricing points.

Background and Grid Lines:

- The grid lines may detract from the data.
- Use the axis labels for scale instead of adding grid lines.

Colour Scheme:

- Make sure that everyone, including those with colour vision impairments, can access and properly view the graph.
- To ensure readability, select a colour scheme that is friendly to colourblind people and check the graph using simulators for colour vision impairments, or people who are colourblind.

Mock-up Graph Description:

- The new graph would keep the same axes but with a lighter grid.
- All dots would be the same size and semi-transparent to show concentration without too much clutter.
- Trend lines would be bold and dashed for better visibility.
- Key data points and trends would be marked and…
- If digital, interactive tooltips would provide more information.