

WorkShop1

Instructions:

- The workshop can be completed in a **group of four (recommended)**.
- All members should work together to complete the workshop, and they will receive the same mark.
- This workshop is worth 2.5% of the total course grade and will be evaluated through your written submission.
- Please submit the submission file(s) through Blackboard.
- **Only one person must submit for the group, and only the last submission will be marked.**

Part One: Comparing visuals

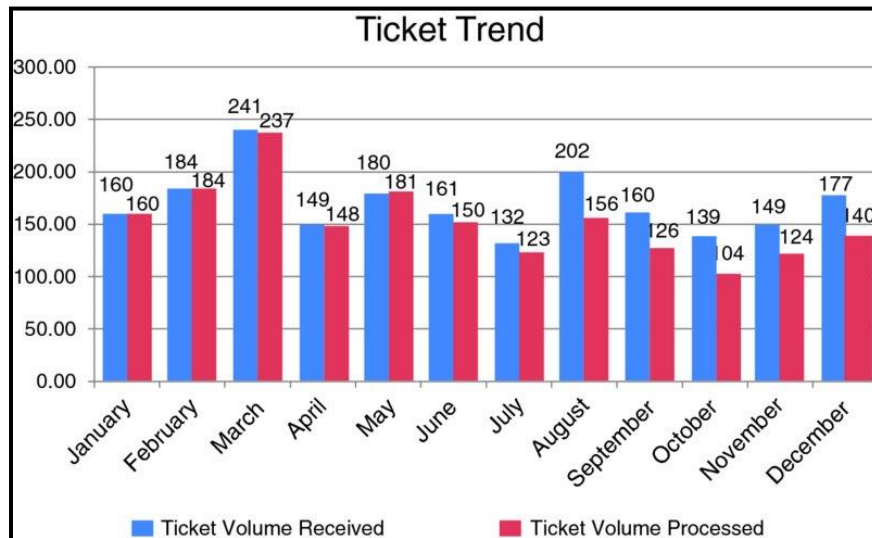
Question 1. Compare the following three visualizations: **BEFORE** and **AFTER**, based on

1. **Title:** Short titles enable readers to comprehend takeaway messages even while quickly skimming the graph. (number of words, size of font, location (left, center, ...))
2. **Subtitles and Annotations provide additional information:** Subtitles and annotations (call-out text within the graph) can add explanatory and interpretive power to a graph.
3. **Labels are used sparingly:** Focus attention by removing the redundancy.
4. **Color scheme is intentional:** Colors should represent a brand or other intentional choice, not default color schemes. Color organization of graph before and after.
5. **Color is used to highlight key patterns:** Action colors should guide the viewer to key parts of the display.
6. **The graph highlights significant finding or conclusions:** Graphs should have a "so what?" – either a practical or statistical significance (or both) to warrant their presence.

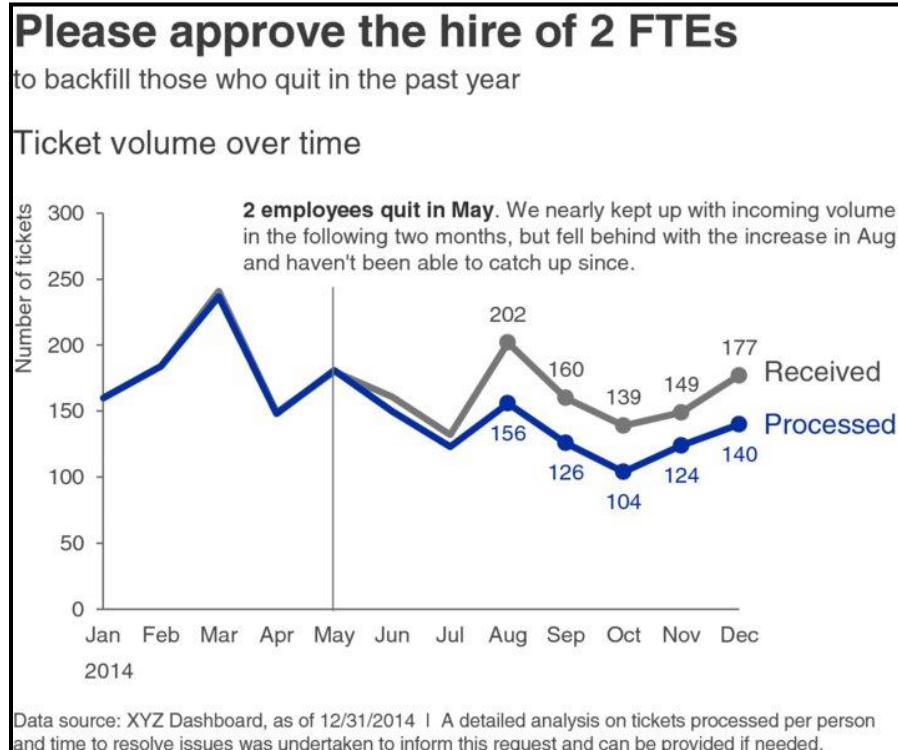
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(a)

BEFORE



AFTER



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Title

The first graph is the bar graph. The title of this graph is Ticket trend which is short and tells us about the trends in the ticket from the first month of the year to the last one. The chart title is above the graph. The font size of the chart is readable to the reader.

The second graph is a Line graph. Unlike the first graph, the chart title is towards the left side of the graph. The second graph also tells us the purpose of making this graph which is above the title of the graph. The title of this graph is longer than the first graph which is large enough for the reader to read.

Subtitles and Annotations provide additional information

The 'Before' chart does not provide any subtitles and expects the users to derive further information and conclusion.

The 'After' chart provides the chart description as well as provides annotation about the reasoning behind the increase in ticket volume and also as to why processing of the tickets fell behind. Also as a note, mentions the source of the data and how the data was derived. The chart provides a complete overview of the issue and the reason behind the issue, all encompassed within the chart itself. It is completely self-explanatory.

Labels are used sparingly

In the first graph, there is no description of both the Axis. On the X-Axis only the months are written without mentioning the year for which this graph has been plotted. Talking about the Y-Axis only the number ranges are provided without highlighting what the values represents.

In the second graph, there is a description of both the Axis. X-Axis label tells us that this data is for the year 2014 while the Y-Axis label tells us that the information is about the number of tickets. This was absent in the first graph.

Color scheme is intentional

In the first graph, the color scheme is the same throughout the graph. The color scheme here helps us to differentiate between the data being compared here which is the ticket volume received and the ticket volume processed.

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The color scheme is a little different in the second graph compared to the first graph. Here the use of two colors has also been done but they seem to overlap till the month of May and one can only notice it on looking closely.

Color is used to highlight key patterns

Although both the graphs represent the same set of data but the latter points out the action that needs to be taken i.e. recruitment of 2FTEs. The line graph is able to display the difference/gap between the received vs processed tickets rising up due to turnover of 2 employees.

The color difference prompts & demands action from the evaluator or the audience to be able to perceive the divergence between received vs processed getting widened with time passing by & the team's inability to bridge the gap.

The graph highlights significant findings or conclusions

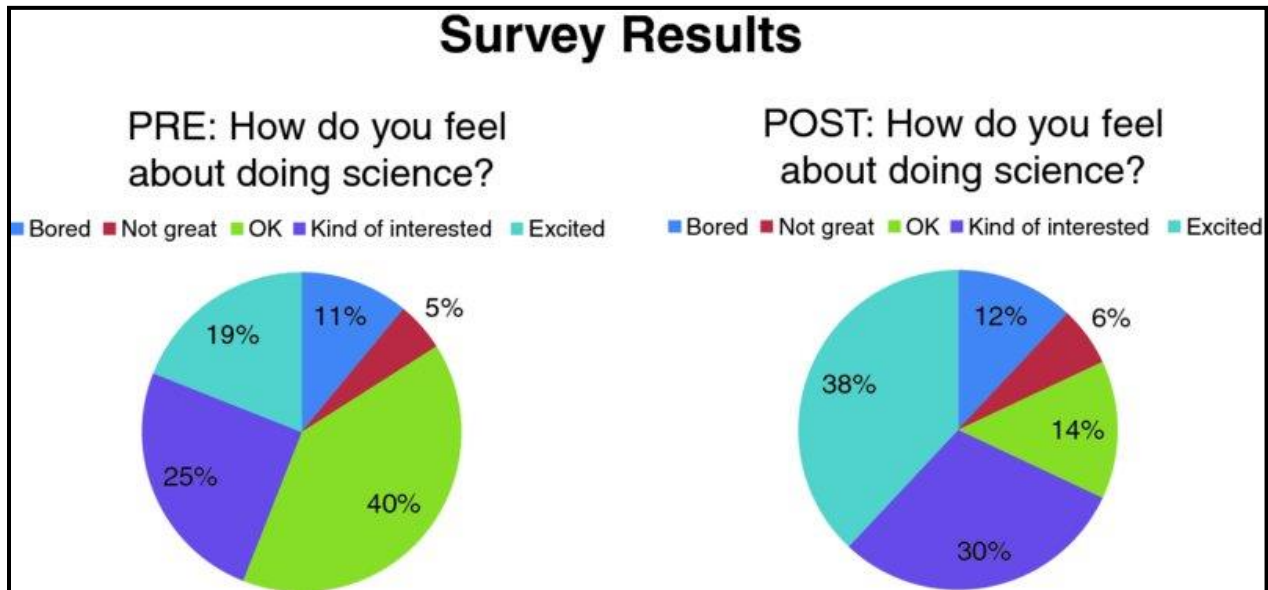
The first graph tells us about the ticket trend. By looking at the graph we can arrive at the conclusion that until the month of May there was very little difference between the ticket received and ticket processed. From the month June, this difference began to rise which clearly shows that some problem has occurred. But the mention of this problem is absent in the graph.

The second graph also highlights the ticket trend. In this graph the reason behind the difference in the ticket processed and ticket received is given. The reason is that two employees quit in May because of which it become necessary to hire 2 FTEs. This explanation was absent in the first graph. So we can conclude that in order to shorten the gap in ticket processing the hiring of two employees becomes necessary.

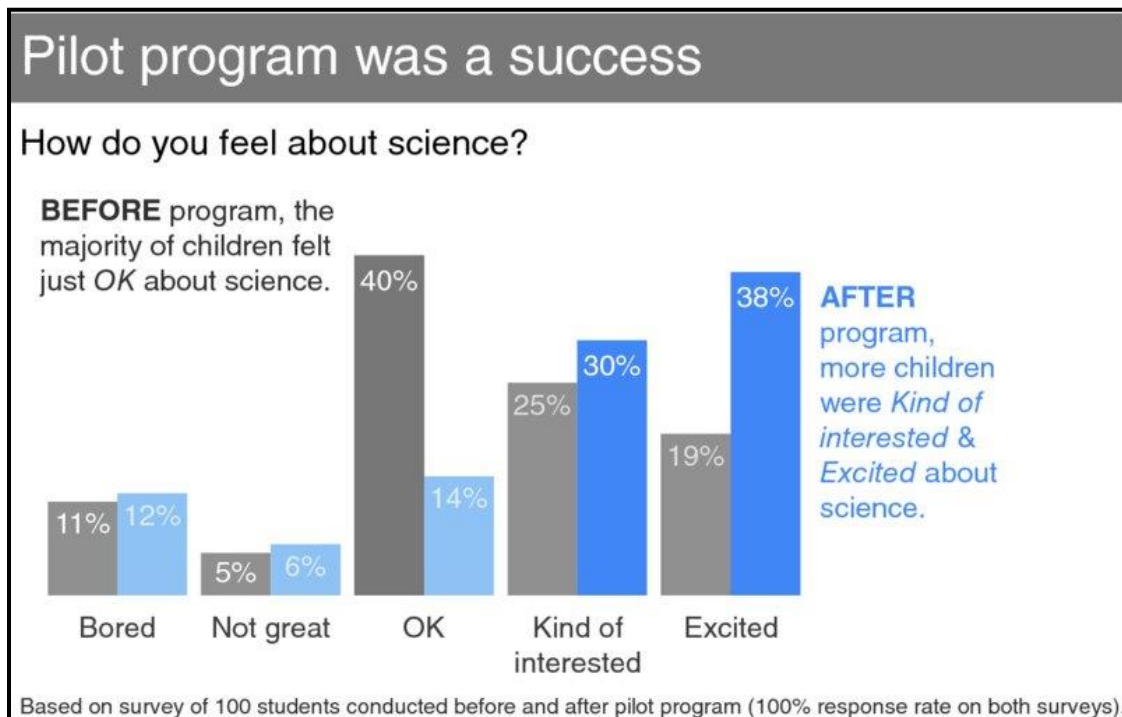
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(b)

BEFORE



AFTER



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Title

The first graph is a pie chart. The title of the 'Before' chart is Survey Results its short, positioned at center, written in bolds and it is to the point. Whereas the 'After' chart is a bar graph, the title of this chart is in brief, highlighted in a colour and positioned to the left of the chart. Though the title of the 'After' chart is little lengthy it gives the user a clear picture of positive outcome of the survey.

Subtitles and Annotations

The 'Before' chart has two pie charts each representing a different subtitle. The first pie chart (PRE) represents the survey results of how do people feel about doing science before taking the pilot program, whereas the second pie chart represents the survey results of how do people feel about doing science after taking the pilot program.

The 'After' chart has a single subtitle "How do you feel about science" which is generalised and makes the user to quickly understand the significance of the chart.

Labels

The 'Before' and 'After' chart both have same five labels, while in case of 'Before' chart each have five labels as it has two pie charts comparing the PRE and POST survey results. Whereas, the 'After' chart uses the same five labels to represent the both PRE and POST survey results in a single graph.

Color scheme

The 'Before' chart has a unique colour scheme for each label, that makes five colours for different labels, this colour scheme makes the visualisation and understanding of graph little complicated.

The 'After' chart has simple colour scheme, which can be easily visualised and the label vs colour comparison method is pretty much simpler.

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Color is used to highlight key patterns

The 'Before' chart as discussed earlier has different colour for different labels and it does not highlight any key patterns.

Whereas, the 'After' chart has uncomplicated colour scheme, it also used Bold colours to highlight key patterns (Before and After) i.e. before program 40% of children felt just OK about the science and after program 30% & 38% more children were kind of interested & excited about science. This makes the viewer understand the major outcome/result of the pilot program on science.

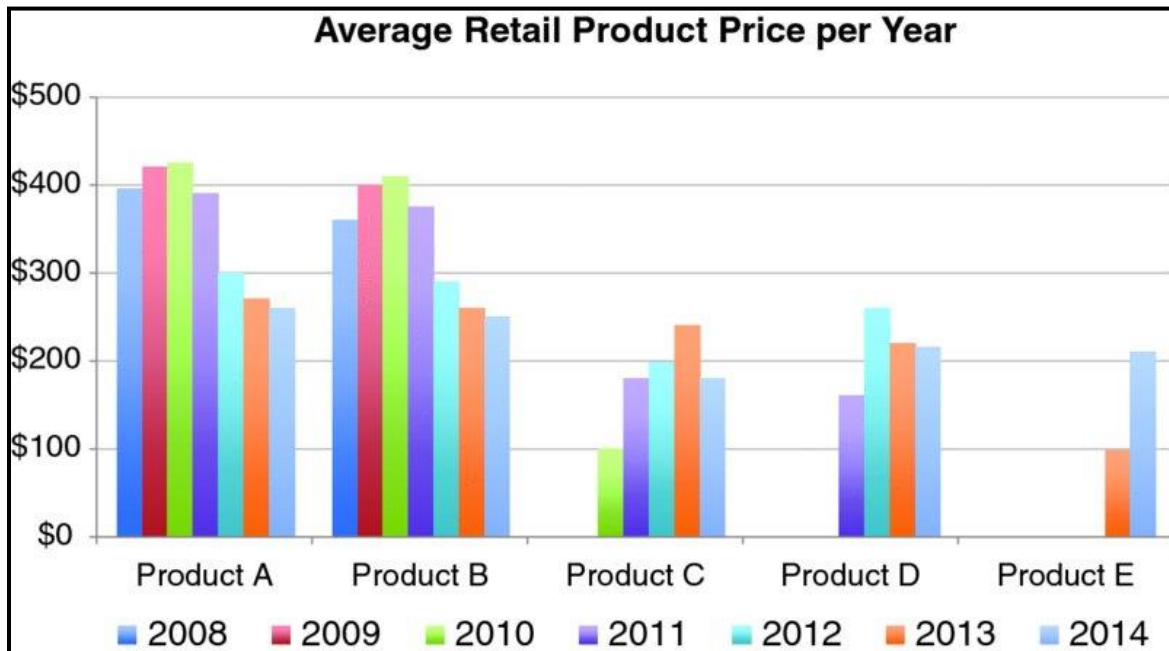
Conclusions

From the above graphs we can conclude that, though the bar graph ('After' chart) has a lengthy title it gives us better visualisation and understanding for this particular scenario. The trend of the results can be observed in a single graph and comparison is visualised easily in 'After' graph than the 'Before' graph. Overall conclusion is that, the feeling about science in children before and after the pilot program has gradually changed and showed positive interest towards science.

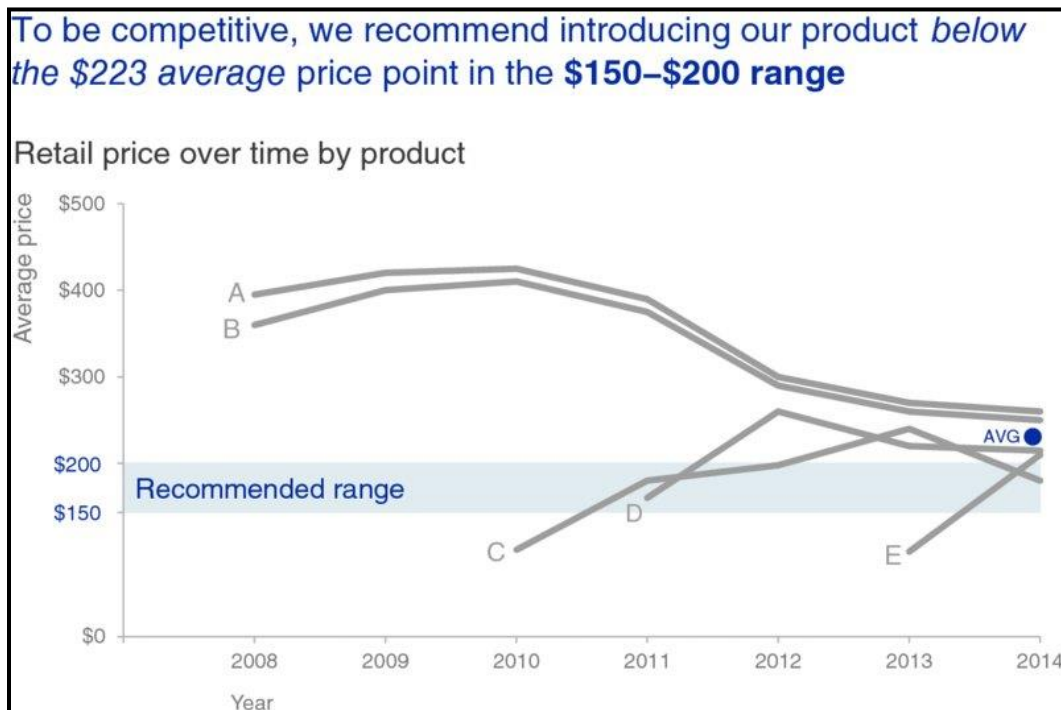
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(c)

BEFORE



AFTER



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Both visuals give us information about average retail price of five products from year 2008 till 2014. Some of the major differences between the visuals are listed below:

Title

The title of 'Before' visual gives an overview of the bar chart as the average retail price of products A, B, C and D between year 2008 to 2014. It is catchy, written in bold letters, located in centre and gives a brief introduction whereas the 'After' visual title provides detailed recommendation on the price range for the new product. The title is lengthy and uses bold and italic font to stress the message. The detailed title quickly tells the readers about the purpose of the chart which is to get the products prices in recommended range.

Subtitles and Annotations

The 'Before' chart doesn't make use of any subtitle and expects the readers to interpret further information, but 'After' chart does make use of subtitle to explain that chart gives data regarding retail prices of all products over time. It also makes use of annotations to depict recommended price range.

Labels

The 'Before' chart has five labels Product A, B, C, D and E on x-axis and includes legend that reflects year that each bar represents for all products, while the 'After' chart has data labels A, B, C, D, E that represent each line to their corresponding product. Custom string is also used to mark the average value of all products in year 2014. Moreover, x-axis and y-axis titles are used in 'After' visual to describe data on both axes.

Color scheme

The 'Before' chart uses colors in pairs to show each year data but the 'After' line chart doesn't make use of any color schemes to represent data. The multi-color scheme of the bar chart helps distinguish the years quickly whereas the monochrome line chart expects the readers to refer to the product labels mentioned against the lines to distinguish between the different products.

Color to highlight key patterns

In line chart, recommended range is highlighted using different shade of color to bring out the key point while no key patterns are emphasized in the bar graph. The highlight again

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conveys the message visually to the readers and relates it to the axis to let the user know where the recommended range lie.

Conclusion

The bar graph only gives information about the average prices of all the products over the years but the line chart, along with showing the continuous price trend, it also recommends the price range within which products should fall (below average price point in the \$150 - \$200 range) to gain a competitive edge in market. The entire information, from the data to the recommendation, is conveyed through the line chart by using detailed title, highlighting the recommended range and by also highlighting the text at different points to stress on the message. Therefore, it marks the purpose of the survey or data analysis. The bar chart, on the other hand, leaves it to the readers to interpret the message and derive the message, which may get tricky as the interpretation can vary from reader to reader.

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Part Two: Download Tableau

1. Ensure you have downloaded a Tableau Desktop license on their laptop/PC (students are eligible for a [free one-year license](#))
2. Ensure they have Microsoft Excel on their laptop/PC

Question 1. Did you install Tableau Desktop on your machine?

Answer. YES

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Deliverables:

SENECA'S ACADEMIC HONESTY POLICY

As a Seneca student, you must conduct yourself in an honest and trustworthy manner in all aspects of your academic career. A dishonest attempt to obtain an academic advantage is considered an offense and will not be tolerated by the College.

Add this declaration to your submission file:

I/WE, ----- (mention your names), declare that the attached assignment is our own work in accordance with the **Seneca Academic Honesty Policy**. I/We do not copy any part of this assignment, manually or electronically, from any other source, including websites, unless specified as references. I do not distribute my work to other students.

	Name	Task(s)
1	Mahesh Kumar Amda	Part b
2	AmandeepSingh Saluja	Part a
3	Chahat Kaur Chhabra	Part c
4	Kajal Rajan	Part c

Using Blackboard, submit a PDF file

Save your group work as

<GroupName>_ws1.pdf