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Data Visualization Effectiveness Profile

1 message

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To: riddhims@andrew.cmu.edu

Wed, Sep 18, 2024 at 4:19 PM

Thanks for filling out Data Visualization Effectiveness Profile

Here's what was received.

Data Visualization Effectiveness Profile

Reference

Few, Stephen. "Data Visualization Effectiveness Profile," 2017, 11.
http://www.perceptualedge.com/articles/visual_business_intelligence/data_
visualization_effectiveness_profile.pdf

Email *

riddhims@andrew.cmu.edu

Your name *

Riddhima Singh

What visualization are you ranking? Provide the title and web-accessible URL. *

How the US Drives Gun Exports and Fuels Violence Around the World
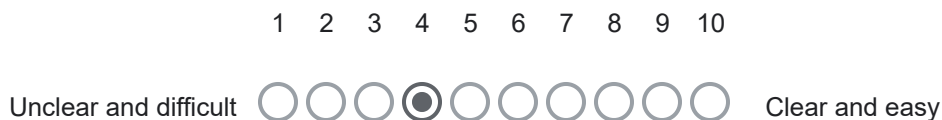https://www.bloomberg.com/graphics/2023-us-made-gun-exports-shootings-violence-sig-sauer/

Usefulness. Is it useful for the intended audience? Does it communicate valuable information?

	1	2	3	4	5	6	7	8	9	10	
Useless	○	○	○	○	○	◉	○	○	○	○	Very useful

Completeness. Does the visualization have everything necessary to make it understandable?

	1	2	3	4	5	6	7	8	9	10	
No relevant data	○	○	◉	○	○	○	○	○	○	○	All relevant data

Perceptibility. Can the reader understand the information with minimal effort? Is the visualization type appropriate? Does it use illogical comparisons?

	1	2	3	4	5	6	7	8	9	10	
Unclear and difficult	○	○	○	◉	○	○	○	○	○	○	Clear and easy

Truthfulness. Is the visualization accurate, reliable and valid? Is it representing what it says it is, and in the most complete and truthful manner? Does it misrepresent the data or make comparisions that aren't correct?

	1	2	3	4	5	6	7	8	9	10	
Innacurate and / or invalid	○	○	○	○	○	○	○	○	◉	○	Accurate and valid

Intuitiveness. Is it easy to understand and clearly communicates the information?
 If unfamiliar, does it include easy to understand instructions on how to interpret it?

1   2   3   4   5   6   7   8   9   10

Unfamiliar, difficult to understand   ◉ ○ ○ ○ ○ ○ ○ ○ ○ ○   Familiar, easy to understand

Aesthetics. It is interesting / enjoyable to look at? Is it a good example of what a beautiful data visualization might look like? Is it somewhere in the middle - pleasing but otherwise not distracting to look at?

1   2   3   4   5   6   7   8   9   10

Ugly   ○ ○ ○ ○ ○ ○ ○ ◉ ○ ○   Beautiful

Engagement. Does it lead the audience to learn more about the topic? Does it inspire the audience to talk about the data or share it with others?

1   2   3   4   5   6   7   8   9   10

Distracts from data   ○ ○ ○ ○ ○ ○ ○ ◉ ○ ○   Draws one into the data

Describe your overall observations about the data visualization here. What stood out to you? What did you find worked really well? What didn't? What, if anything, would you do differently?   *

The first thing that stood out to me was that the visualization pictured a gunshot, which was an aesthetic choice fitting the topic. It made the audience interested in the story and gets across the point that US is a big exporter of firearms. Hence, I rated high engagement and moderate on usefulness.
What didn't work well was the in order to make the visualization appealing, they did not provide any way to read the chart. The intuitive way to read the chart would be to just read the labels and marks. The visualization and design of depicting the data itself becomes meaningless. Hence, I rated the visualization low on completeness and intuitiveness.
The visualization had 3 key components:

- thickness of lines to depict the volume of firearm import
- length of line to depict distance from the US
- association of region to countries by grouping countries together

Who is the primary audience for this tool? Do you think this visualization is effective for reaching that audience? Why or why not? *

Readers of Bloomberg, people interested in firearm control, people in world trade
The visualization is not entirely effective. It is great at engaging the audience, but is not intuitive drawing further insights which the audience of this visualization may require.

Final thoughts: how successful what this method at evaluating the data visualization you selected? Are there measures you feel are missing or not being captured here? What would you change? Provide 1-2 recommendations (color, type of visualization, layout, etc.) *

The method was successful at evaluating data visualization. However, it's pro and con is the same thing. It focuses on the overall impact of visualization but does not get into the depth of visualization choices such as color, choice of symbology, presence of redundant information etc.

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