Visual Analytics project report

Høyskolen Kristiania

PGR110, Visual Analytics

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# Dataset - 1

We are given the task to design and develop a dashboard for the Kristiania Higher Management to help them evaluate how Kristiania is doing compared to other institutes on assorted quality dimensions. The dashboard will visualize Kristiania best and worst performing study programs in a helpful manner. With this in mind we attempted to create the dashboard with functionalities that are minimalistic and aesthetic in design. The concept ought to be user friendly for communicating with the applied data.

# Dataset description

## Data Type

In order to work with efficiency we decided to rename all of the relevant dimensions into significant names with detailed description in each comment section. Later on we discovered it was another more intuitive way of renaming the fields by linking the source together. We have modified relevant tables to assist us in assessing the creation of our final product. In the “Survey in percentage” measure we created a calculated field with total survey divided by total enrollment, number format to percentage with 0 decimals. This data will indicate survey rate in percent amongst all institutes. This is significant as well as how many people actually took the survey. We have to take into account that fewer answers is more likely to result in a higher averaging score. We changed the quality measurements within a scale from “1-5” to integer and aggregated them on average. We want to eliminate distractions by presenting our data in context, thus decimal was removed because we don’t need this concise information.

According to Knaflic C.N, we can eliminate data that doesn’t add any values. “we don’t need the level of precision or granularity that decimal points provide.”(Storytelling with data, 2015, p.134) in our case we are only interested in values between 1 to 5 which are appropriate in this context.

| Source: Dataset1  Datatype float(decimals) | Source: Dataset1  Datatype Integer(whole) |
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# Designing the dashboard

## Sheets

The challenge itself and probably the most fun part was to obtain all the important sheets that cover the assignment task. We being the analysts are responsible to show the audience what is relevant and filter out the less relevant data, how to visualize the data and why we chose to display the elements the way they are. The initial phase was to first extract all the necessary measurements so we can iterate with sketches, essentially we had sheets for each measure.

We made the charts with the basic designing fundamentals in mind. The idea is how the audience will process the information, what is drawing their attention, and how to successfully convey the message in an easy and explanatory way.

## Visualization, the graphical representation of information

The bar charts are very commonly used for a reason, because it’s easy to understand and read. With that being said this is excellent in this case where we have to compare a lot of categories. Referring to Knaflic, C.N, “Our eyes compare the endpoints of the bars, so it is easy to see quickly which category is the biggest, which is the smallest, and also the incremental difference between categories.” (Storytelling with data, 2015, p.66). For comparing the surveys we used a horizontal bar that contains all the institutes with names, this makes it extremely easy for the western hemisphere audience that most read from left to right across the screen. Figure 2.

For the quality measures, the zero baseline in the x-axis will be at 1 and peak at 5. This is a very simple visual, but it allows for accurate comparison.

| Figure 2  Source: TestBoard  Horizontal bar | Figure 3  Source: TestBoard  Vertical bar |
| --- | --- |

## Color, pre-attentive attribute

The use of color is conventional and concise. The goal is to highlight the important part of our information we intentionally picked red, to be more precisely, the color of Kristiania. Since we are comparing Kristiania versus the rest we want to draw the attention towards all data that shows anything Kristiania. Inspiration and color was taken from the Ekstern *Designmanual.* While maintaining the color aspect throughout the dashboard we reduced the color contrast to easily identify Kristiania and lead the cues where and how Kristiania stands out in the crowd.

## Clusters

To make it even easier to read we are removing all unnecessary grid lines as well as markers to make the data stand out while maintaining our principles. Data labels that are attached were removed to clean up unwanted attention, the description will be inside when speculated in detail.

# References

Knaflic, C.N. (2015). *Storytelling with data: A data visualization guide for business professionals*, (2015), pp. 66 - 134.

Design Manual. *Ekstern designmanual V.02*. <https://designmanual.kristiania.no/#Farger>