

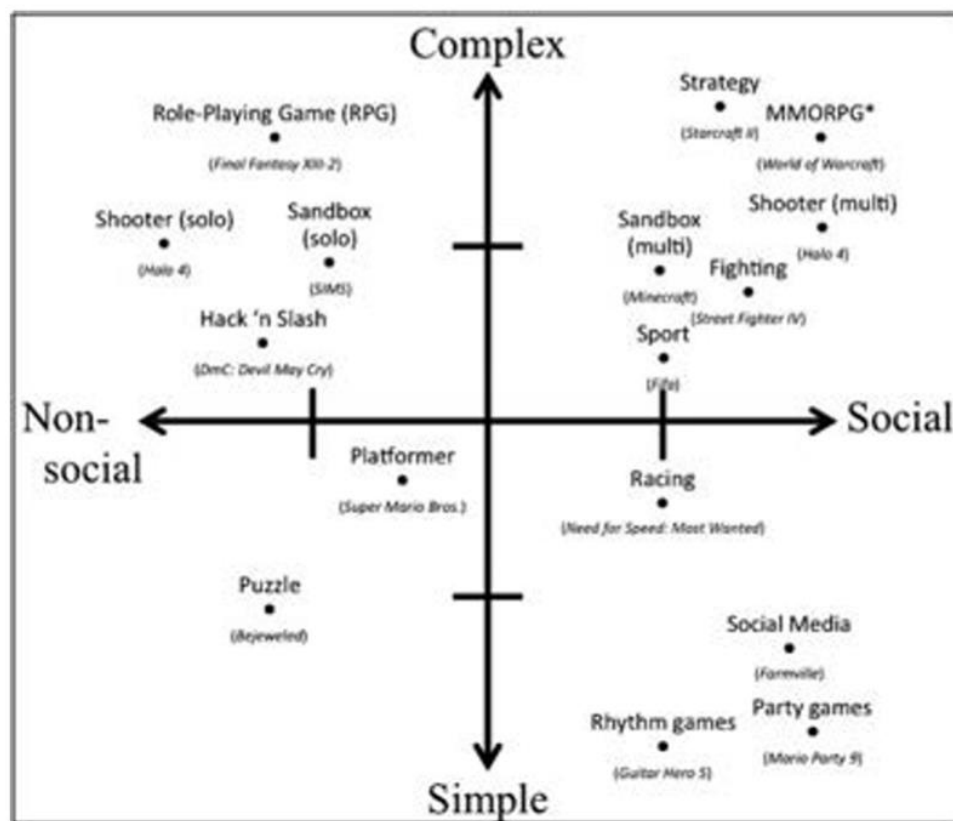
MXB 262 Case study

1.0 Visualization description

Visualization 1:

chrome-

extension://efaidnbmnnnibpcajpcgiclfindmkaj/https://scholarshipweekend.oglethorpe.edu/wp-content/uploads/sites/21/2024/02/Meier-JEORReadings-2024.pdf.



Note. The figure is not empirical but conceptual and is intended to demonstrate the variety of ways video games engage their users. Some genres have been necessarily excluded. The same game (*Halo 4*) was intentionally repeated to illustrate that many games have the option of being played in either a single- or a multiplayer mode. *MMORPG = massive multiplayer online role-playing game.

Visualization 1 is a two-dimensional matrix from a report of a study conducted on the benefits of playing video games, which shows a conceptual map of the main genres of video games with examples organized according to 2 dimensions: level of complexity and extent of social interaction required.

Visualization 2:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10170546/>

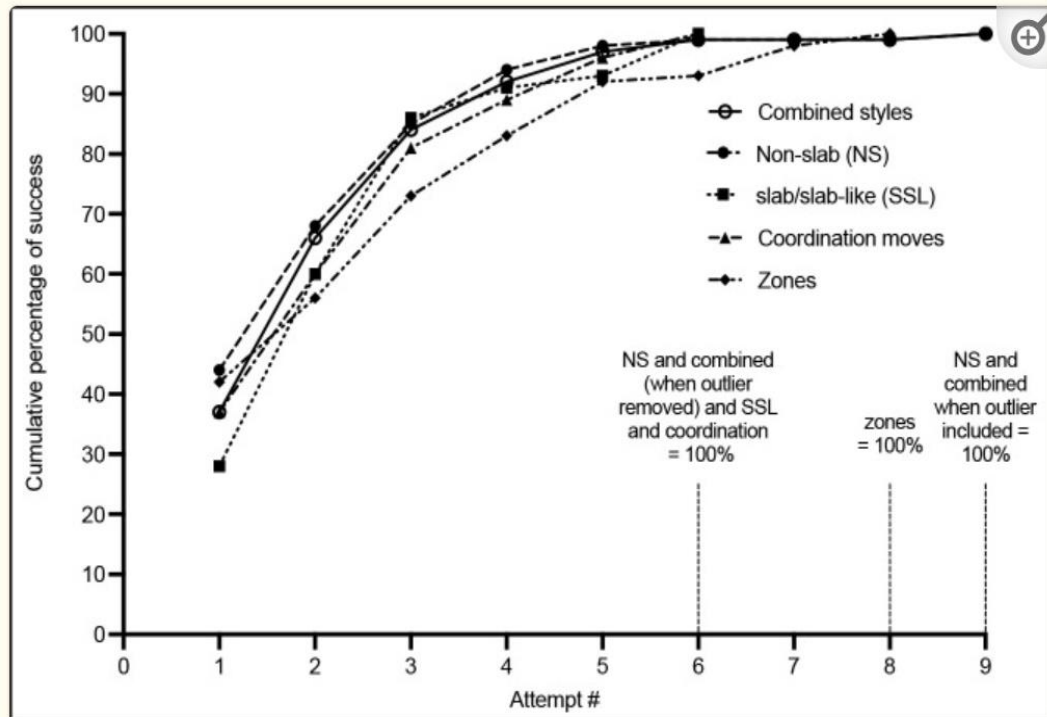


Figure 3

Trends in the cumulative percentage of successes as the attempt number increases in various bouldering styles. The 100% value indicates the attempt number at which all climbers within a bouldering style had their successful events occur.

Visualization 2 is a line graph from a report about time management strategies of rock climbers in the world cup bouldering finals by analyzing the competitors climbing on the routes. This graph shows the relation between the number of attempts and the cumulative chance of success in percentages across multiple lines (climbing styles).

2.0 Audience and action suitability

Visualization 1 targets people who play video games and those who don't but are curious about gaming. It aims to inform and explain the variations of video games that exist to those who are not familiar. Being a static figure, this visualization shows all the video game genres at once, ranging simple to complex along the vertical axis and from solo play to requiring social interaction with others on the horizontal axis. It also wants frequent gamers to agree with their classification. There are examples of games belonging to the specific genre below each point on the visualization to help the readers relate and understand what the game entails and thus how the genre fits on the scales of complexity and social interactions. The author wants this group of readers to agree to gain their trust for the rest of the report. In all, visualization 1 was designed effectively to send both messages to their respective intended audience.

Visualization 2 intends to convince and inform competitive/professional boulderers (boulder climbers) or their coaches about the trends and patterns on various climbing walls. This visualization is also static, so all the information is presented at once. Readers will be able to identify trends from the data represented and conclude ways to increase the chance of a successful climb. However, this visualization does not effectively illicit the intended action of the target audience due to some features which will be explained in detail below.

3.0 critical evaluation of structure

Visualization 1 is an annotated chart, so all the data is represented in one visualization and shown however the presenter wishes to present the data. This makes the visualization audience driven as once it is shown, the audience controls the order in which the information is received. This is good choice for a broad topic with so many examples like video games, it is effective to categorize based on the genre of the games and show them through a two-dimensional matrix. This makes it easier to read and understand instead of having numerous different game titles, which will result in the matrix being overpopulated with data entries.

Visualization 2 is also an annotated chart showing all the data entries in one line graph and like visualization 1, is a good choice to show a “zoomed out” summary of all the data collected (i.e. the success rate of each climb based on the wall route and the number of attempts). Choosing a line graph is also effective because unlike the data in visualization 1 which is categorical, the data in visualization 2 is quantitative, and using lines and dots to represent numbers is more accurate. However, there are random blocks of texts within the graph that do not blend in with the graph and make no sense until you read the description at the bottom of the graph.

4.0 critical evaluation of aesthetic choices

The design of visualization 1 is simple and emphasizes the message. It uses dots to show perceived values on the two-dimensional matrix and because the author decided to categorize the data based on the genre of the game, there are no unnecessary data entries and thus it avoids overcrowding. One issue of the visualization is the text that accompanies each point on the matrix. Each point has the video game genre above the dot and a name of a video game belonging to the genre below the dot in a smaller font and in brackets. There are several data points that are close to each other which makes the text look very messy and confusing, not being able to identify what genre the data point is representing which is not ideal for readers who are less familiar with video games.

As mentioned previously, using lines and dots in a line graph is great to show quantitative data. However, the context of the source of this visualization is to show comparisons between the different climbing walls. The lines in visualization 2 overlap with each other often and are very close to each other. Furthermore, the legend suggests that there are several lines to differentiate between the climbing walls, but the lines patterns are very similar, and the size of each shape is so small that it is difficult to tell the difference. This suggests that there is no difference between the different climbing walls, but the author is trying to show that there is.

5.0 Recommendations

One change to be made for both visualizations is to have a title and subtitle which tells the reader what they are looking at. Having a simple title will preempt the reader of what to look out for in the visualization.

To prevent the issues identified in the previous section, one change for visualization 1 is to remove the brackets for the name of the games since they are already a different font and size or remove it from the main part and include a legend.

Visualization 2 has a few changes to be made. Firstly, remove the blocks of texts within the graph as they do not fit the rest of the data and reduce the data to ink ratio.

Secondly, use colours to differentiate between the different lines since they are so closely packed. A strong consideration is to use a bar graph instead of a line graph as it is also an accurate representation for quantitative data and even if the data are similar, the bar graph will be able to show them without overlapping and looking messy.