

Perception (T1)

Pregunta 1: do we have more cones (light) or rods (hue)?

Rods /// Cons, the Same

Pregunta 2: What is the more accurately perceived color dimensions?

Luminosity /// Hue or Chroma, Saturation

Pregunta 3: What is the more common color blindness?

Red-Green blindness /// Blue blindness, Achromatopsia

Pregunta 4: Choose the color with a greater visible spectrum

Green, Yellow /// Red, Blue

Pregunta 5: Preattentive properties are perceived in less than 200 milliseconds

Vertader

Pregunta 6: Preattentive properties are not affected by distractors

Vertader

Pair each preattentive property with its type:

Hue - color

Blur - form

Size - form

2-D Position - position

Intensity - color

Shape - form

Length - form

Motion - motion

Spatial grouping - position

Pair the meaning with the correct encoding

Vertical position, higher - bigger

Vertical position, lower - smaller

Hue saturation, low saturated - smaller

Light, darker - bigger

Hue saturation, saturated - bigger

Light, lighter - smaller

Choose the properties that help to represent Visual Saliency

Distance from the norm, Enclosure, Added mark /// Saturated, Higher

What is the strongest Gestalt or Preattentive property to represent relations

Connectedness /// Similarity, Symmetry

Types of data (T2) and types of charts (T4) Questionnaire

Pregunta 1: Categorical data may have order

Vertader

Pregunta 2: In continuous data 0 is always absolute

Fals

Pregunta 3: Only discrete values may have divergent order

Fals

Pregunta 4: Nominal data has no order

~~Fals~~ True

Pregunta 5: In Ratio data the distance between any two consecutive values is coherent

Vertader

Pregunta 6: Pair accordingly

Size → Ratio

Days of the week → Ordinal

Number of siblings → Discrete

Country names → Nominal

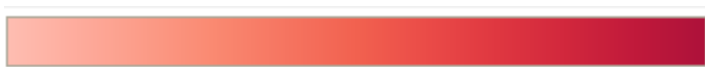
Richter scale for earthquakes → Interval

Pregunta 7: Describe and put a data example for the following scale:



It is a discrete sequential gradient scale used for categorical ordinal data or used for numerical discrete data. The minimum is the color on the left and the maximum is the color on the right. Data example may be the average number of people living in a house in each zone (invent example).

Pregunta 8: Describe and put a data example for the following scale:



Concentration of airbnbs in the center of Barcelona (invent a variable). It is a gradient scale for numerical continuous values where the minimum is the color on the left and the maximum is the color on the right.

Pregunta 9: Describe and put a data example for the following scale



It is a diverging discrete gradient scale, with two hues on the extremes and a neutral value on the center. A data example may be the number of votes of each ideology distributed in a map.

Pregunta 10: Which type of data is represented by...

Tree map - 2 or more categorical variables, with hierarchy

Scatter plot - 1 numerical variable + 1 numerical (or categorical) variable, with or without order

Heat map - 2 or more numerical variables (1 variable can be categorical). With or without order

Line chart - 2 numerical variables, with order

Pregunta 11: Tell one type of chart to represent Deviation...

Stacked divergent bars

Pregunta 12: Tell one type of chart to represent Ranking...

Lollipop chart

Pregunta 13: Tell one type of chart to represent Evolution over time...

Line chart

Pregunta 14: Tell one type of chart to represent Part of a whole...

Doughnut chart

Pregunta 15: Tell one type of chart to represent Flow...

Sankey diagram

Interaction (T5)

Pregunta 1: When detailed information appears on hovering on a chart element...which interaction have we triggered?

Details on demand /// Linked views, overview and details, focus and context, filtering

Pregunta 2: When the data space is very big and nevertheless we want to show it...what interactions can we provide?

Pan, zoom /// Ordering, projection

Pregunta 3: Select two interaction techniques related to what to show

Filter, Layers /// Change style, Order

Pregunta 4: I have to display a map of Europe with many details of economy per country. But I want to give a general view first with a choropleth. Which kind of zoom should I use?

Semantic zoom /// It's better to use layers, Optical zoom

Pregunta 5: Relate every type of chart with its type of interaction

Treemap à Drill-down, Map à Zoom, Sankey diagram à Change position

Pregunta 6: Which options can we give users to personalize the charts?

Order, Change style, Change position, project

Pregunta 7: Which interaction would you offer to your audience if you know that they may have illumination problems in their screens?

Change style /// Order, pan, zoom, project

Pregunta 8: Adding interaction has only good effects on visualizations

Fals /// vertader

Pregunta 9: Every user will know how to interact with your charts

Fals /// Vertader

Pregunta 10: All types of visualizations may include interactions

Fals /// Vertader

Audience (T6) and Dashboard (T7)

What is a scenario?

An imagined situation where our users will interact with our visualization to solve a need.

In Western cultures, which is the most important place on the screen?

Top Left

What is a person?

A representation of our audience to facilitate empathy

Develop KPI (singular)

Key performance indicator

Why do we create prototypes?

To better define our visualization with low effort.

To test if we are able to answer audience questions.

To iterate over potential designs

Who is the intended audience of analytical dashboards?

Top level management

How many screens does a Dashboard fill?

1

Slide design (T9)

What is the difference between informative and persuasive presentations?

Informative presentations show the facts but do not suggest a solution /// Informative presentations want to entertain the audience, Informative presentations let the decision to the audience, Informative presentations are more rigorous

What content shall I include on the slide?

Few words and images, highlighting the important content /// Only images, All the relevant information

When the message follows a storytelling pattern... in which part shall the presenter put more stress?

Climax /// Rising action, Ending, Falling action

If the presentation includes a call to action... where shall I include it?

Ending /// Climax, Rising action, Falling action

Pair the colors with their subtitle meaning:

- Blue - Integrity
- Orange - Innovation
- Purple - Luxury
- Grey - Authority
- Red - Energy
- White - Hope
- Black - Power
- Yellow - Intellect
- Green - Life

What are the important elements in the layout

Coherent design, Visual hierarchy, Layout correspond to intention /// Include text, Include images.

How will you include good images?

Cropped to focus, Get them from good image, Not distorted, Framed composition or 1 image, High resolution

How many different typography families will you include in a presentation?

2 /// 4, 6

Select a voice tool you can play with on a presentation delivery?

Intonation

Once you have finished preparing your presentation... what is the next step

Simplify it, Rehearse

Accessibility (T10)

All users will look at our visualization with our default configuration?

False

Pair user profiles with assistive technology

Motor impairments - Virtual Keyboards

Elderly - Font Size Increase

Low Vision - Magnifier

Blind Person - Screen Reader

Dyslexia - Reading Aid

Accessibility visualization is...

3 correct answers:

- (nowadays) a special feature of very specific libraries
- getting better in many libraries
- (nowadays) difficult to reach with many libraries

A strong motivation for doing accessible visualizations is...

Legal enforcement

Making visualizations accessible benefits...

4 correct answers:

- elderly people
- everyone
- people with learning disorders
- people with disabilities

What can you use as an accessible alternative to a chat?

2 correct:

- a table with the corresponding numeric values
- a textual explanation of trends and main points

Pair profiles with recommendations

Blind - keyboard navigation
Elderly - simpler charts
Cognitive - clear title
Low vision - contrasted colors
Motor - big clicking areas

Will you be able to construct a 100% accessible chart?

I can create a very accessible chart, but I will not fulfill all needs 100% of all users

Which are the seven principles of chartability?

Perceivable, Operable, Understandable, Robust, Compromising, Assistive, Flexible

Which profile target Alcaraz's heuristics?

Low vision

Geographic visualizations (T11) and Software (T12) questionnaires

1- There is only one accepted projection for geographic visualizations

False

2- What is the standard format for professional GIS files?

Shapefiles /// **geojson, topojson**

3- How does Topojson reduce file size?

(all 3 correct)

- 1- Reducing repetition
- 2- Delta-encoding values
- 3- Quantizing coordinates

4- What is 0.0 in geographical coordinates?

Bottom Left /// **Bottom Right, Top Right, Top Left**

5- What is a choropleth map?

A map with shaded areas representing quantitative values /// **A map with lines between points, A map with symbols representing qualitative values**

6- Develop SVG (singular)

Scalable Vector Graphic

7- Give three reasons to choose Tableau as a preferred visualization tool.

- Designed to explore and analyze data visually.
- Lots of possibilities to import data and display it.
- Constant updates.
- Cross-platform web version.
- Free one-year license for education.

8- Give three reasons to choose Ggplot as a preferred visualization tool.

- Mathematical Language
- Well-known bookstores among specialists
- Available Courses & Tutorials