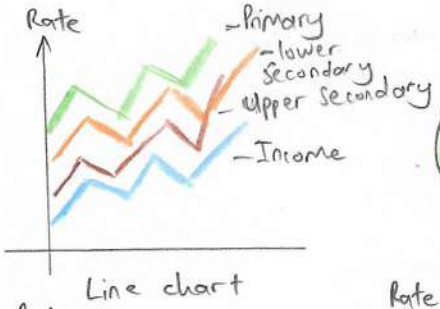
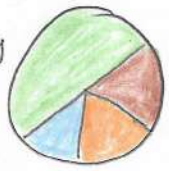
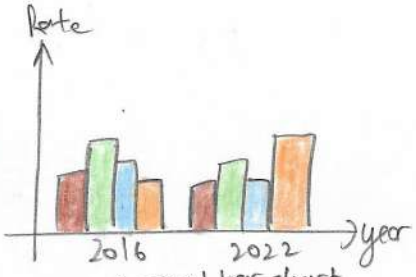
# IDEAS

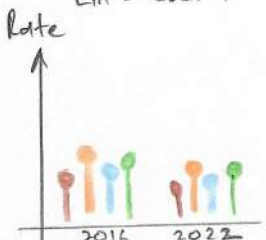


Line chart

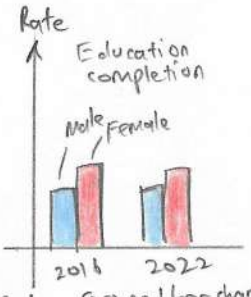

Piechart



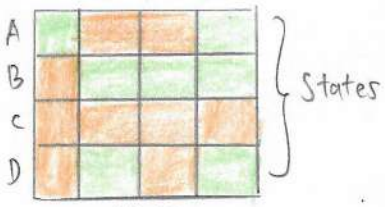
Grouped bar chart



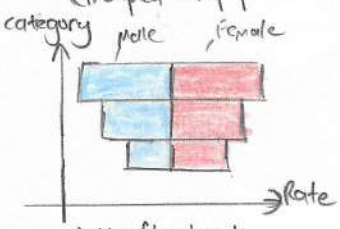
Grouped lollipop chart



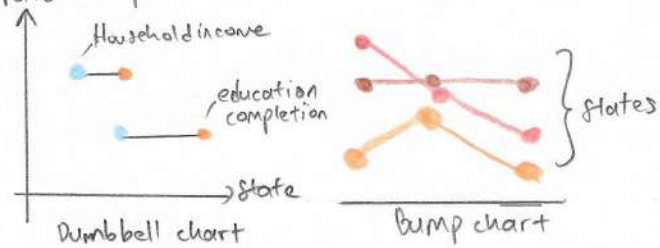
Grouped bar chart



Year
Heatmap

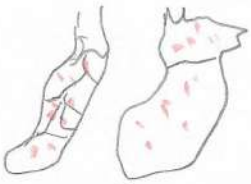


Butterfly chart

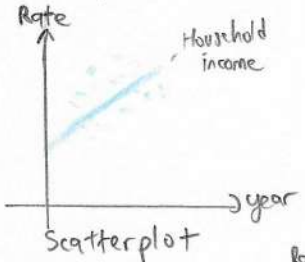


Dumbbell chart
Bump chart

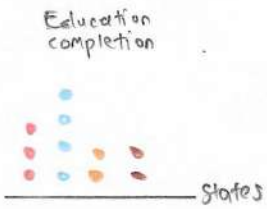
Choropleth map


Dot map

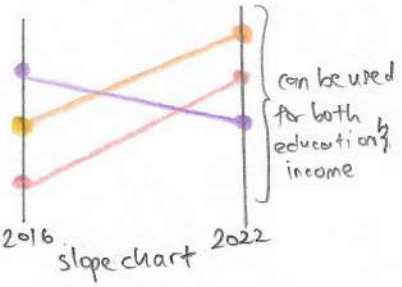
Proportional Symbol map



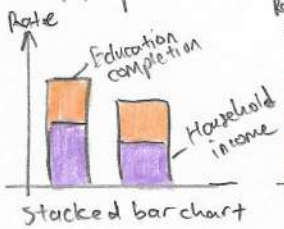
Scatterplot



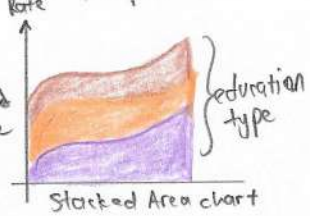
Dot plot



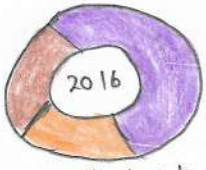
Slope chart



Stacked bar chart

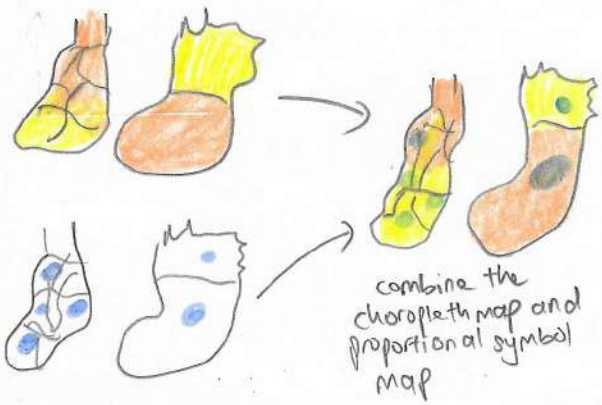


Stacked Area chart



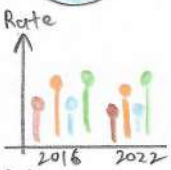
Donut chart

# COMBINE & REFINE

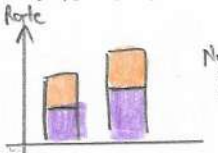



# FILTER

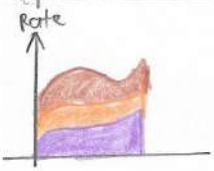
Not very useful as it shows proportion not actual size.



similar to the grouped bar chart.



Not suitable as it shows parts of a whole.



Not suitable as stacking makes it difficult to see how each education level changes over time.

Difficult to compare segments accurately.

# CATEGORISE

Overall trend in time series

↓

State based comparison

↓

Gap between household income and education completion

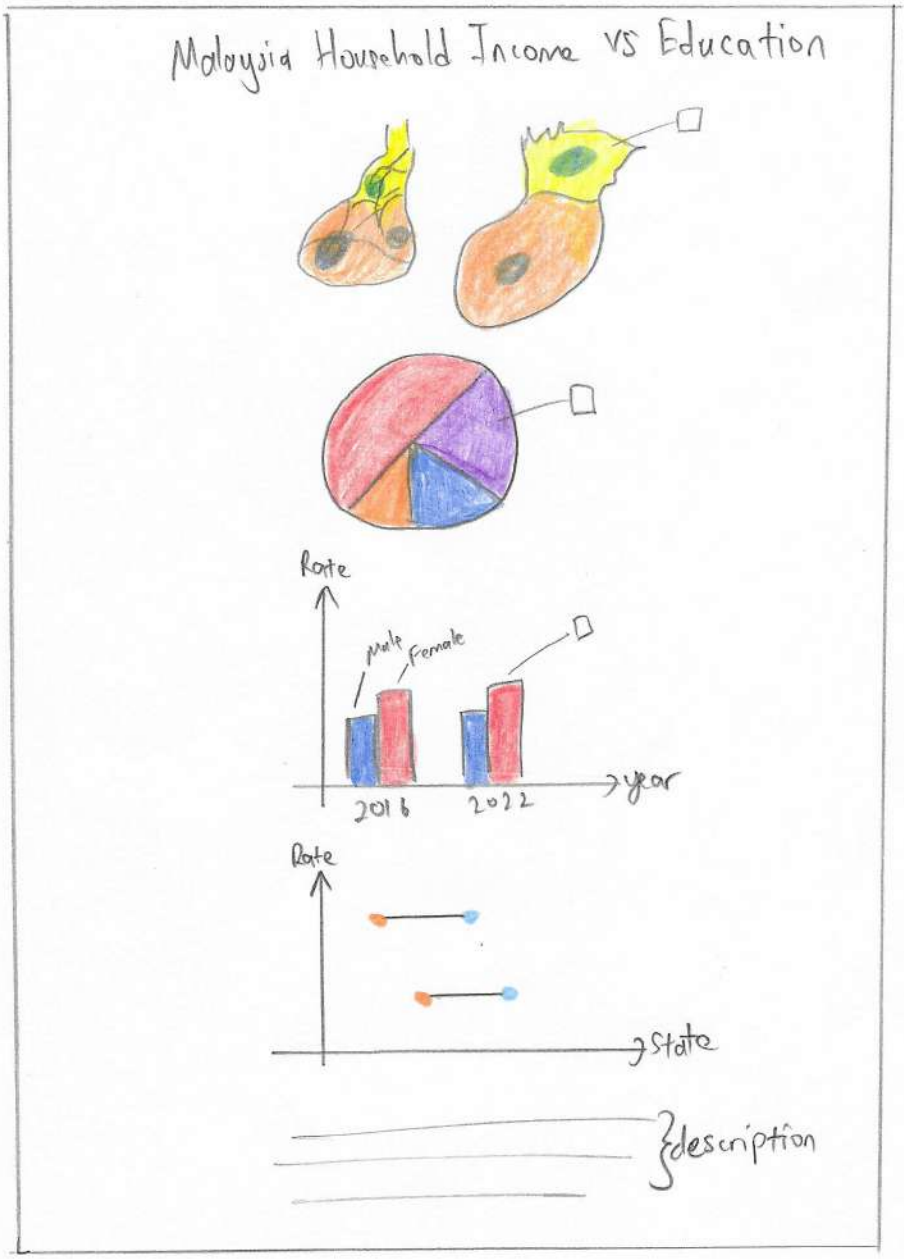
↓

Gender based comparison

# QUESTION

1) Does it show how the household income and education completion rate change over time?
2) Is the visualisation doable?
3) Does COVID-19 (2020-2021) affect the household income and education completion rate?

# LAYOUT




Title: Vertical layout
Author: Gurgobind Singh
Date: 13/10/2025
Sheet: 2
Task: Design simple vertical layout

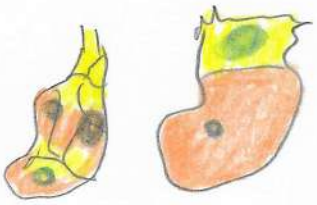
# OPERATIONS

- Refers to the tool tips (annotated description) when the cursor is above the idiom.
- Refers to the overall description of the idioms.

# DISCUSSION

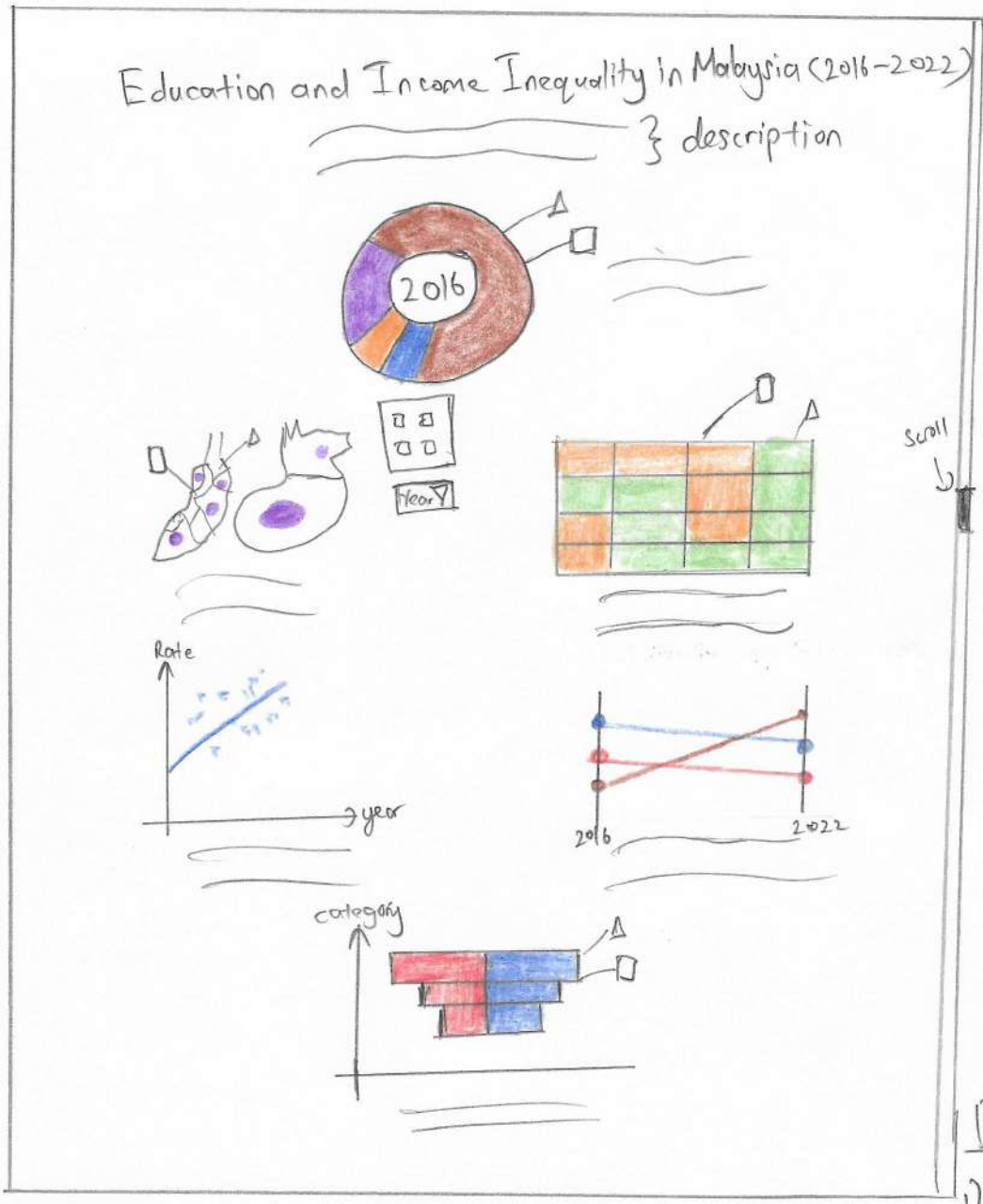
1. The idioms are arranged neatly.
2. There is only one overall description which is not enough for a proper storytelling.
3. Provides less engagement with user.
4. May not be suitable for a single HTML page cause it might need more space.

# FOCUS



Focus on highlighting the overall household income and education completion for each State in Malaysia throughout years 2016-2022. The user attention is drawn to the first idiom as it is positioned at the top and has a bigger size than other idioms. This idiom tells the story of the evolving of income and education completion throughout the years for each state in Malaysia.

# LAYOUT

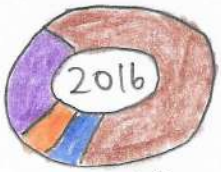



Title: Narrative view
Author: Gurgobind Singh
Date: 13/10/2025
Sheet: 3
Task: Narrative visualisation for viewers

## OPERATIONS

- □ – Refers to the tooltips when the cursor is above the idiom
- △ – Refers to the idiom annotation of vital information for viewers.
- ▦ – Refers to the legend selector
- ▨ – Scrollable option easier for viewers to view bigger idioms
- ≈ – Provide descriptive story about the idiom.
- Year ▽ – Drop down menu for year selection

## FOCUS



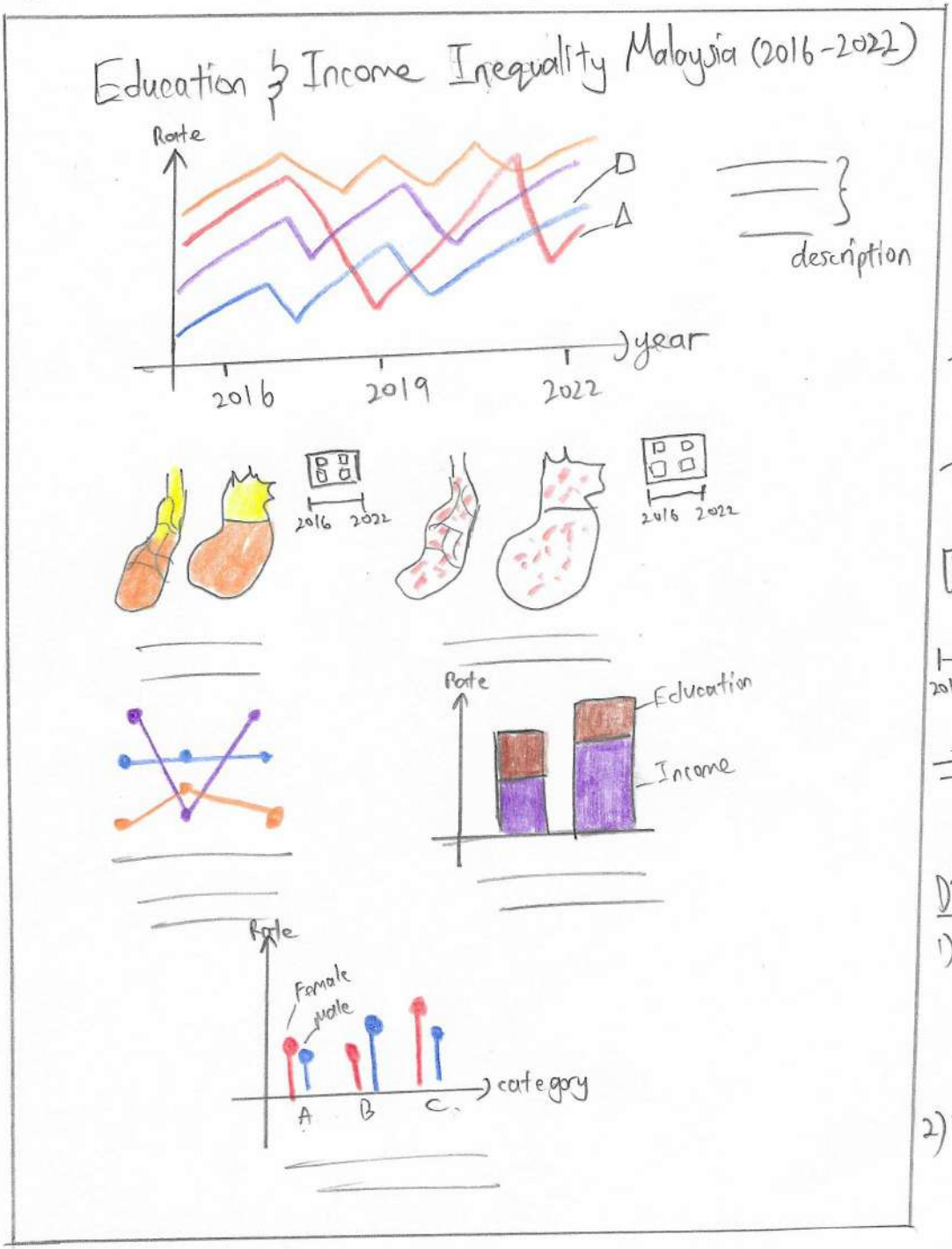

Focus on highlighting the overall total household income, and category of education completion rate in percentage from 2016-2022. This idiom is bigger to capture viewers attention, thus making it the main focus.

## DISCUSSION

1) The scroll option is good if the idioms require more space to be displayed.
2) The white space between the idioms might be too little which may cause the idioms to look like it's joined and not separate.
3) The large font size for the main title will attract viewers attention as it has a higher visual hierarchy.

# LAYOUT

Title: Storytelling
Author: Gurgobind Singh
Date: 13/10/2025
Sheet: 4
Task: Education & Income inequality Malaysia (2016-2022)



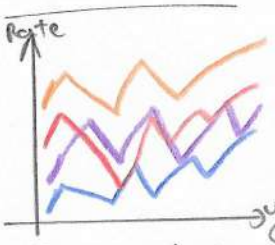

## OPERATIONS

- Refers to tooltips when the cursor is above the idiom
- Refers to idiom annotation of vital information for viewers.
- Refers to the legend selector.
- Refers to the year slider selector.
- Provide descriptive story of the idiom.

## DISCUSSION

1) The main focus idiom might be too large which may disrupt the sightlines.
2) The dot map might not be suitable if the dataset is not aggregated by district or individual location.
3) The legend selector is good for viewers to filter for a particular state.

## FOCUS



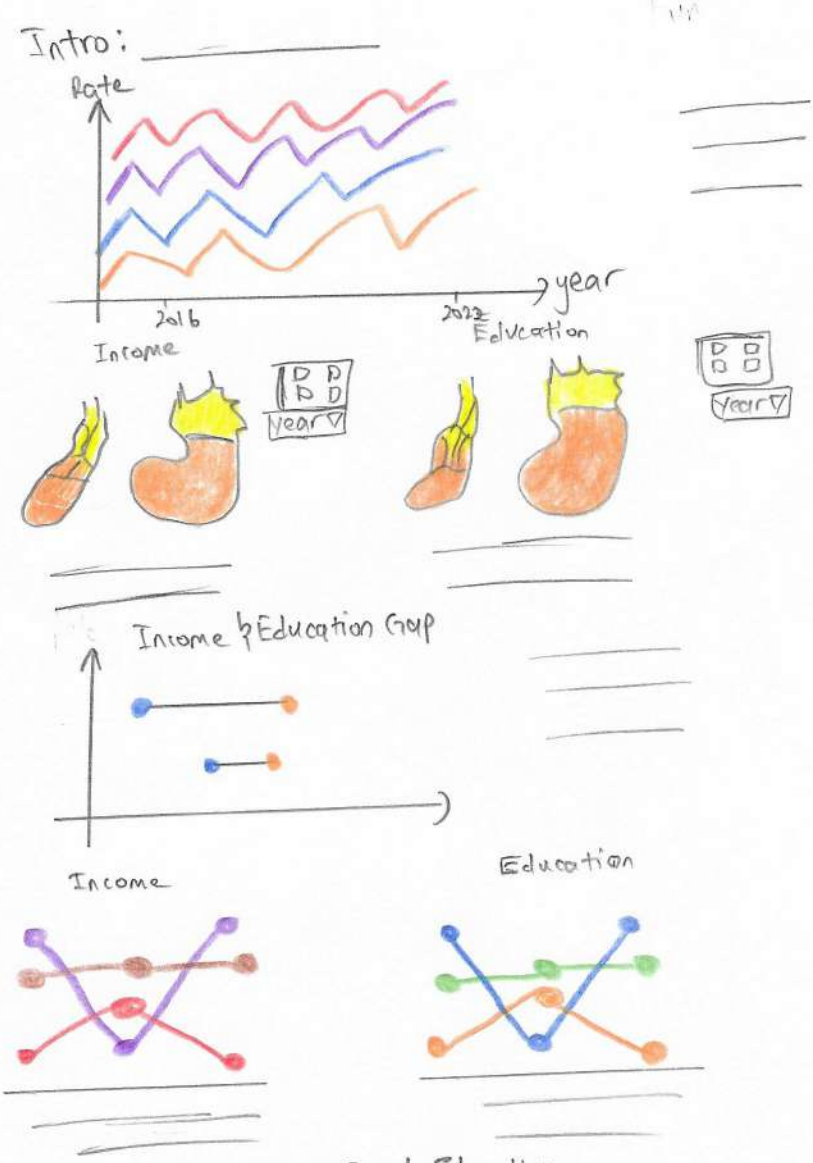

Focus on highlighting the overall long term trend of the household income and education completion. The user attention is drown to the lines which tells the story of the education & income inequality, whether it is increasing or decreasing.

# LAYOUT

Title: Malaysia income and education inequality
Author: Gurgobind Singh
Date: 13/10/2025
Sheet: 5
Task: Design final layout

## MIND THE GAP

Education & Income Inequality in Malaysia (2016-2022)



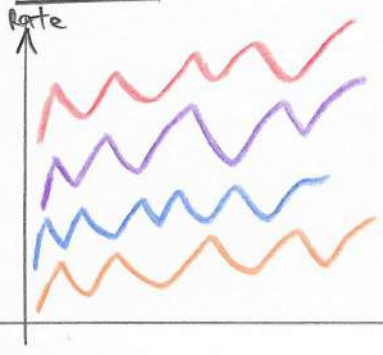

## OPERATIONS

- ☐ - Refers to the tooltips which works when the cursor is on the idiom.
- DD DD - Legend selector.
- Year ▽ - Year selector dropdown menu.
- Scrollable option to view bigger idioms.
- = - Provide description story of the idiom.

## DETAILS

- Dependencies: HTML, Excel, R, Vega-Lite and JavaScript for data cleaning and website development
- Estimated time and effort: Atleast 4 days to build all idioms and 2 days for final design and layout.
- Should be free cost.
- Requirements: Need a decent screen (13 inch and above) to observe all idioms clearly.

## FOCUS




The main focus chart is the overall trend of household income and education completion over the years (2016-2022). This is the first chart to be seen and the biggest size to attract viewers attention. The other charts are equally important and will have similar sizes.