

IDEAS

① Education and Employment in Malaysia.

what to show? → relationship b/w edu & employment
→ better education, stronger employment?

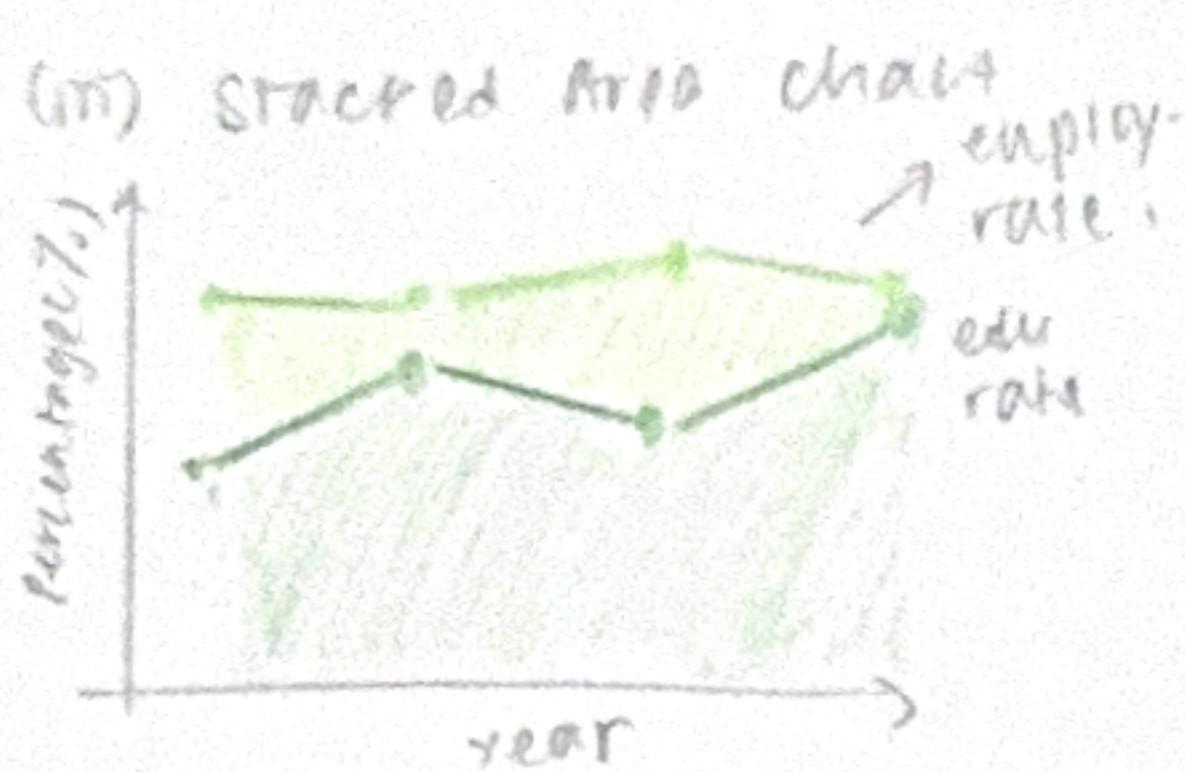
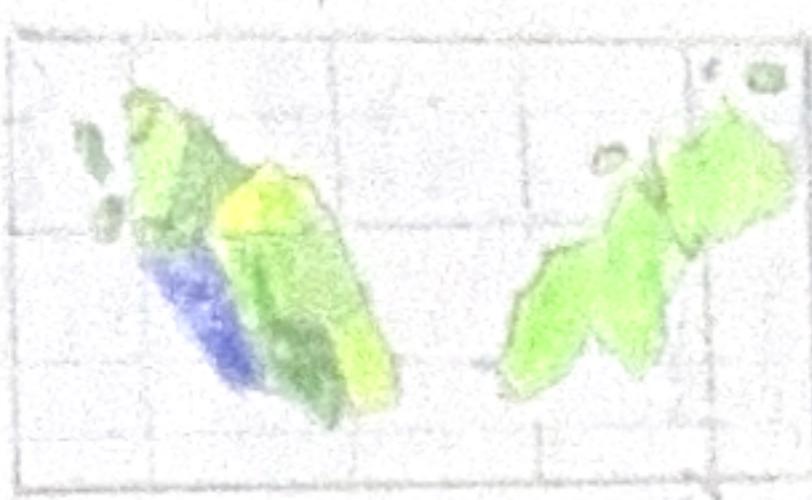
- Data source:

↳ Education Attainment / Employment (DOSM) (a)

↳ Employment by Education Level (MOHE) (b)

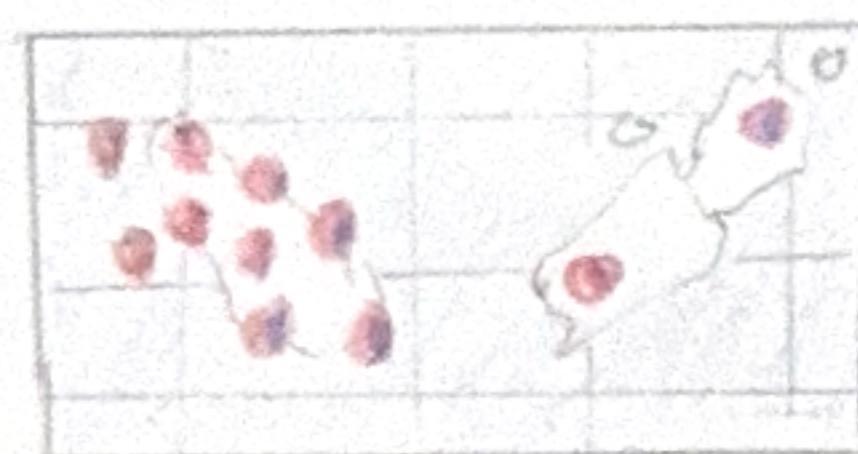
(a) choropleth map

Tertiary education % across malayzta



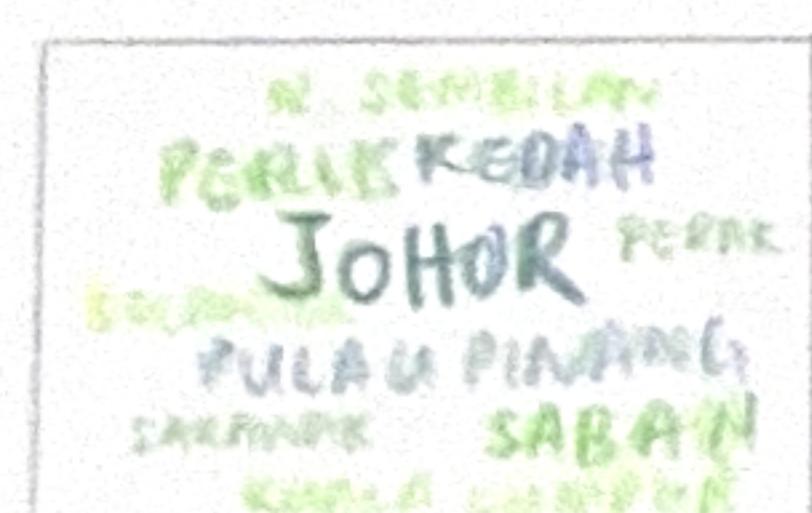
(c) bubble map chart

to show how many diff education tier in each state



(d) word cloud

to show which states perform the best

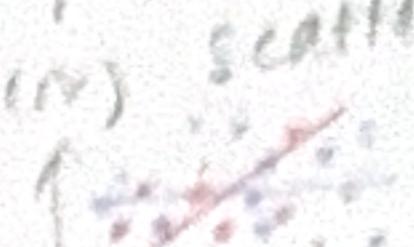


using Vega / Vega-Lite

FILTER

(1) (i) Repeating chart

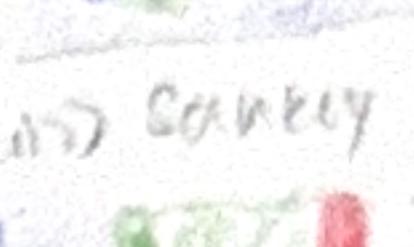
compare and then
the stock bar chart



(1) (ii) bubble map chart

overcomplicated

cluttered



don't have enough
data to bring
in the
relationship

CATEGORIZE

① examine how different levels of education attainment influence employment outcome.

② visualize the flow of individuals from various education level to their employment status

③ - education level - employment - employment status - optional ④ key categories that dimension will appear in your diagram

⑤ expected insights → higher edu, higher unem → which education will better

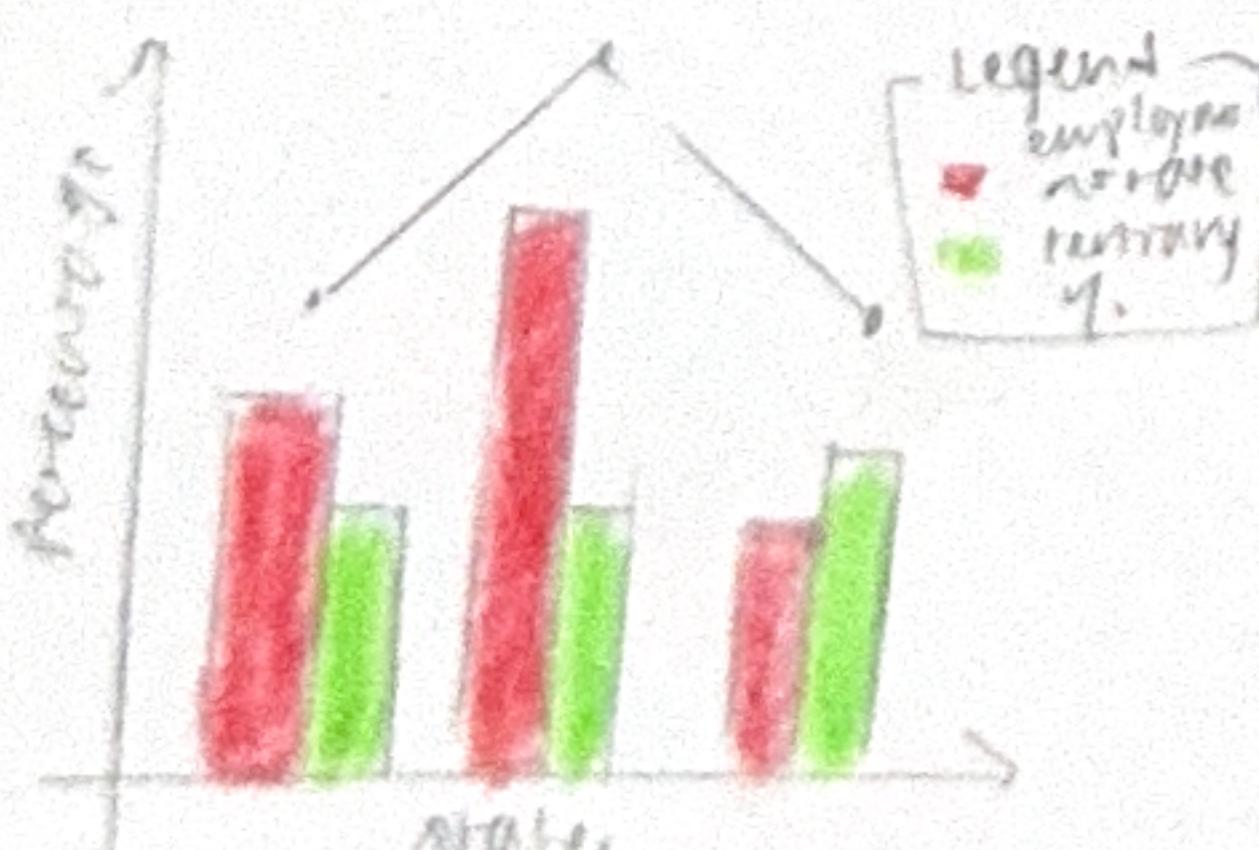
COMBINE & REFINER

① stacked bar chart / grouped

- a grouped bar chart + line chart
to show 2 columns to show
co-education trend

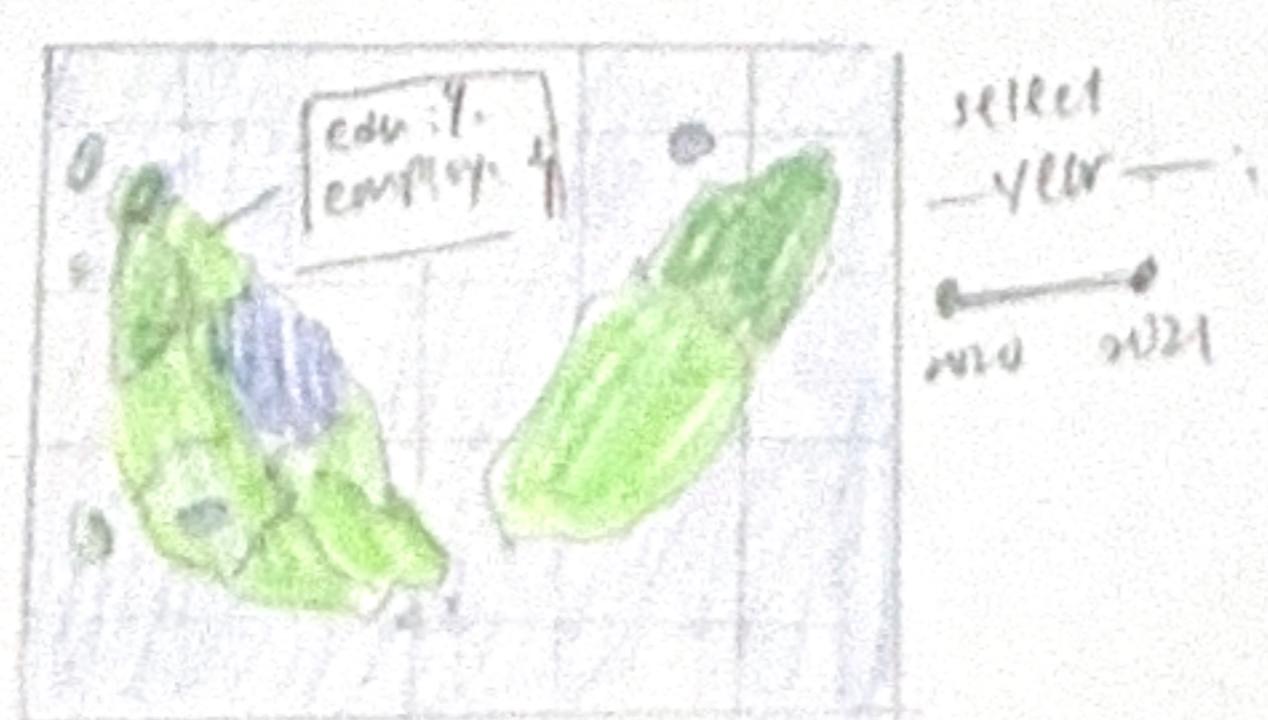
co-education
so employment rate

- provide a legend



② choropleth map

- calculate and display the
tertiary education rate in
malaysia → add a filter to
see the trend
- tooltip shows the detail
break down employment rate



QUESTIONS

① Does higher education lead to higher employment in malaya?

② Which education levels have the highest unemployment rate?

③ Are diploma and degree holder concentrated in the private / public sector?

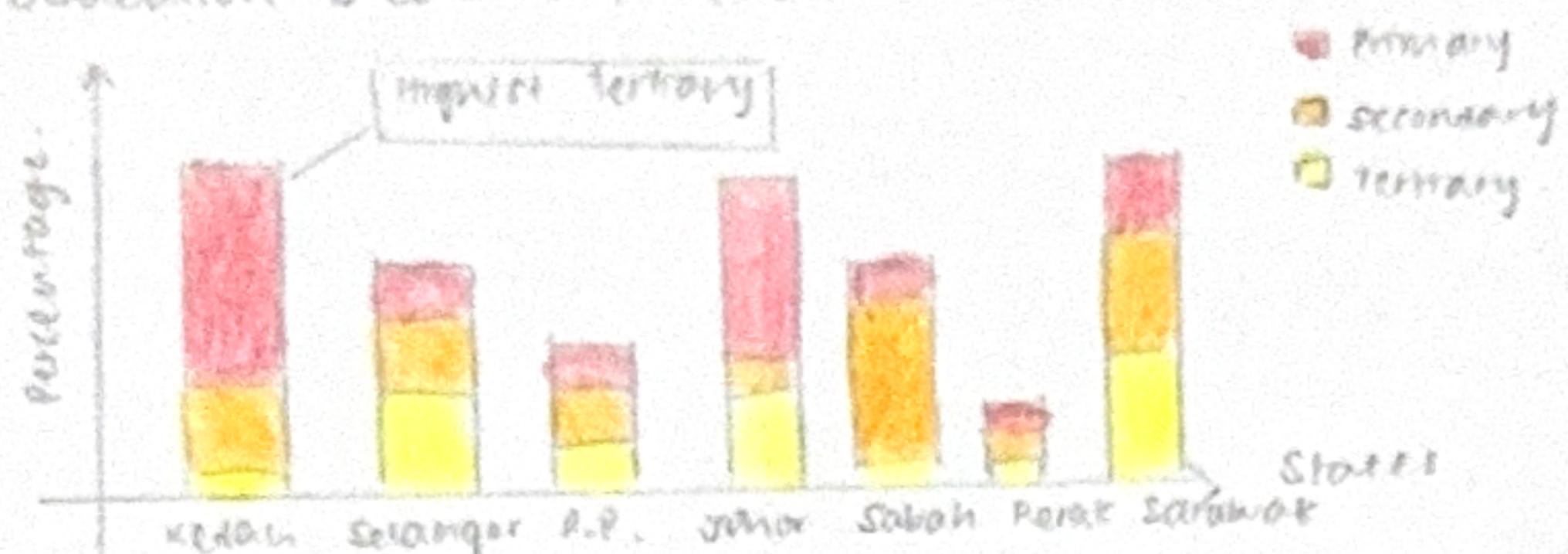
④ How has the relationship changed over time?

LAYOUTEducation and Employment in Malaysia

This dashboard shows the relationship between education rate and employment rate in Malaysia.

①

Education Breakdown in Each States



②

Recruited Population Density in Malaysia



Top Performing States in Malaysia across time

PERAK PERLIS
Johor JOHOR SELANGOR
N SEMBILAN KEDAH
P PINANG PERLIS
SABAH KUALA LUMPUR

③

④

Male & Female Age Distribution in Workspace

FOCUS

TITLE / SOURCE		overall	storyline
①		use warm colour tone - red/blue exception due to traditional thoughts Red - female Blue - male.	① - start with how many tertiary educated students out there - give overview how many tertiary stud secondary/primary
②	③		② relate to employed density in each state - dot density plot (able to visualize which state - too crowded / less crowded)
④	⑤		③ word cloud to show the best performing states - use different colour to show the strength of it - upon clicking, it will show highlight the map in chart ②
⑥			④ age distribution act as extra insights to see how is the current work and age gap / distribution looks like - provide more insights (younger)

TITLE: Education & Employment in Malaysia

AUTHOR: YANCI XUAN CHOW
DATE: 10/10/2025

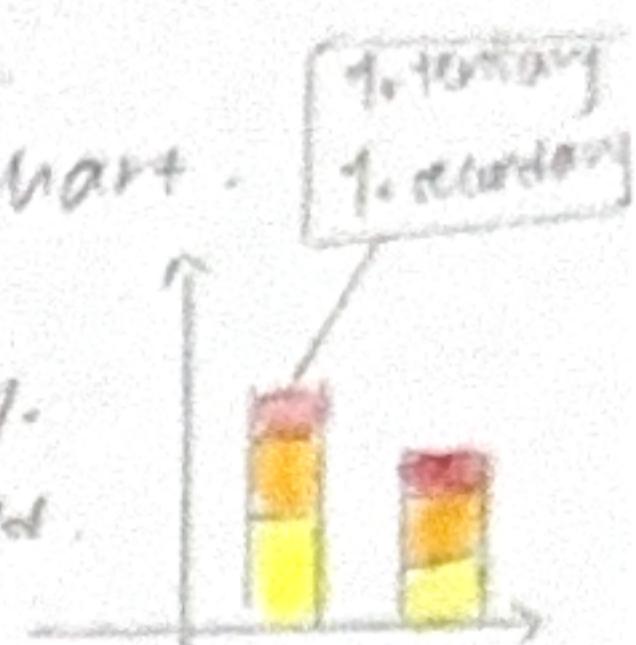
SHEET: 2

TASK: Education and Employment relationship in Malaysia

OPERATIONS

① Stacked bar chart

- Hover over each category show %.
- bars can be sorted (comparison).



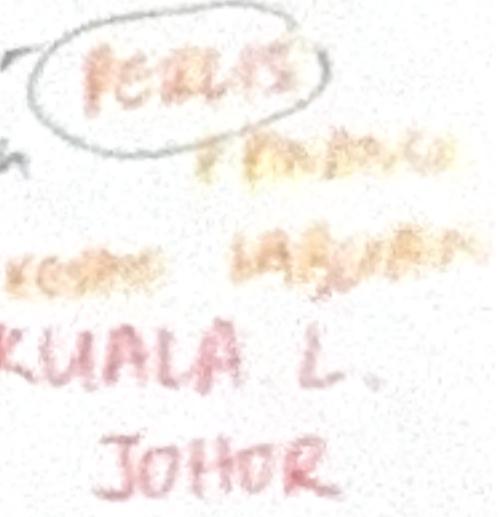
② Dot map

- Hover over each state show exact %.
- Add a slider to show growth over year.



③ Word cloud

- use different colour to show the strength of it. performance
- when word cloud state is clicked → linked to chart ② to show the location.



④ Butterfly chart

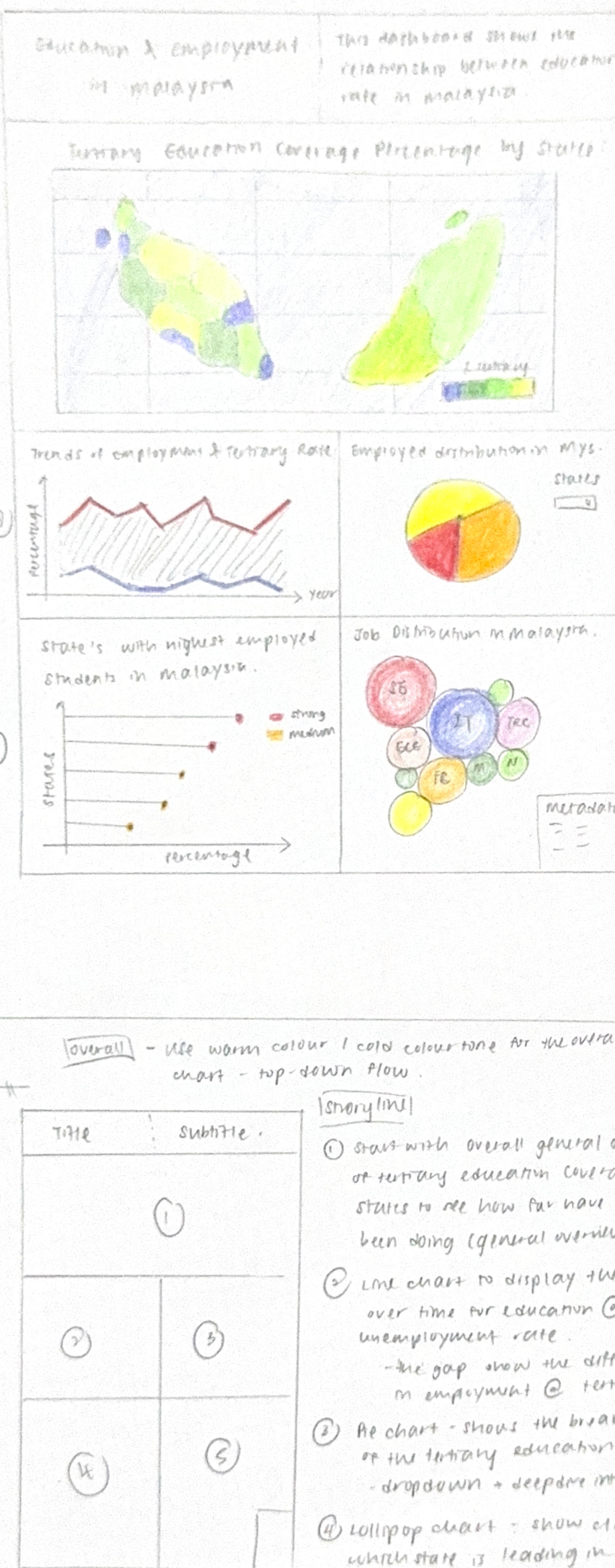
- to show exact distribution - red/blue colour indicate M/F

⑤ Add some short analysis of the chart at a side + metadata.

DISCUSSION

- ① Need more dataset to perform recruited population
- ② dot map might be difficult to visualize the insight
 - can consider other chart
- ③ How to implement word cloud in negative map?
- ④ can implement more chart (line graph)
- ⑤ need to get more dataset for male / female age distribution

LAYOUT



TITLE: Education & Employment in Malaysia

AUTHOR: YANG XUAN CHOW

DATE: 10/10/2025

SHEET: 3

TASK: Education and employment relationship in Malaysia

OPERATIONS

DATA + REDESIGN
CR: HSI

- (1) Choropleth map
- add a slider to show the colour change across the year
 - hover over each state to show the exact percentage

- (2) Line graph
- hover over each point to show the exact %
 - the area highlighted shows the gap for each year

- (3) Pie chart
- add a dropdown menu to show the distribution in each state

- (4) Lollipop graph
- different colour to show the three tier of strong/med/weak

- (5) Bubble chart.
- different colour shows different category
 - hover to show detail %

SELECT STATE
KEDAH
JOHOR
PENANG
MELAKA

FOCUS

- (1) The size of bubble determine the % of the dedicated field in Malaysia

TITLE	subtitle
(1)	
(2)	(3)
(4)	(5)

- Storyline:**
- Start with overall general overview of tertiary education coverage by states to see how far have the states been doing (general overview)
 - Line chart to display the trend over time for education @ unemployment rate.
 - the gap shows the difference in employment @ tertiary
 - Pie chart - shows the breakdown of the tertiary education
 - dropdown + deep dive into states
 - Lollipop chart - show clearly which state is leading in Malaysia

DISCUSSION

- (1) The colour is too messy
does not follow the design principle
- (2) Bubble chart - need to find dataset to show the desired outcome
- (3) Overall good flow -
need to modify the colour

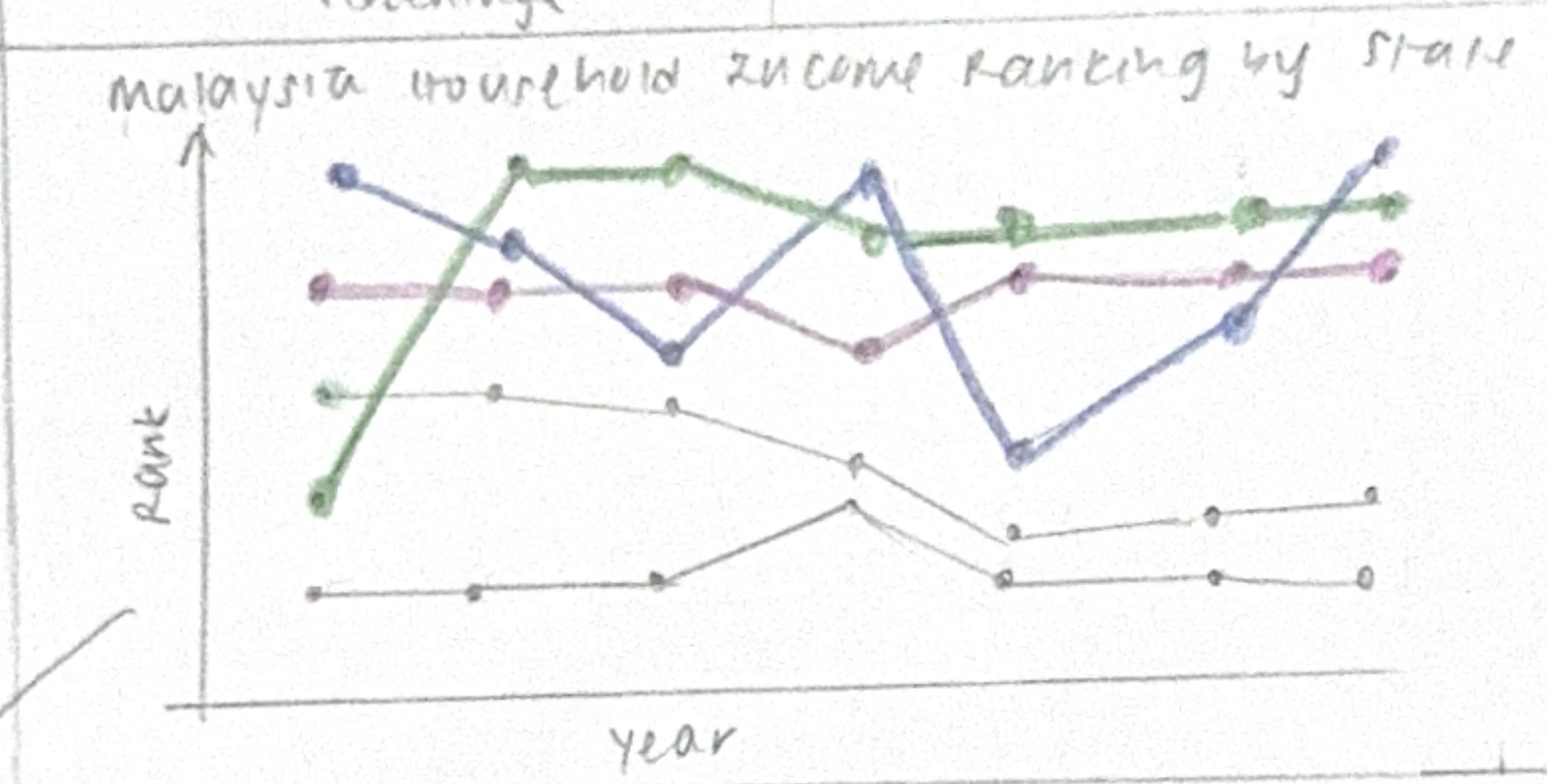
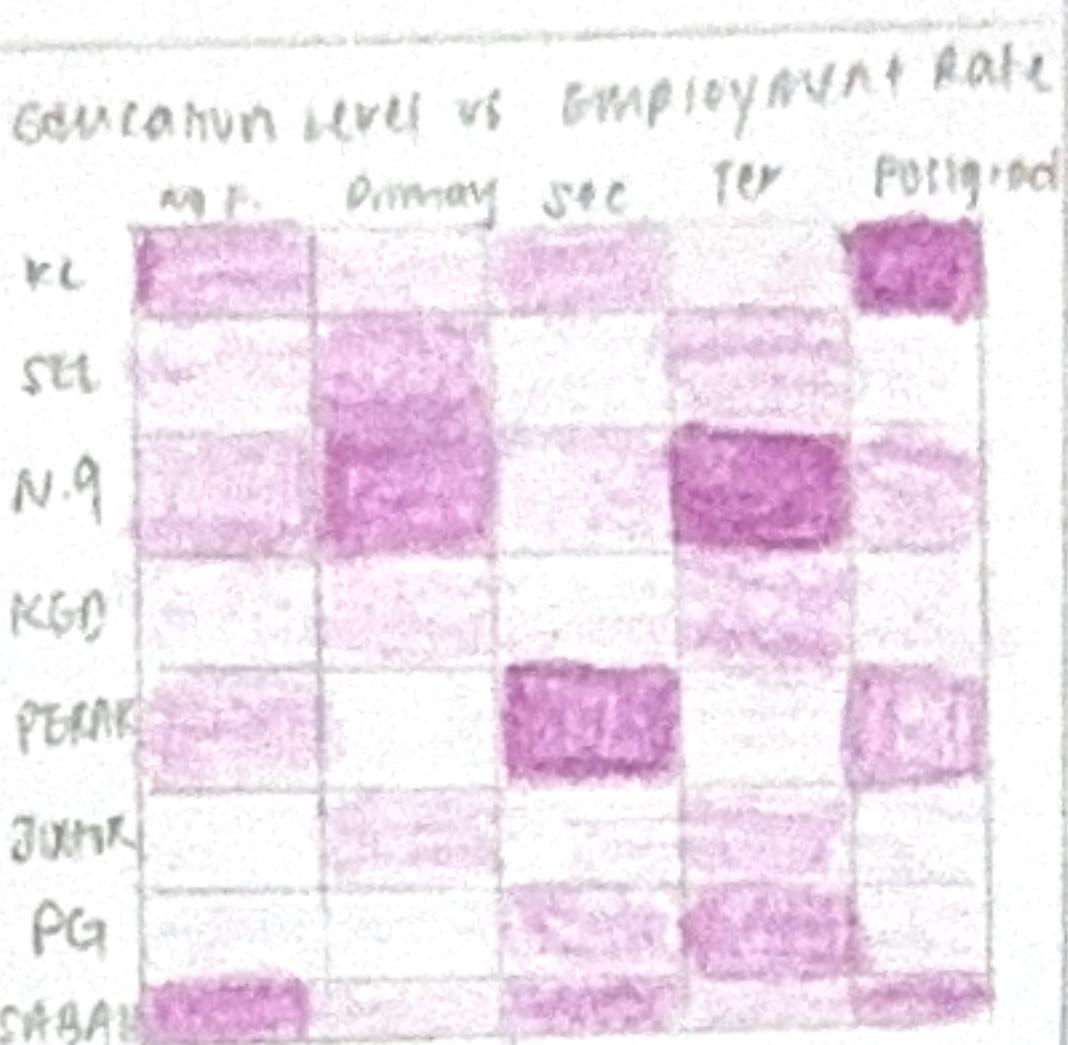
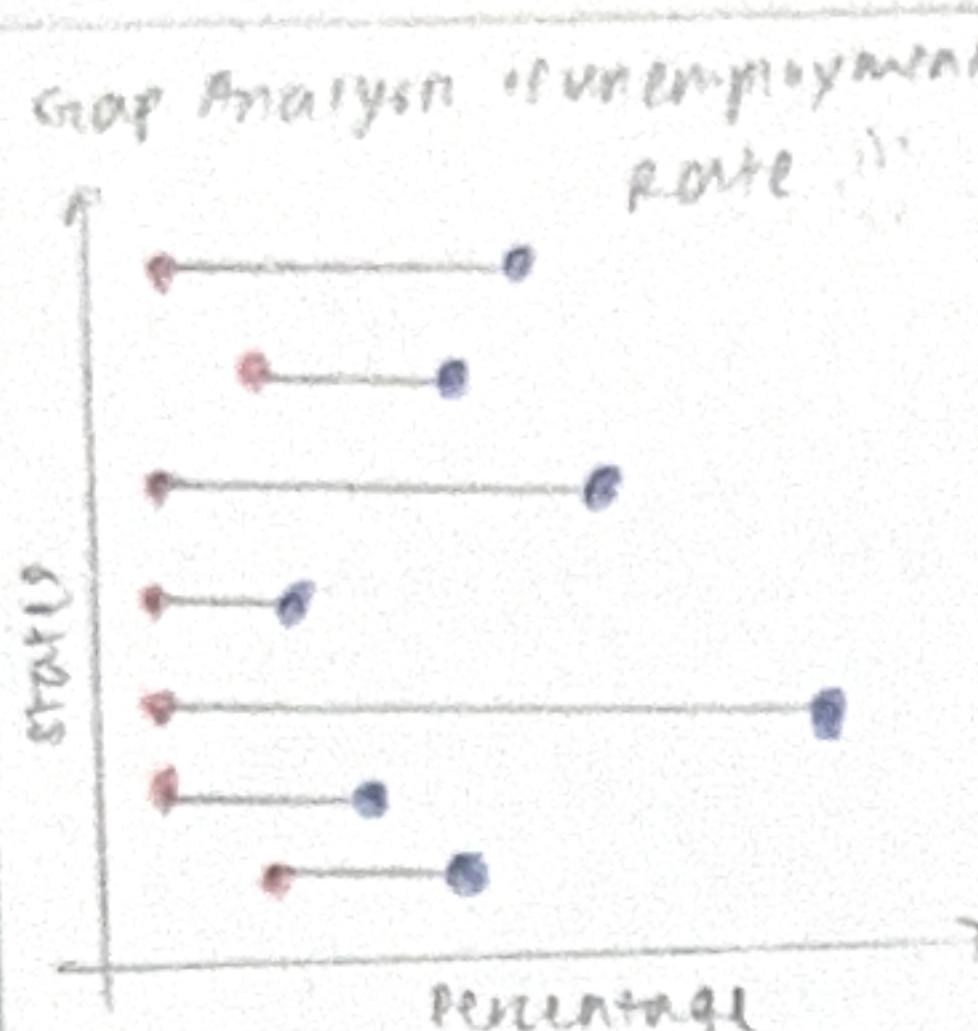
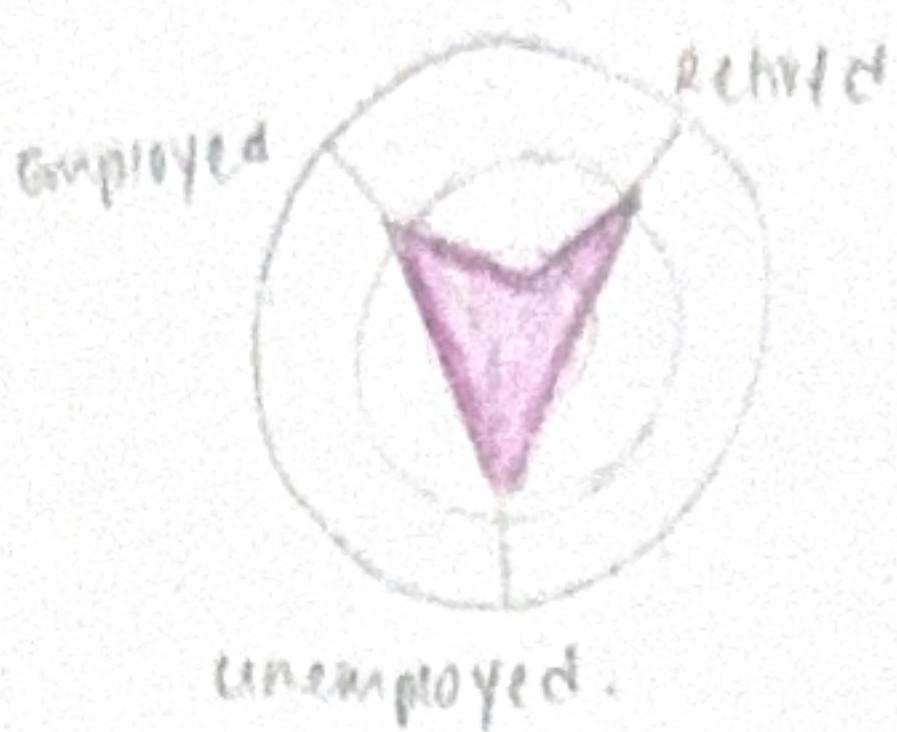
LAYOUT

EDUCATION AND EMPLOYMENT IN MALAYSIA
IN 2021

Different notes with sheet 3.



Employment status in Malaysia in each state



Add in state's flag at a side

- focus only in 2021

Overall

use cold colour tone (blue/purple) - arrangement chart size by size and one last big chart for visual hierarchy.

② Storyline

- ① - start with how many employed % in across my
- ④ - add annotation to highlight which state perform the best (higher rate)

② radar chart to show the breakdown of the employed status

③ dumbbell chart → to show the gap between employed and unemployed states

③ concides the chart by ranking them based on the employment & tertiary

④ heatmap to see which states has a higher number of graduate

TITLE: Education & Employment in Malaysia

AUTHOR: YANG XUAN CHEN

DATE: 10/10/2023

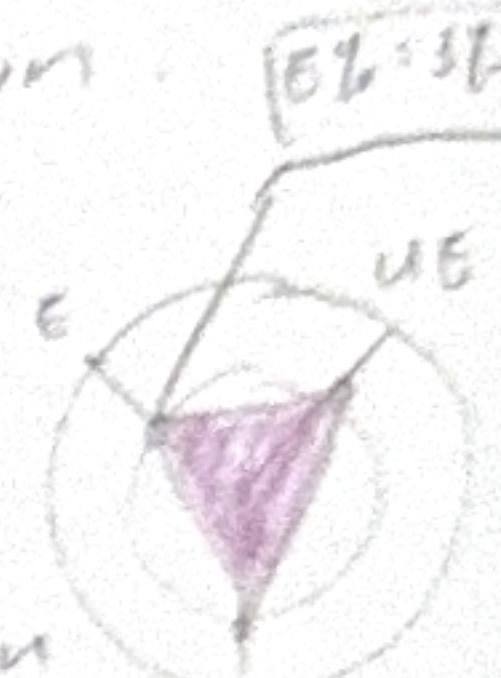
SHEET: 4

TASK: Education & Employment Relationship in Malaysia 2021

OPERATIONS

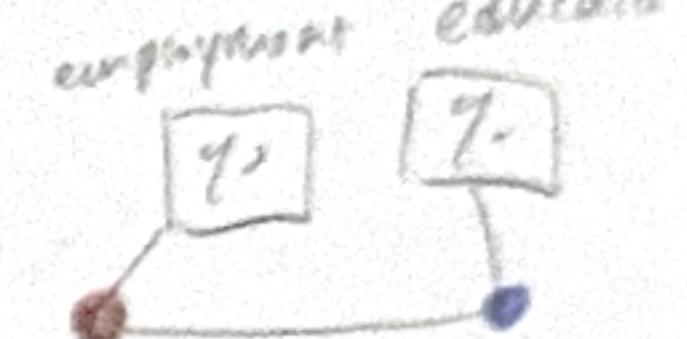
① choropleth map

- hover over each state show %
- can be pressed for each state + annotation to hold the map location



② radar chart

- hover over and show percentage
- add a drop down menu for states



③ dumbbell chart

- show percentage of each state

④ Heat map

- hover over tips which includes population
- dynamic after → region east/west my

⑤ Rank diagram

- show ranking change from year to year
- relative difference calculation

DISCUSSION

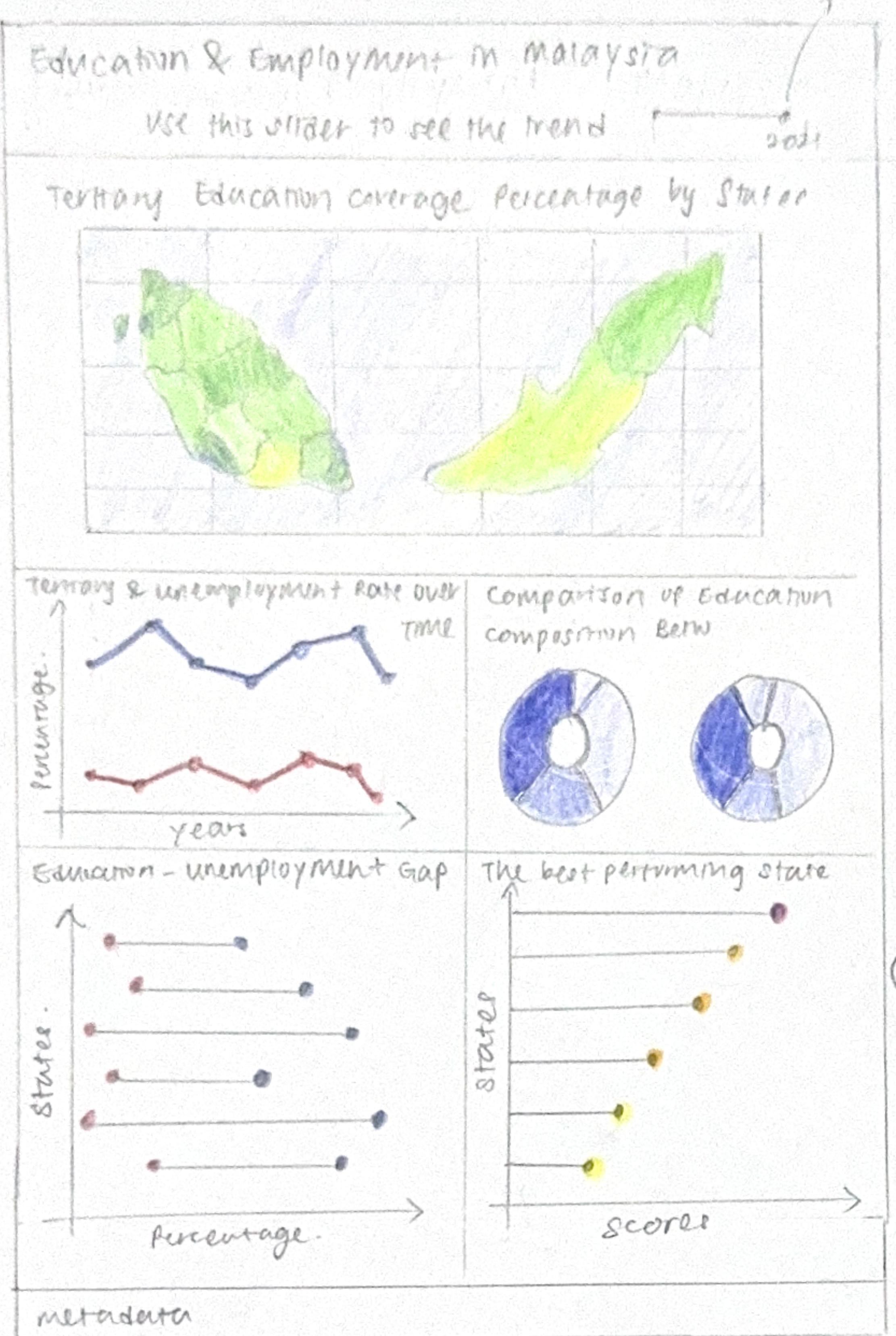
① might leads to confusion with the current layout

② by adding the state's flag might affect the data-mk ratio.

③ all the charts need are abit high-level chart → might turned out to be too messy.

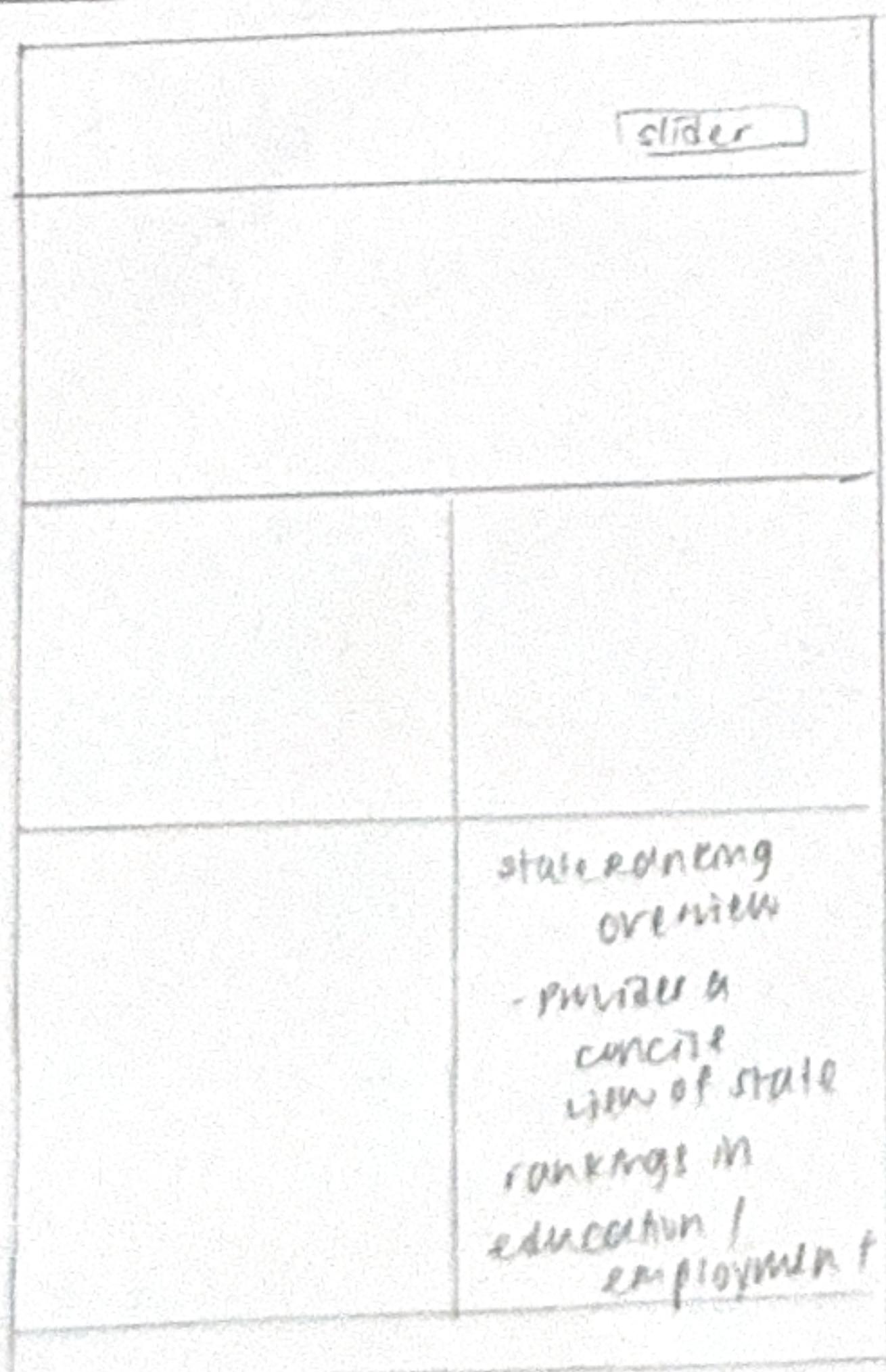
④ click here we built the chart using the regular

LAYOUT



FOCUS

Overall use cold colour tone to show overall structure
- explore relationship between education and employment in Malaysia



(5) Donut chart

- enables direct visual comparison between 2 states' education or employment proportion

- (1) choropleth map
 - quantitative, spatial, temporal dataset.
 - Geoshape (state polygons), triangle (symbol), text annotations - colour/hue & luminance, shape, position.
- (2) line chart
 - quantitative, temporal
 - points with text annotations for major changes
 - tooltip - display indicator and exact value on click.
- (3) dumbbell chart
 - line and circle endpoints
 - display state-wide disparities and identify the largest gap through annotation

education & employment
TITLE: education & employment in malaysian
AUTHOR: YANG XUAN CHEW
DATE: 10/10/2025
SHEET: 5.
TASK: final design sheet
(education & employment)

OPERATIONS

- (1) choropleth map
 - add a slider to show the colour change across the year.
 - able to highlight the border the state.
- (2) line chart.
 - to show the trend across the years - add a filter to show each states
- (3) donut chart.
 - add in annotation to show the percentage.
- (4) dumbbell chart.
 - arrange it based on the sequence.
- (5) lollipop chart
 - link to other chart.
 - how over the state.

DISCUSSION

- (1) the best flow from the big overview - too many line used - no crowded.
- (2) best way to determine the best performing state.
 - need to determine how to calculate @ evaluate
- (3) the algorithm need to show a better hierarchy.