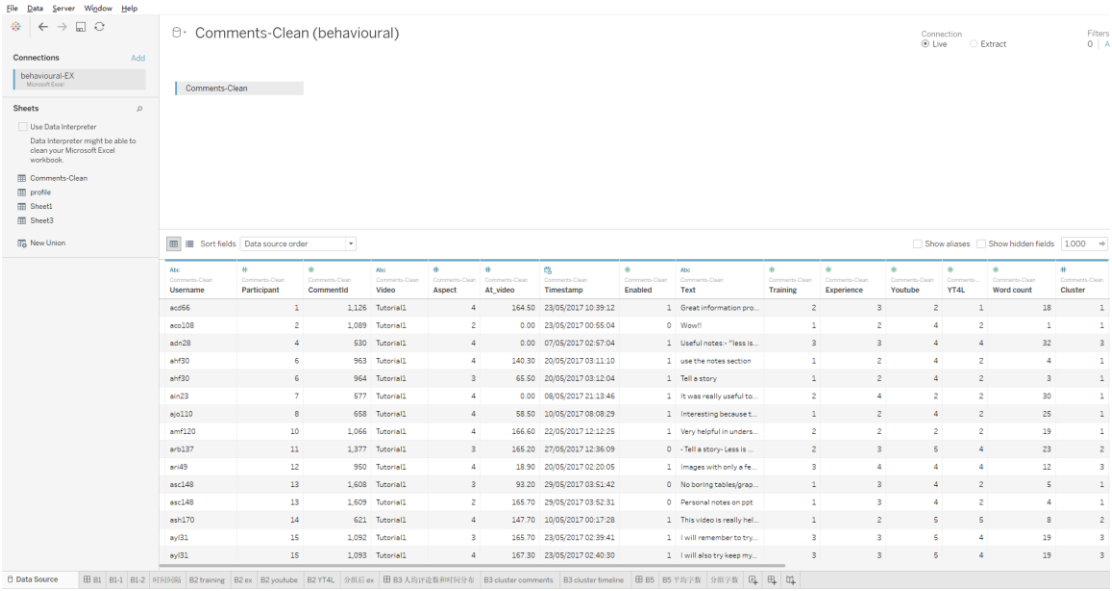
Tableau Instruction

- Import dataset

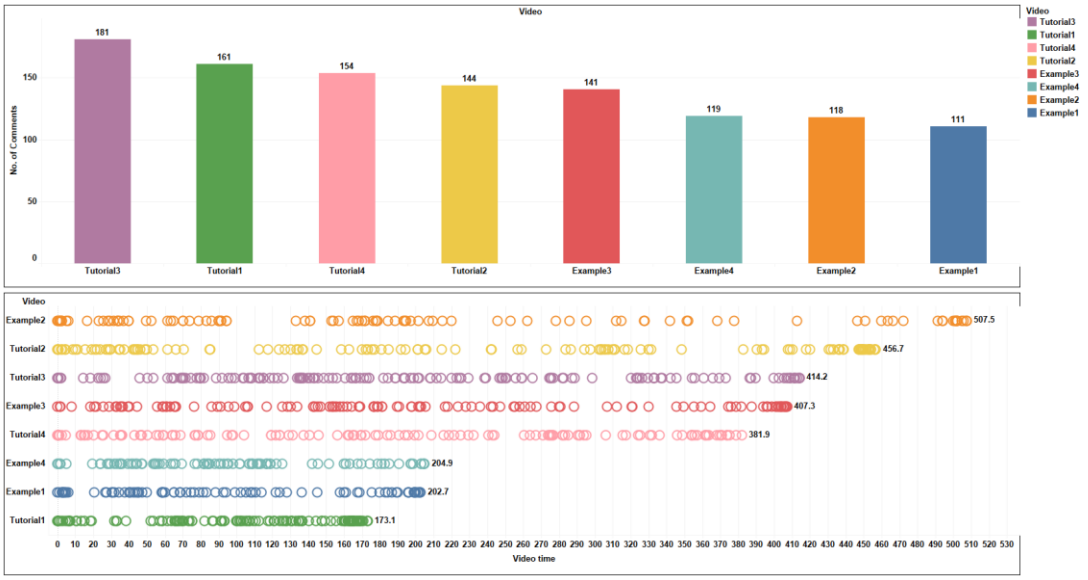
In order to create visualisation, the priory thing is to import data. We import excel table in the “Data Source” module. When data are imported, they will be showed in the interface for checking conveniently.



If the visualisations leverage a common dataset, we create one Tableau file to create different worksheets or dashboards of visualisation. After importing dataset, we can produce visualisations now.

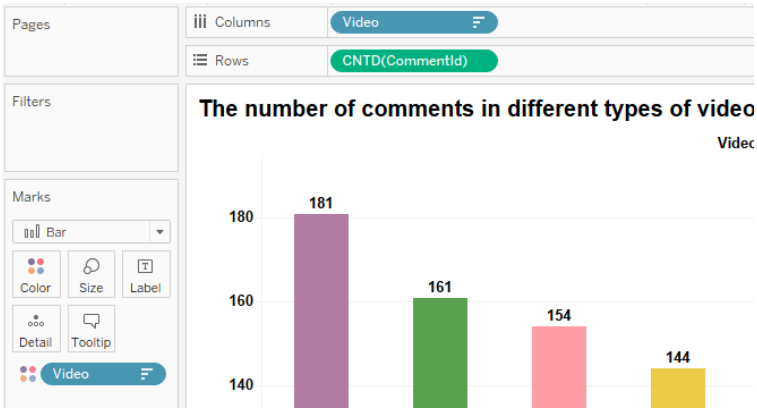
- B1

This visualisation is made by “Dashboard” in Tableau. It consists of two worksheets which are respectively a bar chart (top) and a circle view chart (bottom).

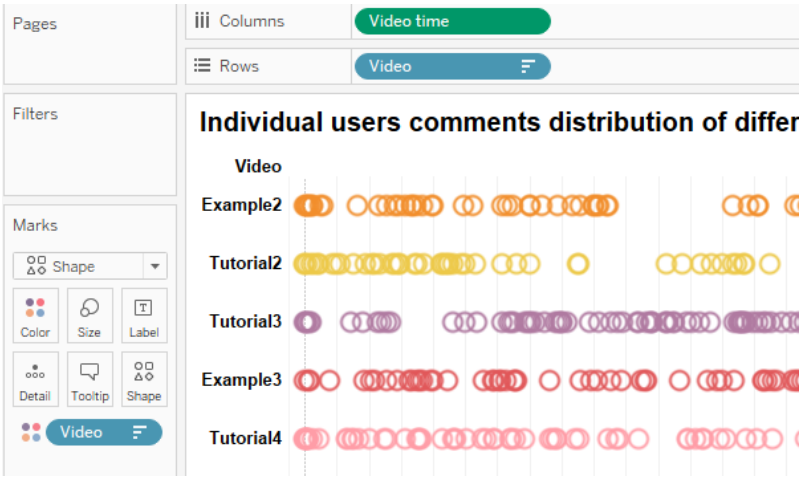


The columns in bar chart are “Video”. Each row represents the number of comments of each video by selecting “CNTD(CommentId)” to calculate this indicator. The mark is “Bar”

to build a bar chart in this visualisation. In order to distinguish different videos, we apply color as a retinal property by dragging “Video” to “Color”.

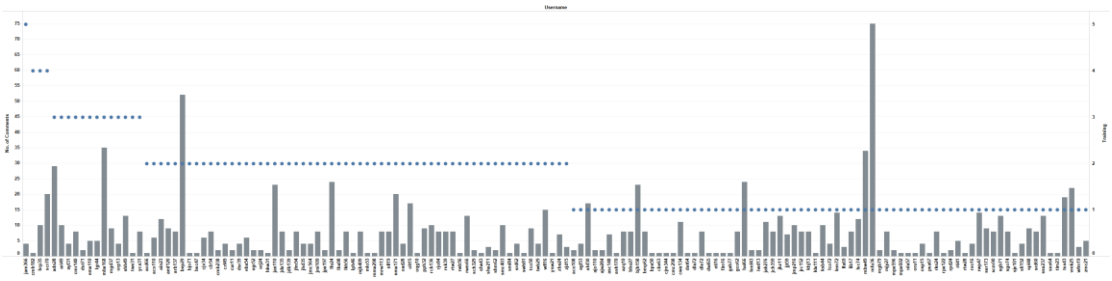


In circle view chart, the columns are “Video time”. Each row represents each video. The mark is “Shape” to build a circle view chart in this visualisation. Similar to bar chart, in order to distinguish different videos, we apply color as a retinal property by dragging “Video” to “Color”.

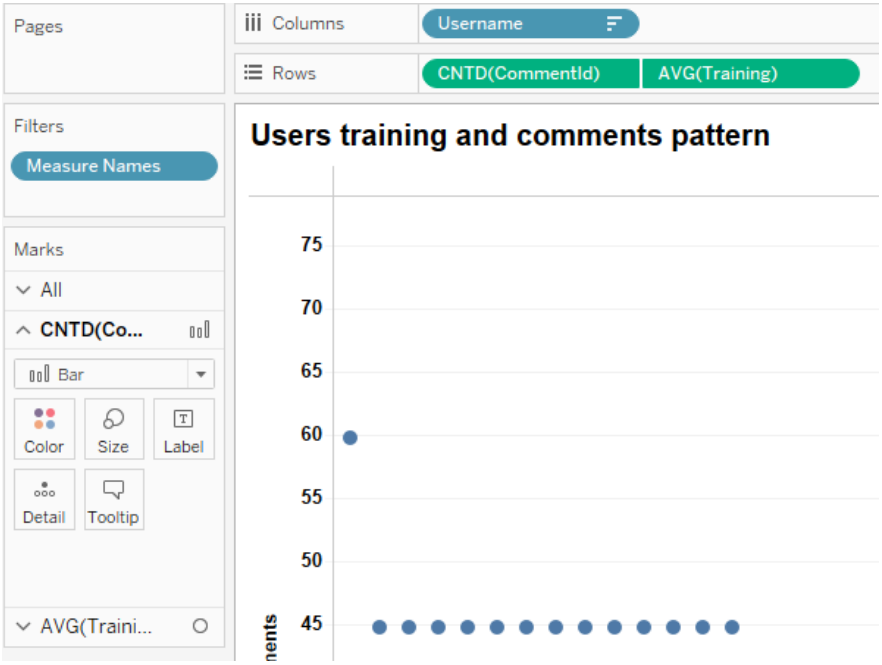


After creating two charts, we create a new dashboard and then drag two charts into the dashboard. The size of dashboard will be altered to automatic so as to make it easy to look at.

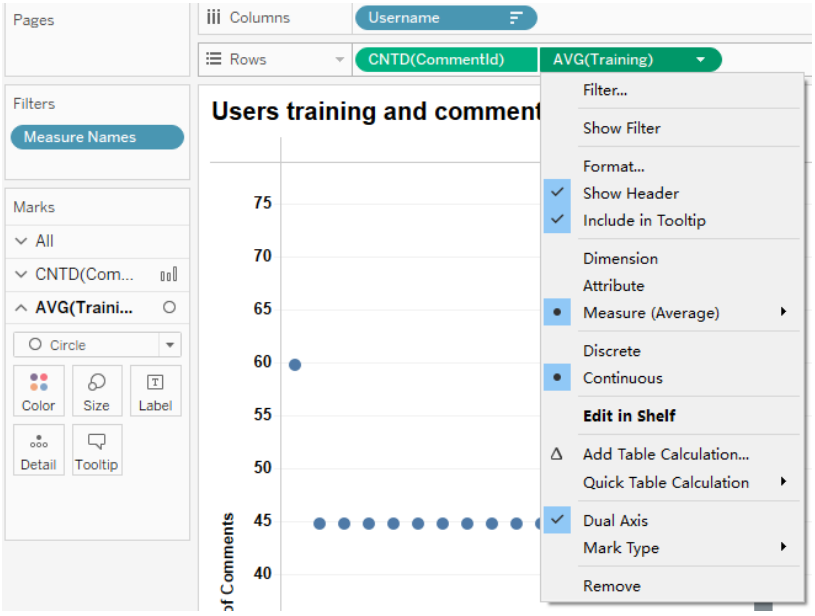
- B2



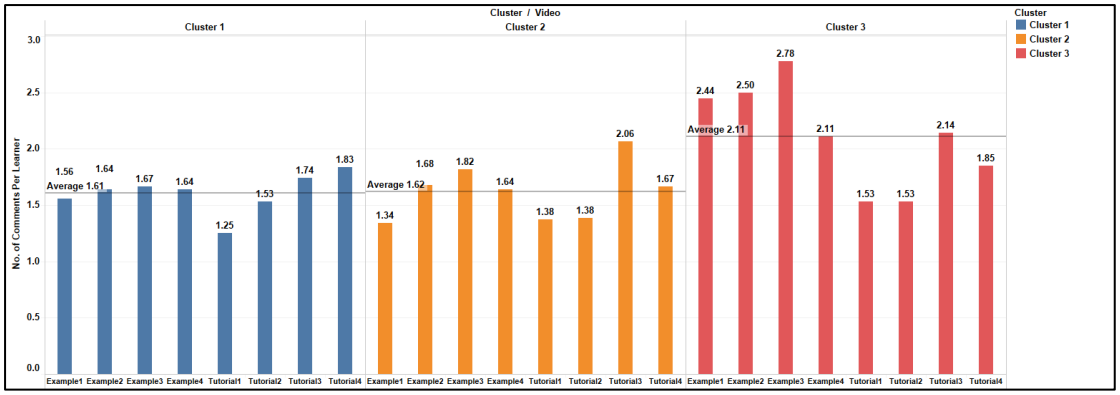
This visualisation is a combination of a bar chart and a circle view chart.



The columns are “Username”. The bars in rows indicate No. of Comments and the circles in rows are the value of “Training”. The marks are respectively “Bar” and “Circle”. In order to distinguish bars and circles, we use different colors to represent two kinds of indicators. Additionally, we apply “Dual Axis” to combine two kinds of charts in one visualisation to compare two variables easily.

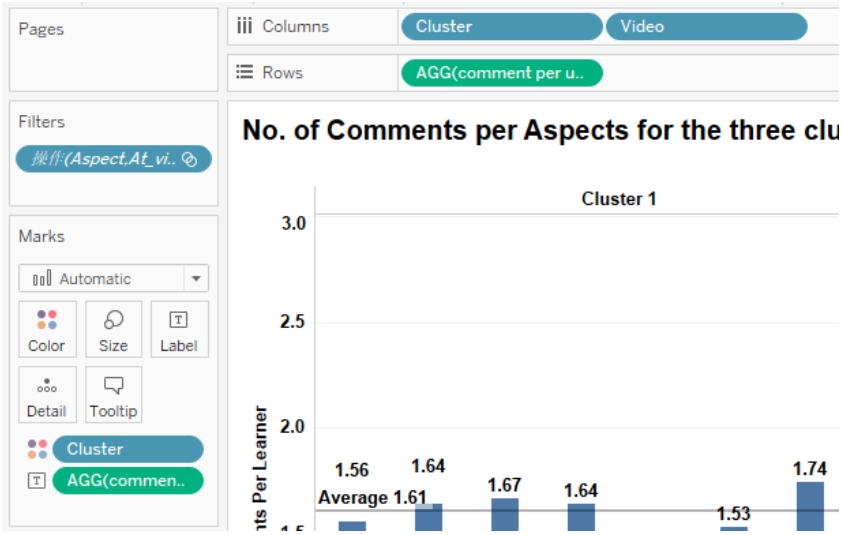


- B3

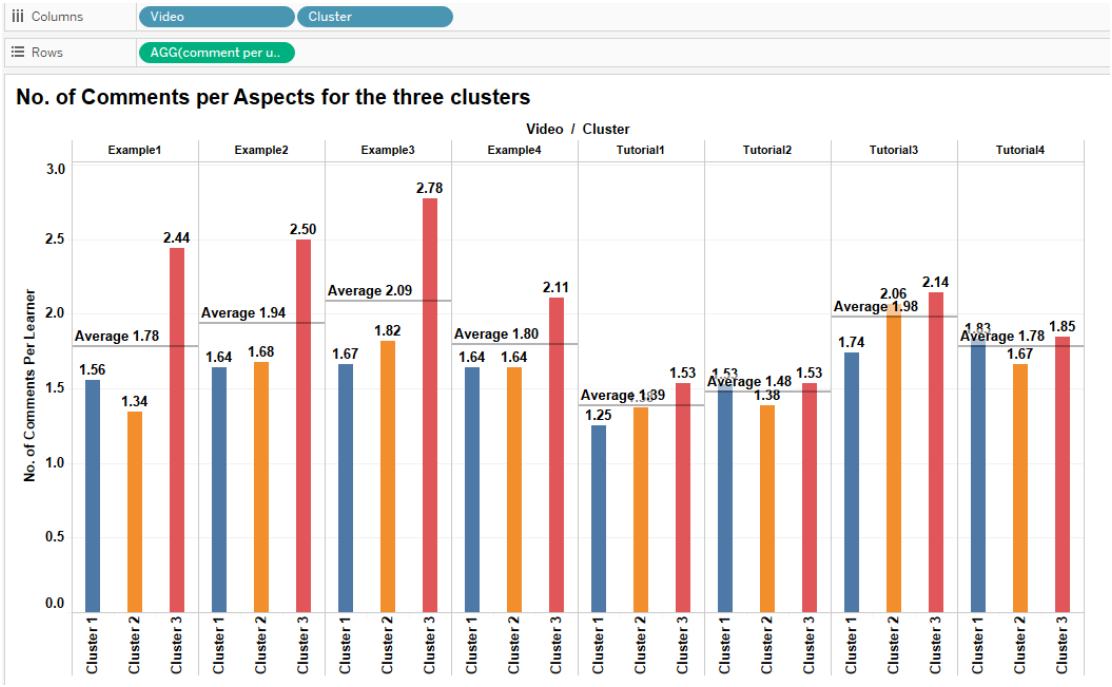


This is a bar chart which is divided by clusters and videos.

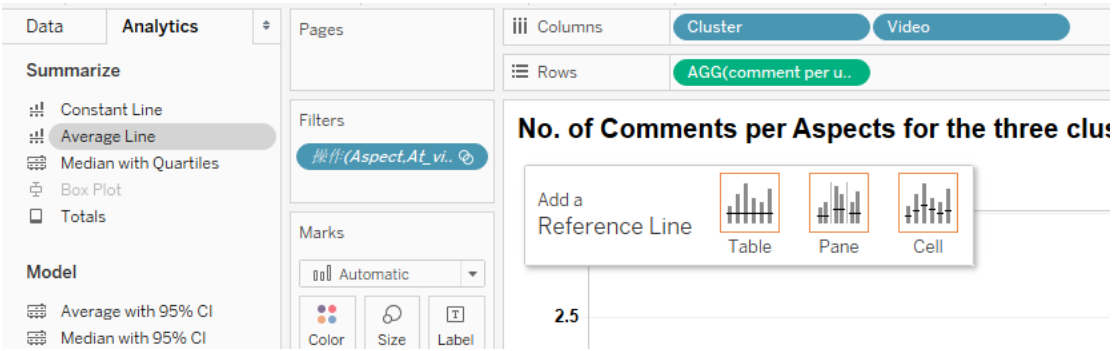
Firstly, the columns contain “Cluster” and “Video”. The sequence of these two variables determines the presentation of the charts. For example (see Figure), if “Video” is ahead of “Cluster”, the bars will be presented with videos firstly and clusters next. Our aim is to compare the average number of comments of different videos made by learners in same cluster, so the presentation is first “Cluster” and next “Video”.



On contrast, if we put “Video” in front of “Cluster” like following, the chart will be showed with videos first and then clusters. This situation is not suitable to our requirement, so we don’t use this kind of presentation.

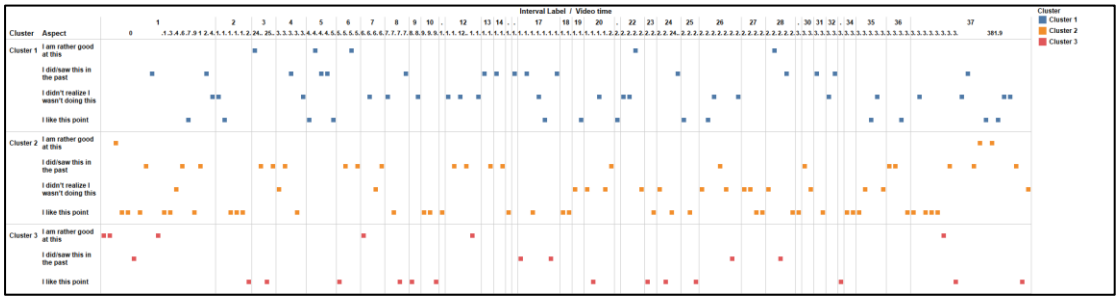


Secondly, we add the “Average line” into each pane to see the average level in order to compare the number of comments on each video and the average value of the cluster.



- B4

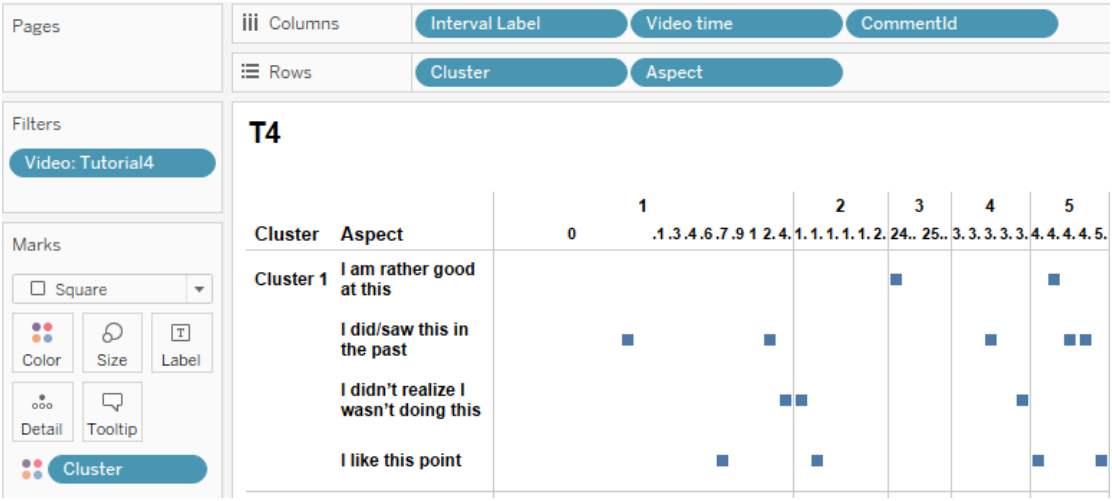
This is a rectangle view chart in which each rectangle indicates the one comment on the timeline according to intervals and detailed time.



This chart is sorted in ascending order of “Interval Label”, “Video time” of each comment, and “CommentId”. For example, the first 4 comments in cluster 1 have same Interval Label 1. Then we presented in order of detailed time when the comments are made. If they have same video time, they will be sorted in order of comment id.

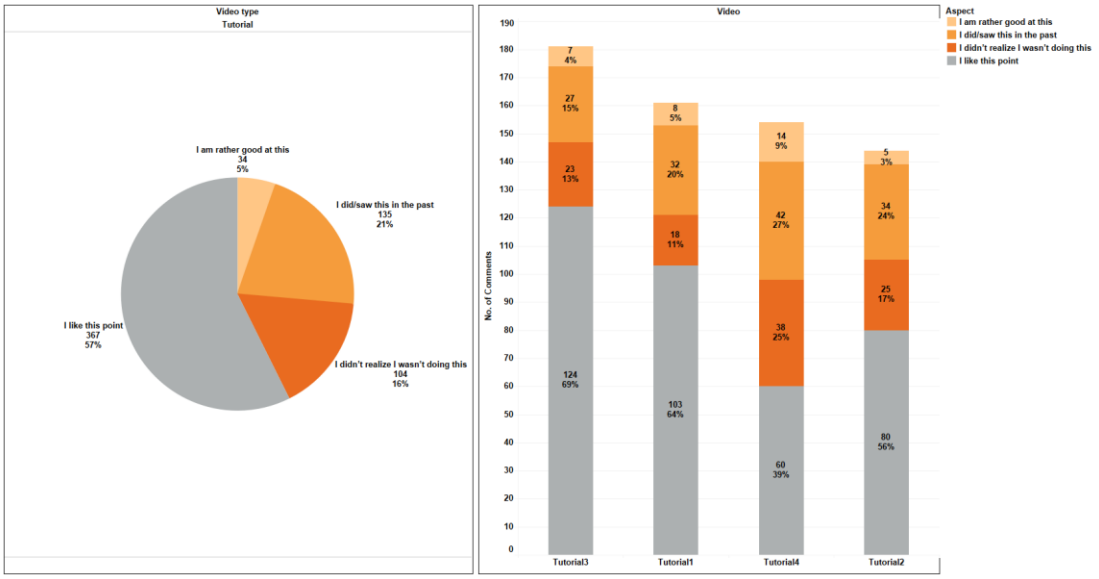
All the comments are divided according to “Cluster” and “Aspect”. Color is used to

distinguish clusters in this visualisation.



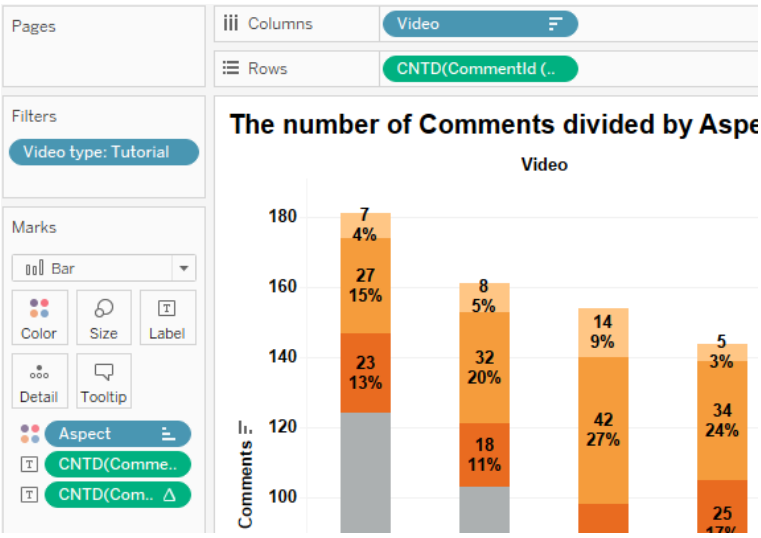
- C1

This visualisation consists of two parts: pie chart and stacked bar chart.

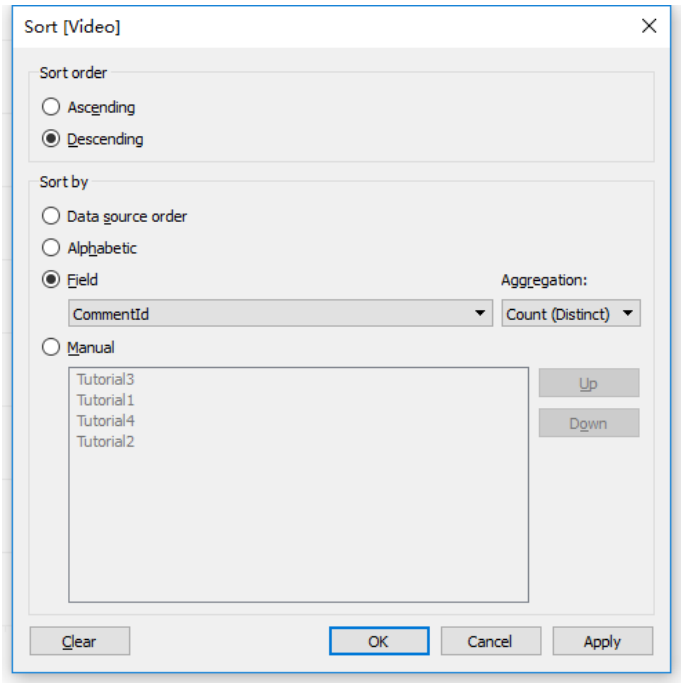


Firstly, we should select “Pie” as the marks to present this visualisation. Size will indicate the number of comments and colors indicate different aspects. In order to observe the value clearly, the labels can be added into chart. We add “Aspect”, “No. of Comments”, and “Percentage of each area” as labels. Additionally, the filter is also applied in this chart. We filter out “Tutorial” from video type.

Secondly, the stacked bar chart is a kind of bar chart. We use color to indicate different aspects. The tutorial videos are also filtered out in this chart.



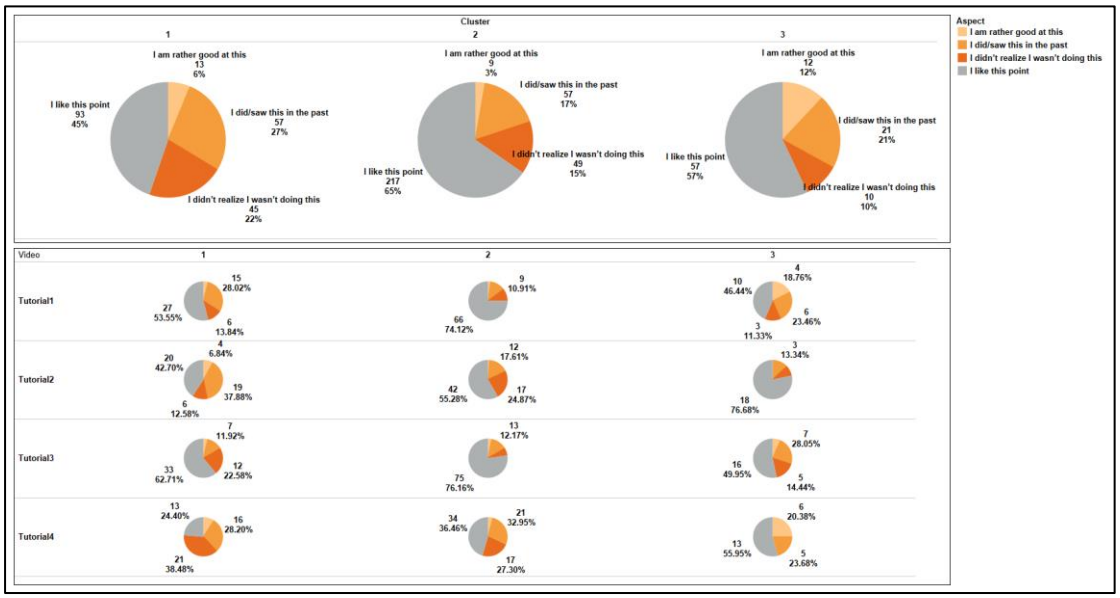
In addition, this chart is sorted in descending order of No. of Comments.

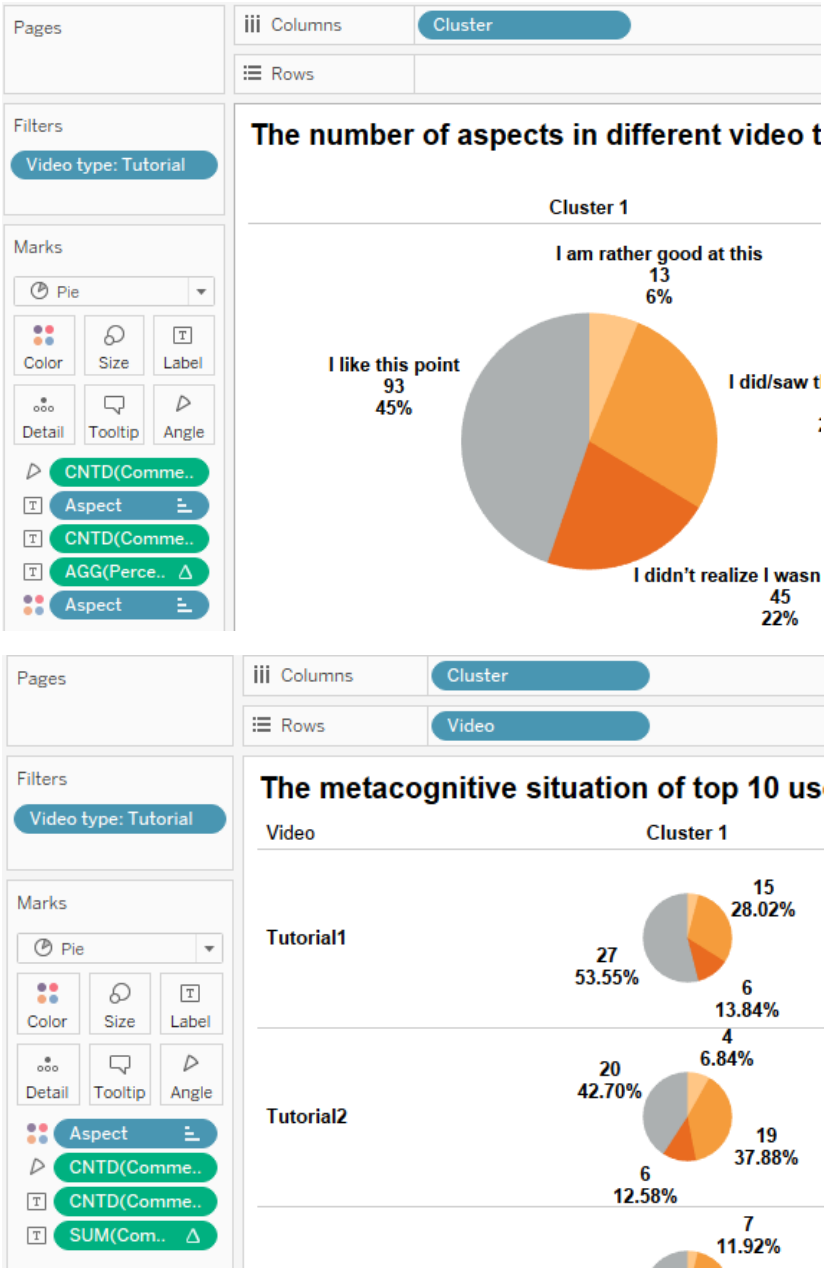


After creating two charts, we drag two charts into the dashboard.

- C2

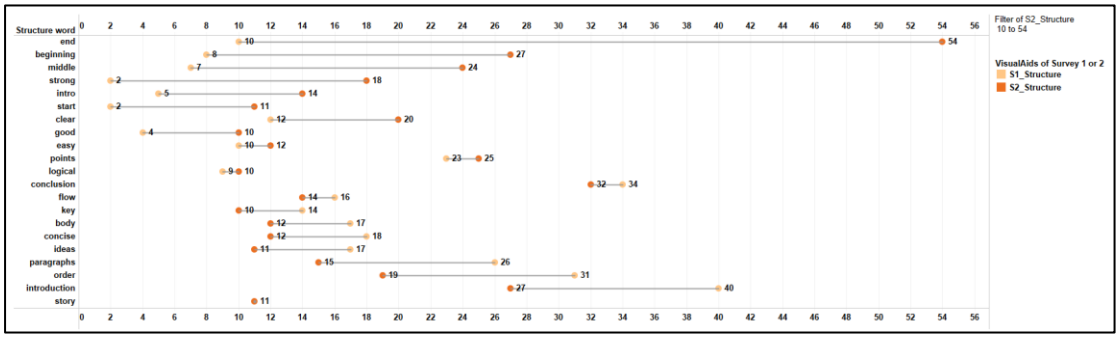
This visualisation contains two pie charts. The instruction of pie chart can refer to C1.

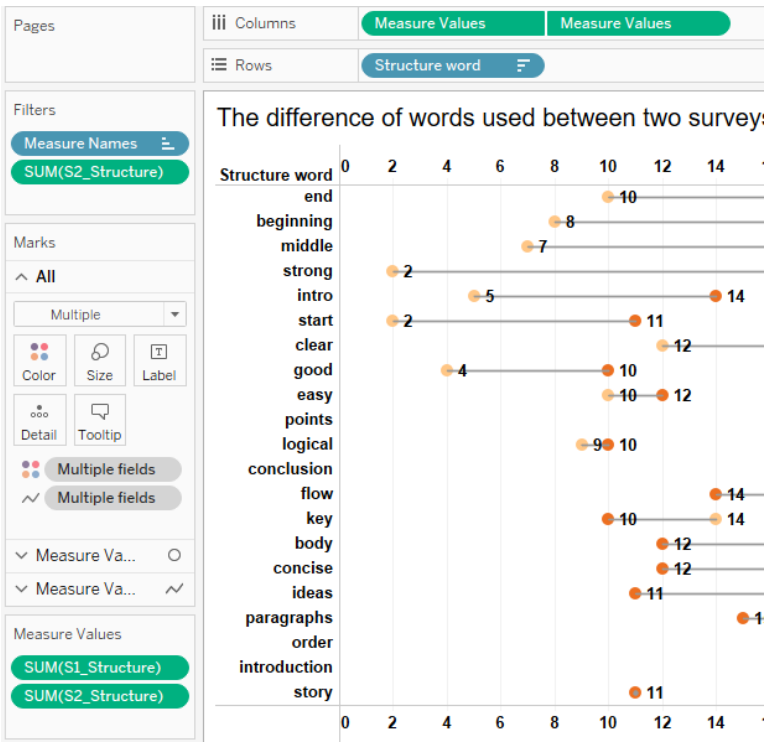




- C3

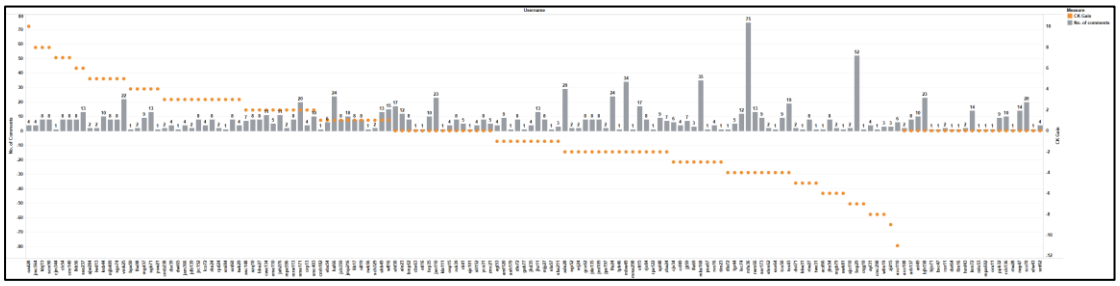
In order to create this visualisation, we drag the “Measure Value” into column twice. The first measure value is presented with circles and the second with lines. All the words are sorted in ascending order of the frequency gap between two surveys. Because of space limitation, we apply word using frequency from survey 2 as a filter to show some words here.



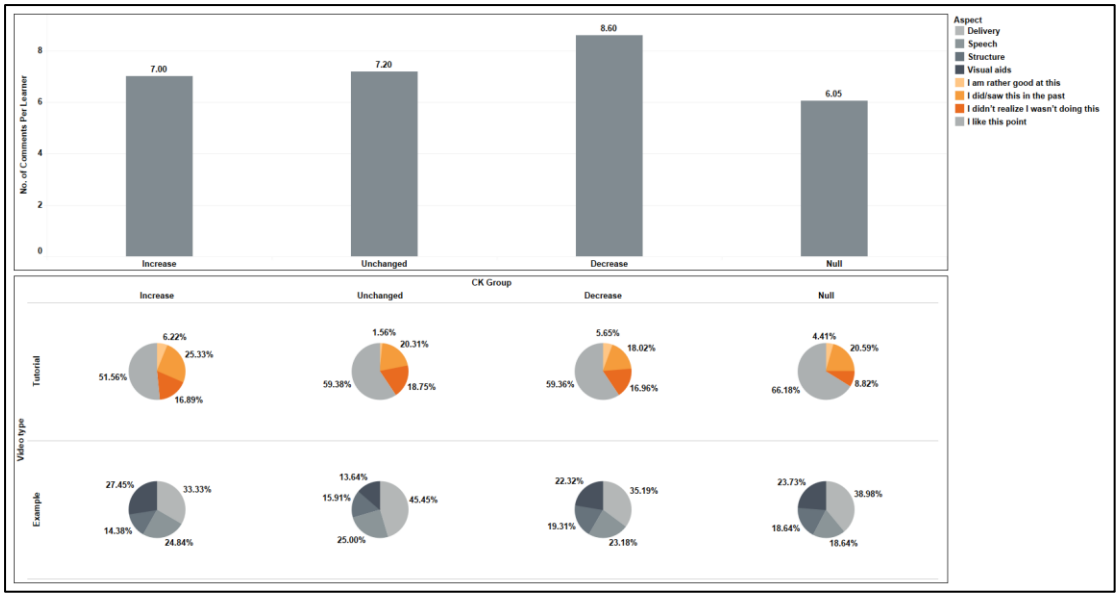


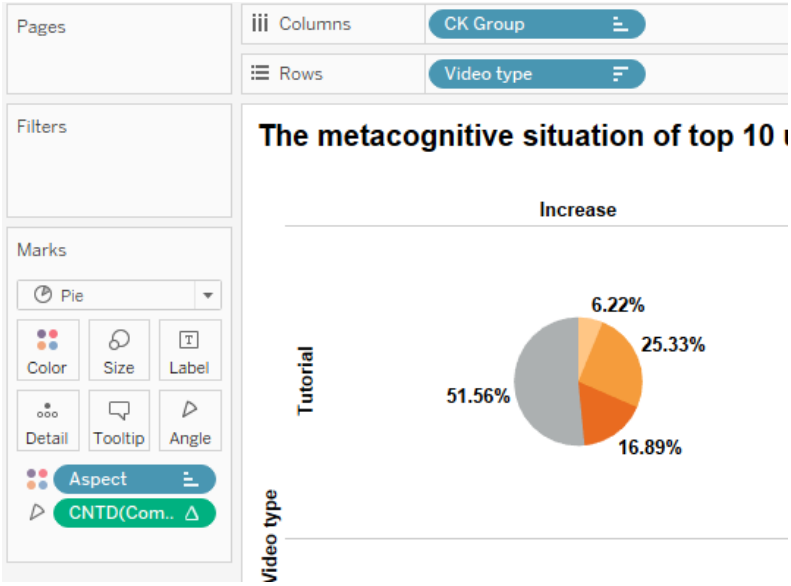
- C4

This is a simple combination of bar chart and circle view chart. The instruction can refer to B2.



This visualisation is a dashboard containing a bar chart and a pie chart. It is worth noting that we use “CK Group” to divide all learners.



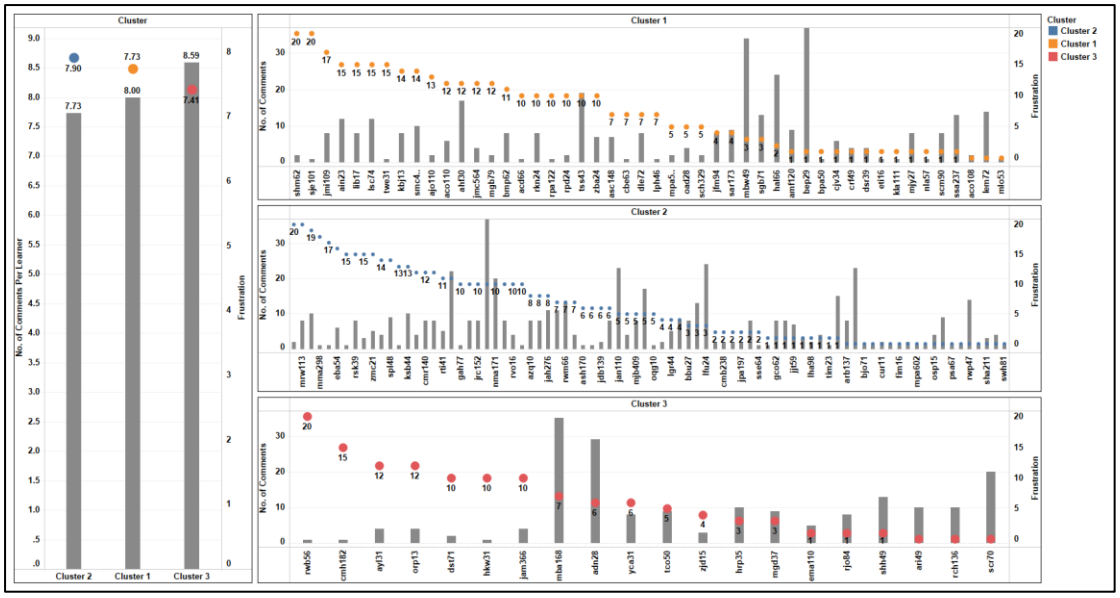


- E1

This visualisation consists of four charts. The difficulty does not locate at creating charts but at data processing. When computing average number of comments, we create a new table to store learner information but deleting the learners who do not have frustration value. We do this in order to make sure the learners are same when comparing frustration and number of comments. Then we combine the original table and the new table. These learners will not be included when computing average value in the left chart because we use new table, but they will be showed in the right three charts because they are included in the original table.

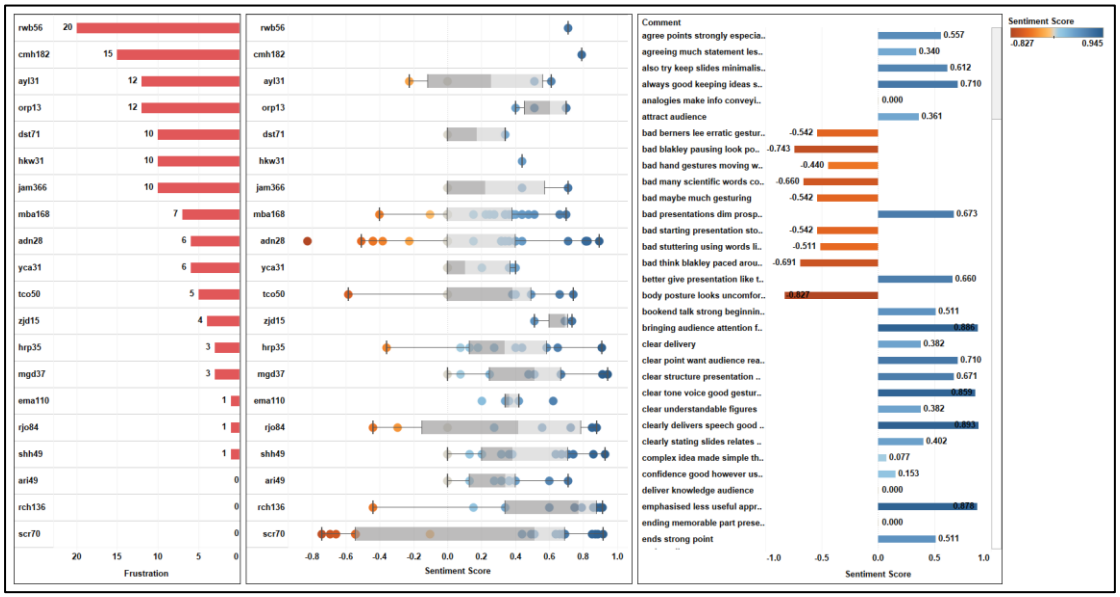
This point is also illustrated in the report.

The learners in four charts are all sorted in descending order of frustration value.



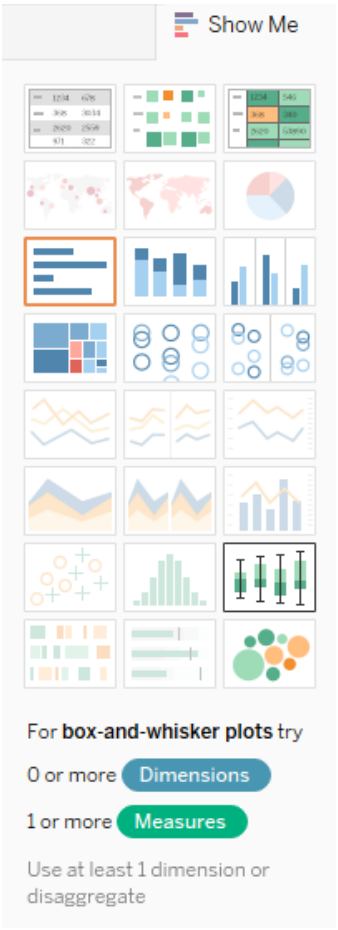
- E2

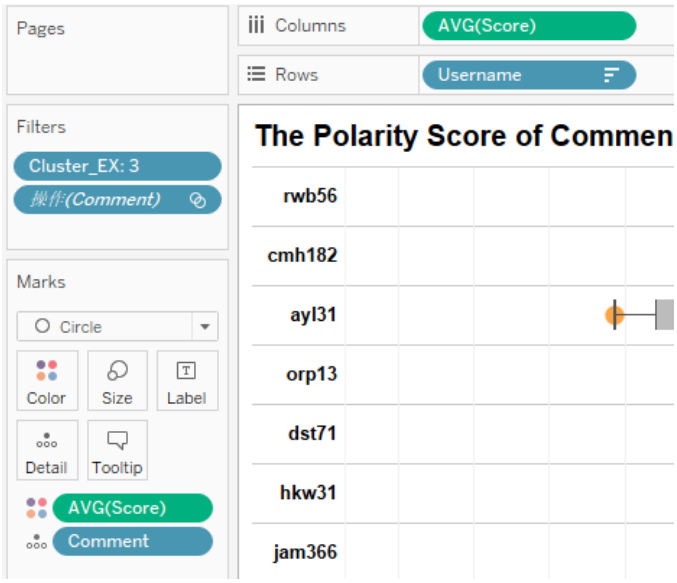
This visualisation contains a bar chart, a box plot chart and a butterfly chart.



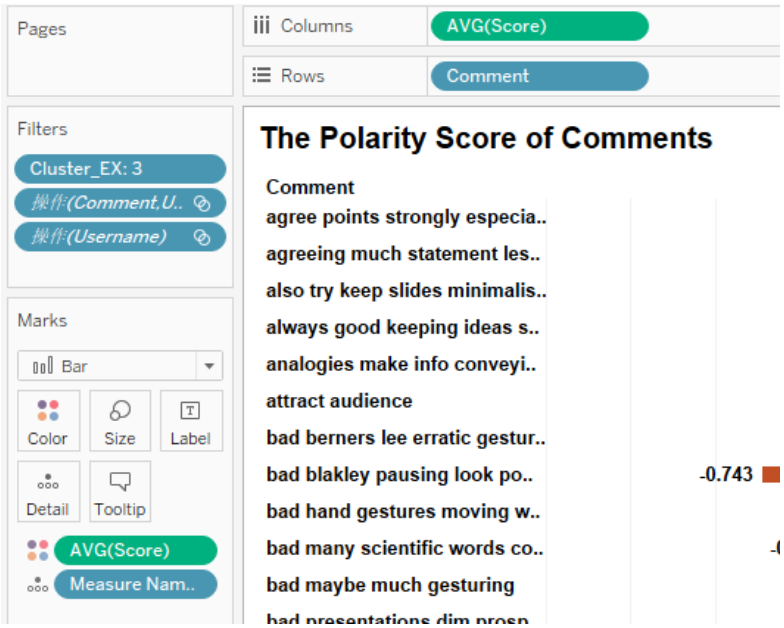
First, the bar chart presenting the frustration is a simple bar chart. We filter out cluster 3 to observe in this visualisation.

Second, the box plot chart (middle) is created by selecting box plot in Tableau. We use color as retinal property to indicate the sentiment score from negative to positive. In box plot chart, each spot represents the comment made by each learner.





Finally, the butterfly chart is also a kind of bar chart. We list all the comment text in rows and corresponding sentiment score in columns. Similar to box plot chart, color is also used to indicate the sentiment score from negative to positive. In this visualisation, we filtered out cluster 3 to observe learner's comment text and sentiment.


Pages
Columns
AVG(Score)
Rows
Comment
Filters
Cluster_EX: 3
操作(Comment,U..
操作(Username)
Marks
Bar
Color
Size
Label
Detail
Tooltip
AVG(Score)
Measure Nam..
The Polarity Score of Comments
Comment
agree points strongly especia..
agreeing much statement les..
also try keep slides minimalis..
always good keeping ideas s..
analogies make info conveyi..
attract audience
bad berners lee erratic gestur..
bad blakley pausing look po..
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bad hand gestures moving w..
bad many scientific words co..
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