Charts and Graphs

Download these data in SPSS.

http://linguistics.byu.edu/faculty/eddingtond/604/LarsonHall2008.sav

Data are from 200 Japanese learners of English. One group started learning English before junior high school, (ERLYEXP) and the other in junior high. Other columns indicate:

Scores on a language aptitude test (APTSCORE)
Use of English (USEENG)
Grammaticality judgment test (GJT)
Scores on correct pronunciation (RLWSCOR)

Let’s look at the curve or distribution of their GJT scores. This is called a histogram.
Click on Graphs > Legacy dialogs > Histogram
Put GJT score in variable > OK
How evenly distributed is it?
What is the mean?
Where do the first and second standard deviations fall?

Now let’s divide the scores by early and late learner.
Click on Graphs > Legacy dialogs > Histogram
Put GJT score in variable
Put erlyexp in rows
What differences are there?
Let’s do a bar chart to see if there are differences in GJT scores between early and late learners.

Click on Graphs > Legacy dialogs > Bar > Simple > Define
Choose Other statistic and put GJT score in variable
Put erlyexp in Category axis > OK
Another better way to see this is a boxplot.
Click on Graphs > legacy > boxplot > Simple > Define
Put GJT score in Variable and erlyexp in Category > OK

The line in the middle of the box is the median.
The box shows the 25th to 75th percentiles.
The whiskers show the highest and lowest scores, unless the highest and lowest are more than 1 1/2 times the box.
Outliers appear as circles
Intensity differences of /ð/ in different phonetic environments. F=post-fricative, I=Intervocalic word-internal, L=post-lateral, N=post-nasal, O=contact with other consonant, P=post-pause, W=word initial, intervocalic.

Notice:
Almost all phonetic contexts have some intensity difference of about 1 (vowel like, deleted)

After Fricatives and laterals look similar

After Nasals and Other look similarities
After Pauses has little deviations

Intensity differences of /ð/ according to the stress of preceding and following syllables. B=both syllables stressed, F=following stressed, N=neither stressed, P=preceding stressed.

Intensity Difference

Stress
Do a histogram of the aptitude score. 
Click on Graphs > Legacy dialogs > Histogram 
Put aptitude score in variable > OK 

What does this show you that a mean doesn’t?

Do a bar graph that shows differences in mean scores between early and late learners and how much they like studying English.

Do a bar graph that shows differences in mean scores between early and late learners and how well they do on the R/L/W pronunciation score.