

Visualizing the Normal Curve

In this activity, students are expected to explain the concept of the normal curve in their own words and produce a visual representation of the normal curve

Length  30 min (Small Problem)

Prerequisite Normal curve

Concepts Normal curve, Graphs, Inferential statistics, Probability distributions

Theme None

Disciplines Psychology, Education



Scenario

A good friend of yours from high school is in his 1st year of psychology at York University in Ontario. He is taking a social science statistics class as a required course. At first, he loved the class and found it to be surprisingly easy, but the teacher just started with the normal curve and he feels lost! He knows that you are also taking a social science statistics class this semester and that you are understanding the material (yeah!). He gives you a call and asks if you can help him. You agree to help!

What you need to produce and Evaluation grid

The Normal Curve (2%)	
1. Brainstorm	/ .25
2. Quote (APA)	/ .25
3. Bullet summary	/ .25
4. 4 Graphs and interpretation (~100 words)	/ 1.25
Total	/ 2

Breakdown of the question

Brainstorming

Before you can help, think about what information you need from him in order to assess his level of comprehension and to understand WHY he does not understand the material.



Direct Quotes

You now have a better sense of your friend's level of understanding and the resources available to him. By speaking with your friend, you learn that the teacher has not assigned a textbook for the course and although the teacher does spend a lot of time explaining concepts in class, your friend is not a very good note-taker and only has bits and pieces of information.

Since he does not have a textbook assigned, you decide to find a textbook (on-line or hard copy) and send him sentence(s) and/or paragraph(s), from that textbook that explain the concept of the normal curve. You will probably notice that there is a lot of information in the chapter(s) about the normal curve. You are careful to select only the most important paragraphs or sentences that help to summarize the concept. Since he may want to use this textbook in the future, you also include a proper APA citation.

Bullet Summary

Your friend reads the information from the textbook that you selected for him, but he still feels confused. He is having a difficult time understanding the vocabulary and examples. To make it easier for him, you decide to re-write the information that you found in the textbook in your own easy-to-understand words and you present the information in bullet form so that each idea is separated.

Graphs and Interpretation

Your friend is starting to feel much better, but he is still not understanding how a variable can be normally distributed. You remember from high school that he was a visual learner, so in your final attempt to help him, you decide to visually show him how the normal curve can be created. Use an example to "build" the normal curve. Your sample size should be a minimum of 100. You should show the progression of the normal curve (i.e. after 25, 50, 75, 100). You could show this in Excel, PPT, Prezi, Record a video, draw, etc. Once you have created the normal curve, make sure to include a few notes about what kind of information the normal curve can tell us.

