LEARNING ANALYTICS SCENARIO #2:
STATISTICS ARE PROBLEMATIC

Professor X has recently begun an appointment as Department Head of a Social Science program. They get access to some learning analytics tools, but it is not clear how a department head should use them and why. Professor X knows there are issues with the current programming and starts looking for patterns in the data.
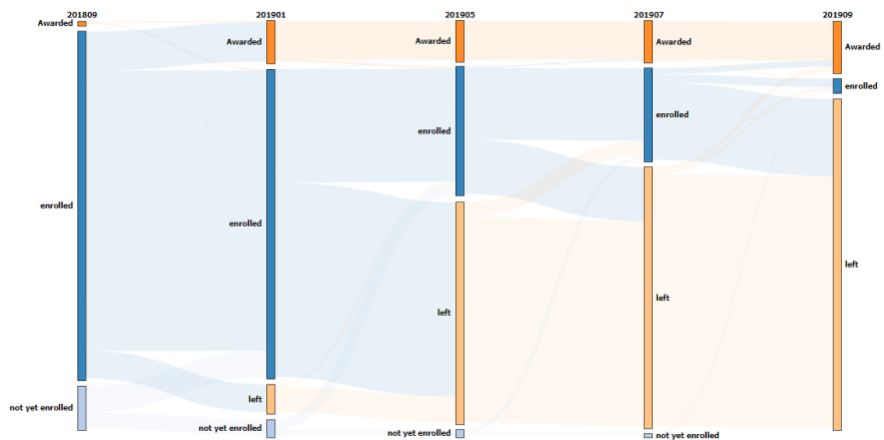
They begin with the Ribbon Tool. They notice that most attrition seems to occur after the second year of the program, which surprises them since they had assumed most students would be relatively stable between second and third year.

Wanting to get to the bottom of this phenomenon, Professor X begins investigating other data sources to see if they can find anything to explain what they Ribbon Tool is showing them. What they find is not entirely surprising – SLEQ

This is a sample of the RibbonTool output. The data in the visualization is not real, but you can nonetheless see a large portion of students left after the 201901 (the 2nd term from the left).

results from the required second year statistics course show that students are experiencing difficulties in the required statistics course. Although the department has known that this statistics course is not a student favourite, it had been seen as a necessary evil in the Social Sciences curriculum given that statistics are used in so many social science research projects. Are students leaving the program in second year because they think it will have many courses like the statistics one?

To confirm this suspicion, Professor X goes back to the Ribbon Tool to see where students went when they transferred out of Social Science after second year. They notice that they were transferring into programs that seemed somewhat related to Social Science, yet that did not require statistics. Reaching out to some students who transferred out confirms this too.

Wanting to do something to reduce attrition, Professor X contacts the Gwenna Moss Centre for Teaching and Learning to discuss curriculum. Through consultations and curriculum mapping processes, they manage to embed necessary statistics concepts and lessons throughout all the required second- and third-year courses instead of a separate, standalone statistics course. The intended result is to help students feel less overwhelmed by statistics, while still allowing them to learn the necessary skills for an academic career in Social Sciences. The department members also hope the change will help student understand the value of the statistics in understanding key questions, so the content will seem relevant and important. A 3-year assessment plan is put in place to monitor the impact of this change over time.