Assessment of Success

In this activity, students will use past grades in an Introduction to Psychological Statistics university course to determine which course evaluations leading up to the final examination result in better grade outcomes on the final examination.

Length	▯ 1-2 hours (Medium Problem)
Prerequisites	Correlation, Scatterplot, Average, Percentage, Excel
Concepts	Percentage, Correlation, Scatterplot
Theme	Education
Discipline	Psychology

Scenario

You graduated CEGEP with a Social Science degree. You decided to take a year off to work (and travel) and will be starting university in the Fall majoring in Psychology. You will be taking 5 courses and plan to work 15-20 hours a week. You feel very confident about doing well in all your courses except for one: Introduction to Psychological Statistics. You struggled with Quantitative Methods in CEGEP and after looking at the course outline posted on the department website you are very concerned about the fact that there will be a 60% final examination. You decide to be proactive and meet with the professor ahead of the semester to help you determine what you should focus on during the semester to increase your chances of doing well on the final examination.

What you need to produce and evaluation grid

- Assignment: Assessment of Success (10%)

Brainstorming	
• Hypothesize the "value" of the course evaluations in helping to prepare for the final examination (~150 words)	/2.5
Computation in Excel	
• Percentages, average • Correlation, scatterplot	/3
Interpretation	
• Interpretation (~300 words)	/4.5
Total	**/10**

Breakdown of the problem

You meet with the Introduction to Psychological Statistics professor before the start of the semester. You explain that you are anxious about the final exam, considering it is worth 60% of the final grade. The other 40% will be divided equally between: in-class work; homework; research project; and mid semester test. You ask the professor which of these is most important in determining success on the final examination. The professor is sympathetic but explains that she has only taught the course for 2 semesters with over 45 students in each term and has not looked for any patterns. However, since you are proactive and serious about your studies, she is willing to send you the Excel spreadsheet with the grade breakdown for the 2 semesters. The only condition is that you must send her your findings. Since there is a 10% research project in the course, the professor suggests that you treat this as part of the research project (she will allocate 5% of the 10%). She expects the results in 3 weeks.

1. **Brainstorming**

   Below is the evaluation plan for the course:

Evaluation Plan		
Evaluation	**Weight**	**Evaluation objectives**
Mid semester test	10%	Week 6 (concepts / statistical tests)
In-class work	10%	Group work, not graded but marks given for participation in the weekly exercises / activities
Homework	10%	Work to be done individually and on a weekly basis, questions relate to the material learned in class
Research project	10%	Work to be done individually; application of the statistical concepts learned; focus is more on methodology and less on statistical tests / analysis
Final examination *	60%	Cumulative (concepts / statistical tests)

* The final examination will be held in accordance with the final examination policies of the college; date to be set during the examination period by the examinations office.

Guiding question 1
What do you believe are the learning objectives for each course evaluation?

2. **Computation of descriptive statistics and correlation and/or scatterplot.**

Guiding question 2
Before running correlation (and/or) scatterplot, what descriptive statistics should you produce for interval level variables?

3. **Interpretation of the results**

   You need to write a ~300-400-word interpretation of the results. Since you will share the information with your professor, you will need to use formal academic language. You may need multiple paragraphs. Remember, you are trying the determine which evaluations might be most important in helping you prepare for the final examination.

Guiding question 3
What do the descriptive statistics help me learn?
What do descriptive statistics not tell me?

Guiding question 4
What should I remember about causation when interpreting correlations?