1. \*\*Controlling for Biases\*\*: In research and data analysis, controlling for biases involves various methods to minimize or eliminate the impact of bias in study design, data collection, data analysis, and interpretation of results. This can include using randomization to distribute confounding variables evenly among groups, blinding in experiments to prevent subjective influences, ensuring representative sampling to generalize results more accurately, and employing statistical techniques like regression analysis to adjust for potential biases during analysis.

2. \*\*Confounding Variables\*\*: A confounding variable is an extraneous variable that is associated with both the dependent variable and the independent variable. This relationship can lead to a spurious association that may incorrectly suggest or obscure a real relationship between the studied variables. Controlling for confounders is crucial in experimental design to ensure that any observed effects are due to the independent variable and not to these other associated factors.

3. \*\*What is A/B Testing\*\*: A/B testing is a basic randomized control experiment comparing two versions (A and B) of a single variable to see which performs better. Commonly used in marketing, product design, and web development, this method involves showing version A to one group and version B to another, then statistically analyzing which version achieves better performance based on defined metrics.

4. \*\*When to Use Welch's t-test\*\*: Welch's t-test is used instead of the standard t-test when the two samples have unequal variances and possibly unequal sample sizes. It's a more reliable test under these conditions as it adjusts the degrees of freedom based on the sample data variability, making it more appropriate for non-homogeneous variances.