Application exercise 5.2: Inference for comparing two proportions

Submit your responses on Sakai, under the appropriate assignment. Only one submission per team is required. One team will be randomly selected and their responses will be discussed.

Raise teacher pay vs. cut taxes

A 2014 Public Policy Polling survey asked NC residents whether they would prefer that the General Assembly raises teacher pay or cuts taxes. Overall it was found that 54% of respondents preferred raising teacher pay, 36% prefer cutting taxes, and 10% were not sure.

Some of these interviews were conducted over the phone, and others (for those without a landline) were conducted on the internet. Ideally we would like to see no significant difference based on whether the interviews were conducted over the phone or on the internet.

Findings of the report can be found at `http://www.publicpolicypolling.com/pdf/2014/PPP_Release_NC_514.pdf`.

1. How many NC residents were polled as part of this survey?
2. How many of them were polled via phone vs. on the internet?
3. State the distribution of responses on raising teacher pay vs. *cutting taxes or not sure* by mode of delivery of the survey. *Hint:* There is a table that will help you somewhere in the report.
4. Conduct a hypothesis test evaluating whether opinion on raising teacher pay varies by mode of delivery (phone / internet). *Hint:* Make sure to state the hypotheses, check conditions, calculate the appropriate test statistic, and the p-value.
5. If you find a significant difference between these proportions, look through the remainder of the findings from the report to try to explain what might be causing this difference?