Current Events and Generation Z

Introduction
With busy academic, social, and work schedules, it is easy for people my age to forget that a world exists outside our own. That is why I wanted to study whether people I am friends with on Facebook (high school to college age) care about/keep up with current events. To do this, I asked the following question on a survey:

- Do you consider yourself well-informed about current events?

Of course the parameter of interest in this case is the proportion of all college-age or high-school-age students who would have said “YES” to my question had they been asked. So that I might investigate this question I first had to select my sample.

Sampling Plan
To gather my sample I decided to randomly select 70 high school- to college-age students from my much-bigger list of Facebook friends. I had to make sure I did this in a way that qualified as a real simple random sample. So here’s what I did. First, I listed all the people on my Friends list and assigned each a number. Then, using a random number generator function on my calculator, I selected 70 subjects and sent them the survey. This is a random sample from the point of view of statistical science, but is only representative of a small population (my Facebook friends). Therefore, the results cannot be generalized to a larger population. Here’s a summary of what I ended up with:

- Population: My Facebook friends
- Sample: 64 respondents from my Facebook friends (64 of 70 responded)

Results
I had 64 of my 70 sampled people respond. Of these 64, 37 said “Yes” so my statistic is (37/67)x 100% or 57.81%:

- Statistic: 57.81% of respondents said “Yes” to my question.

A computer-generated plot of this result is below.
Do you consider yourself well-informed about current events? (64 responses)

Confidence Interval
We know that just because the statistic is 57.81% there is no guarantee the parameter is as well. But it’s the parameter we are mostly interested in. So we have to construct a confidence interval for the parameter. A 95% interval is computed using the formula:

\[ \hat{p} \pm \frac{1}{\sqrt{n}} \]

where \( \hat{p} = 0.5781 \) and \( n = 64 \). If we plug those into this formula we get \( 0.5781 \pm 0.125 \), which gives us the interval 0.4531 to 0.7031. What does this mean? A 95% confidence interval means that if we were to take many different samples of size 64 from my population and ask this same question, each time computing an interval using this formula, then 95% of those intervals would contain the unknown parameter. So in that sense there is a 95% chance that the one we found does.

Test of Hypothesis
I have decided to test the following: \( H_0: p = .50 \) versus \( H_A: p > .50 \). I chose this because I am interested in whether I can safely say that the majority of the people on my Friends list would have said “Yes” to my question. To test this hypothesis I first have to adopt a preset Type I error rate. I will pick alpha = 0.05. Next, I have to compute the associated z score:

\[ z = \frac{(0.5781 - 0.50)}{\sqrt{(0.5)(1 - 0.5)} / 64} = 1.2528 \]

If I take 1.2528 to the standard score table we have in our book, then I get a p-value of 0.10565. Since the p-value is bigger than my preset alpha level, I cannot safely say that more than half of
my Friends would have said “Yes.” That’s too bad! I’m sure it is because my sample size was only 64 people, but still!

**Reflection**
There were not any particular difficulties involved in the implementation of the survey. The question was not controversial so no one had a problem answering it for any reason. I did have six people in my original sample who did not respond, but I think that is because they simply didn’t get on Facebook during that period of time. This could be a source of bias since the busier people may be the ones who are more up on current events, but there’s no real evidence of that there. I am not sure I’d change anything if I had it to do again. Things went pretty well and I’m happy with how it all turned out.