

## Methodology

### General

The Elon University Poll is a scientific survey of registered voters in North Carolina. The Poll is a telephone survey using live human interviewers. The survey uses a stratified random sample of households with telephones and wireless (cell) telephone numbers

Interviews for most surveys generally result in at least 1,000 interviews of North Carolinians registered to vote. Our target margin of error is at a maximum +/- 3 percent based on a 95 percent confidence interval.

Please direct questions about the Elon University Poll's methodology to Dr. Jason Husser at [jhusser@elon.edu](mailto:jhusser@elon.edu) or Dr. Kenneth Fernandez at [kfernandez@elon.edu](mailto:kfernandez@elon.edu).

### Registered and Likely Voters

We measure likely voters using these questions.

- A. Are you registered to vote in North Carolina?
- B. In the coming Presidential election, do you plan to vote?
- C. Do you remember for sure whether or not you voted in the 2008 Presidential election?
- D. In 2008, did you vote for John McCain, Barack Obama, or someone else?

The year (2008) and candidate names change over time. We report distinct results for registered voters distinct from results for likely voters. When a questionnaire does not include a vote intention question, we reports only results for registered voters. We do not report results for non-registered voters.

For a study on the use of these questions see: Murray, Gregg R., Chris Riley, and Anthony Scime. 2009. "Pre-Election Polling: Identifying Likely Voters Using Iterative Expert Data Mining." *Public Opinion Quarterly* 73 (1): 159–171

### Procedures Used for Conducting the Poll

The Elon University Poll typically conducts surveys over at least a five-day period. Interviews calls between 4:00 p.m. to 9:00 p.m. during the week and from 1:00 p.m. to 6:00 p.m. during the weekend. Each survey report specifies dates and times called.

The Elon University Poll uses CATI system software (Computer Assisted Telephone Interviewing) for the administration of surveys.

We attempt to reach each working telephone number in the sample up to five times.

We only interview residents of North Carolina who are over 18.

The paid, live interviewers are adults from the target population.

### **Additional Methodological Decisions**

#### Branching Questions

For many questions with multiple response options, we program our surveys to branch into a secondary probing question.

#### Anticipated/Volunteered Response Options

We anticipate some response options that respondents volunteer despite not hearing them as options. Though some volunteered options are unpredictable, we code the more common options.

#### "Don't Know" & "Refused" Response Options

All questions include an option for respondents to volunteer "don't know" or to refuse. In the vast majority of questions, interviewers do not prompt "don't know" responses.

#### Weighting

We typically weight results from the Elon University Poll on multiple demographic characteristics: race, gender, household size, region, education, and age. Weighting rarely leads to substantial changes in results. We use demographic characteristics of registered voters when possible. We use iterative raking, adjusting one dimension at a time.

We include detailed information about weighting of survey samples for each poll on both the Elon University Poll website and within released reports.

#### Within Household Randomization

For landlines, we use the common "oldest-youngest" technique to ensure within household randomization. We assume cellphones belong to an individual rather than a household. Thus, we do not conduct within-household randomization within our cellphone sample.

### Completion Criteria

An interview is a complete only if a respondent progresses through the entire survey. Respondents who hang up before completing the last question or who refuse to more than 20 percent of the questions are incompletes.

### Ethical Standards

The Elon University Poll obtains approval from Elon University's institutional review board to conduct telephone survey research. We are compliant with human subjects norms and regulations. All responses are voluntary. Datasets are deidentified.

### Support for Transparency

The Elon University Poll supports transparency in survey research and is a supporter of the American Association for Public Opinion Research Transparency Initiative, which is a program promoting openness and transparency about survey research methods and operations among survey research professionals and the industry.

All information about the Elon University Poll that we released to the public conforms to reporting conventions recommended by the American Association for Public Opinion Research and the National Council on Public Polls.

### Question Construction and Question Order

In releasing survey results, the Elon University Poll provides the questions as worded and the order in which respondents receive these questions. In some cases question ordering rotates to avoid biases.

Though not exhaustive by any means, examples of question construction and ordering protocols/practices include: avoiding the use of jargon and ambiguous terms; avoiding any priming or leading questions by removing any 'loaded' language; wording questions succinctly and specifically; asking only one question (avoiding 'double-barreled' questions that ask about multiple topics in one question); ensuring reasonable response options that conform to topic/question.

In an effort to provide neutral, non-biased questions, we attempt to observe conventional question wording and question order protocols in all of our polls.

In order to avoid recency or primacy effects, we randomize candidate names and directional response options (e.g. support / oppose) within the text of each question.

We pretest every questionnaire multiple times before entering the field.

## Sampling

Survey Sampling International, LLC, provide samples of telephone numbers.

To equalize the probability of telephone selection, sample telephone numbers are systematically stratified according to subpopulation strata (e.g., a zip code, a county, a state, etc.), which yields a sample from telephone exchanges in proportion to each exchange's share of telephone households in the population of interest. Estimates of telephone households in the population of interest are generally obtained from several databases. Samples of household telephone numbers are distributed across all eligible blocks of numbers in proportion to the density of listed households assigned in the population of interest according to a specified subpopulation stratum. Upon determining the projected (or preferred) sample size, a sampling interval is calculated by summing the number of listed residential numbers in each eligible block within the population of interest and dividing that sum by the number of sampling points assigned to the population. From a random start between zero and the sampling interval, blocks are selected systematically in proportion to the density of listed household "working blocks."

A block (also known as a bank) is a set of contiguous numbers identified by the first two digits of the last four digits of a telephone number. A working block contains three or more working telephone numbers. Exchanges are assigned to a population on the basis of all eligible blocks in proportion to the density of working telephone households. Once each population's proportion of telephone households is determined, then a sampling interval, based on that proportion, is calculated and specific exchanges and numbers are randomly selected.

The wireless component of the study sample starts with determining which area code-exchange combinations in North Carolina are included in the wireless or shared Telcordia types. Similar to the process for selecting household telephone numbers, wireless numbers involve a multi-step process in which blocks of numbers are determined for each area code-exchange combination in the Telcordia types. From a random start within the first sampling interval, a systematic nth selection of each block of numbers is performed and a two-digit random number between 00 and 99 is appended to each selected nth block stem. The intent is to provide a stratification that will yield a sample that is representative both geographically and by large and small carrier. From these, a random sample is generated.

Because exchanges and numbers are randomly selected, unlisted as well as listed numbers are included in the sample. Thus, the sample of telephone numbers generated for the population of interest constitutes a random sample of telephone households and wireless numbers of the population.

### **Frequently Asked Questions about our Methodology**

1. Who pays for the Elon University Poll?

Elon University fully funds the Elon University Poll.

2. Does the Elon University Poll favor a certain party?

The Elon University Poll is an academic, non-partisan survey. We do not engage or work with any political candidates or parties. We employ best practices to ensure the results are not biased.

3. How do you measure likely voters?

We measure likely voters using these questions.

E. Are you registered to vote in North Carolina?

F. In the coming Presidential election, do you plan to vote?

G. Do you remember for sure whether or not you voted in the 2008 Presidential election?

H. In 2008, did you vote for John McCain, Barack Obama, or someone else?

The year (2008) and candidate names change over time.

4. Do you report results for both registered AND likely voters?

Yes. We report distinct results for registered voters distinct from results for likely voters. When a questionnaire does not include a vote intention question, we reports only results for registered voters. We do not report results for non-registered voters.

5. Where do you get your numbers?

We obtain samples of randomized phone numbers from Survey Sample International.

6. How many times do you call a number before giving up?

We attempt to call each number five times before removing it from the sample.

7. Do you call both cell phones and land lines?

Yes. We use a mixed sample of both cell phones and landlines.

8. Does the Elon University Poll do IVR surveys or “robopolls”?

No. Well-trained students at Elon University conduct all our interviewers.

9. Do you report non-response rates?

Yes. We report non-response rates based on AAPOR guidelines.

10. Do you weight the data?

Yes. We apply weights to the data. An iterative raking algorithm generates weights based on known parameters of registered voters in North Carolina.

11. Do you randomize response options?

Yes. We rotate the order of candidate names in all applicable questions. We also rotate order of text for other questions, such as those that include response options such as “more” and “less.” Furthermore, we rotate the order of some questions themselves if we suspect the order of a question could bias results.

12. Do you conduct within-household randomization?

Yes. For landlines, we use the common “oldest-youngest” rotation to ensure within household randomization. We assume cellphones belong to an individual rather than a household. Thus, we do not conduct within-household randomization within our cellphone sample.