2016-07-15

Data Literacy and Voting

Stuit, Martha

http://hdl.handle.net/2027.42/146732
Data Literacy and Voting

Martha Stuit
University of Michigan

Friday, July 15, 2016, 1:15 p.m. - 2:15 p.m.

Image: “Voting United States.jpg” by Tom Arthur, on Wikimedia Commons. CC BY-SA 2.0.
SCECHs

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Submit your form by July 22!

More information:
http://dataliteracy.si.umich.edu/scech
http://dataliteracy.si.umich.edu/conference

#4tvirtualcon
Join the Conversation!
October 2, 9, 16 & 23, 2016

Connect and collaborate with other K-16 educators about the teaching of writing in virtual spaces.
FREE REGISTRATION & SCECHs #4TDW

CLICK TO REGISTER
raise hand
polling
magic wand
chat
Use Magic Wand Tool
What Do You Teach?

- HS Language Arts
- HS Social Studies
- HS Science
- HS Math or CS
- HS Other Subjects
- HS Librarian
- Administrator
- Higher Ed Faculty
- Higher Ed Librarian
- Other
1. News media
2. 2016 Presidential election overview
3. Rules of thumb for data literacy and voting
4. Sources of election information
5. Questions/discussion
News Media
Americans overwhelmingly think that news media are one-sided

% of U.S. adults who think that news organizations ... when covering political and social issues

Deal fairly with all sides  Tend to favor one side

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>24%</td>
<td>74%</td>
</tr>
</tbody>
</table>

But more are divided in whether they think this about news they get online from friends and family

% of online news consumers who think that the news their friends and family post or send online about political and social issues...

<table>
<thead>
<tr>
<th>Represents more than one side</th>
<th>Represents just one side</th>
<th>They don't get this news from friends &amp; family online</th>
</tr>
</thead>
<tbody>
<tr>
<td>31%</td>
<td>35%</td>
<td>33%</td>
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</table>

“The Modern News Consumer”
PEW RESEARCH CENTER

*See end of presentation for a list of resources used in this webinar.*
2016 Presidential Election
2016 Presidential Election

- **February 1 to June 14**: Primaries
- **May 3**: Donald Trump became the presumptive Republican nominee
- **June 6**: Hillary Clinton became the presumptive Democratic nominee
  - Bernie Sanders is still active
- National conventions to determine the parties’ nominees for president and vice president:
  - **July 18-21**: Republican National Convention
  - **July 25-28**: Democratic National Convention
- **November 8**: Election

Image: “US Flag Backlit.jpg” by Jnn13, on Wikimedia Commons. CC BY-SA 2.0.
Rules of Thumb for Data Literacy and Voting
1. Know how polling works.

What is polling? How do they get those numbers?

As Charles Wheelan writes:

“...one might reasonably ask, How do we know all this? How can we draw such sweeping conclusions about the attitudes of hundreds of millions of adults? And how do we know whether those sweeping conclusions are accurate?” (170)
Definition, from Wheelan:

“A poll (or survey) is an inference about the opinions of some population that is based on the views expressed by some sample drawn from that population.” (170)

*A “poll” is also the place where voters cast their votes.*
Ways that polls trip us up:

- Polls are formed from **samples** of a **population**.  
  - *Is the sample representative of the population?*

- Types of bias:
  - **Nonresponse bias**: who chose *not* to participate in the poll
  - **Selection bias**: who participated in the poll

- Question **wording** and **order**
  - *How might respondents respond?*
There are different types of polls:

- **Interactive polls**: an interviewer speaks with a respondent.

- **Automated polls**: a robo-call to respondents. Respondents use their phone keypad to respond.

- **Online polls**: polls completed online, which are questionable because not all people have Internet access, and they have issues with bias.
Indications of a good poll:

● **Transparency** - Participates with these organizations:

<table>
<thead>
<tr>
<th>Organization</th>
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<tbody>
<tr>
<td>American Association for Public Opinion Research (AAPOR)</td>
</tr>
<tr>
<td>National Council on Public Polls (NCPP)</td>
</tr>
<tr>
<td>□ Includes article called “20 Questions A Journalist Should Ask About Polls Results”</td>
</tr>
<tr>
<td>Roper Center’s Polling Data</td>
</tr>
</tbody>
</table>

○ *Tip*: Check out FiveThirtyEight’s Pollster Ratings! (You can delve *even* deeper by clicking on “How this works.”)

● **Methodology**

○ Representative of population

○ Type of poll
Example: Franklin and Marshall College Poll

March 2016
Franklin & Marshall College Poll

SUMMARY OF FINDINGS

Prepared by:
Center for Opinion Research
Floyd Institute for Public Policy
Franklin & Marshall College

RACE. Which of the following categories best describes your racial background?

93% White
8% Non-white
Example: Pew Research Center report

- **Sample:** 2,245 adults, who are 18 and older, in the United States.
- **Methodology:** telephone interviews
  - 559 contacted by landlines
  - 1,686 contacted by cell phones

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Notes: Based on registered voters. Q23, THOUGHT, CAMPNII & Q5. Other/Don't know responses not shown.
* Results from June surveys except for 1992 & 1996 interest in campaign news, from July.
Source: Survey conducted June 15-26, 2016.

PEW RESEARCH CENTER
2. Apply statistical skills.

• **Questions to ask:**
  – What is the **sample**, and is it **representative**?
  – What kind of **average** is it?
    • Mean, median, or mode
  – What is the **inverse** of the statistic?
  – What is the **margin of error**?
    • + or - percentage points
3. Apply data visualization skills.

- **Type of chart or graph**
  - Is it the right one?
  - Is it used correctly?
  - Is it misleading?

- **Colors**
  - What are the colors supposed to indicate?
  - Do they make the data seem dramatic?
Example: Venn diagram by Hillary Clinton

Dear Congress,

Let's get this done.

Thanks,

The vast majority of Americans

12:21 PM - 20 May 2016
Example: Revised visualization
Each dot is an opinion poll, and the lines indicate trends generated by HuffPost Pollster’s poll-tracking model. This chart is as of July 8, 2016.
It's all about the 538 Electoral College votes

Here's a map of the country, with each state sized by its number of electoral votes and shaded by the leading candidate's chance of winning it.
4. Look at multiple sources.

• We often talk about *unbiased sources* or reporting, which do not exist. Good methodology and bad methodology do exist.
• To combat that, look for **multiple sources** to understand an issue. Also, apply the **statistics** and **data visualization skills** that you have learned from other webinars.
• Making good, informed decisions about the sources of information that you read and cite is key.
• How?
  – Look for counterarguments on the issue.
  – Peruse a variety of sources, including ones that lean left and ones that lean right.
Sources for Election Information
The Dallas Shooting Was Among The Deadliest For Police In U.S. History

By Carl Bialik, Ritchie King and Andrew Flowers

https://fivethirtyeight.com/
Flowing Data

Recent

History lesson on data visualization
Clive Thompson for Smithsonian Magazine gives a quick history lesson on infographics. Data visualization was rare because data was rare.

Making the Seinfeld theme song with Bieber, Diplo, and Skrillex
Last year the New York Times interviewed Justin Bieber, Diplo, and Skrillex about how they put together their song Where ...

Moving drought boundaries
Drought continues to trudge along. My grass is just about dead, save a few hearty patches clinging on to the ...

Features

Shifting Incomes for American Jobs
For various occupations, the difference between the person who makes the most and the one who makes the least can be significant.

Who Still Smokes?
Two decades out from the first statewide ban on smoking in enclosed workplaces, here's who still smokes.

Northwestern
School of Professional Studies
Go beyond analytics.
Earn your master's degree online.

Become a member.
Learn to visualize your data. From beginner to advanced.

http://flowingdata.com/
LWV’s VOTE411

**Enter Your Address**

Enter your address for personalized voting information.

**Street**

**City**

**State**
- Select –

**Zip**

**Enter**

**Follow Us**

Facebook | Twitter | YouTube

**State Voter Information**

Select a state to view its voting information:

**State**

---

**REGISTER TO VOTE**

Register yourself and encourage others to register to vote.

---

**SEARCH BY STATE & TOPIC**

Find voting information by state or by topic.

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Enter your address to find your polling place, build your ballot with our online voters’ guide and much more! With our voters’ guide you can see the races on your ballot, compare candidates’ positions side-by-side, and print out a “ballot” indicating your preferences as a reminder and take it with you to the polls on Election Day. Check out our resources for military and overseas voters!

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http://www.vote411.org/
America Can Fix Its Student Loan Crisis. Just Ask Australia.

Other countries offer plans that give students more time to repay loans or that make provisions for fluctuating earnings, so fewer borrowers default.
OBAMA AND TRUMP AFTER DALLAS
BY DAVID REMNICK

A President can be judged on his ability to explain, to console, and to frame tragedy in the realm of both politics and emotion.
You can look many of these sources up on FiveThirtyEight’s Pollster ratings (next slide). For instance, Pew gets a B+.

http://www.pewresearch.org/
## Aggregators of Polls: FiveThirtyEight

**FiveThirtyEight’s Pollster Ratings**

*By Nate Silver*

FiveThirtyEight’s pollster ratings are calculated by analyzing the historical accuracy and the methodology of each firm’s polls. Accuracy scores account for the type of election, a poll’s sample size, the performance of other polls surveying the same race and other factors. We also calculate measures of statistical bias in the polls.

*See more: The State Of The Polls, 2016 | How this works | Download the data*

### Ratings and Definitions

<table>
<thead>
<tr>
<th>POLLSTER</th>
<th>LIVE CALLER WITH CELLPHONES</th>
<th>INTERNET</th>
<th>NCPP/ AAPOR/ ROPER</th>
<th>POLLS ANALYZED</th>
<th>SIMPLE AVERAGE ERROR</th>
<th>RACES CALLED CORRECTLY</th>
<th>ADVANCED +/-</th>
<th>PREDICTIVE +/-</th>
<th>538 GRADE</th>
<th>BANNED BY 538</th>
<th>MEAN-REVERTED BIAS</th>
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</thead>
<tbody>
<tr>
<td>SurveyUSA</td>
<td></td>
<td></td>
<td></td>
<td>763</td>
<td>4.6</td>
<td>90%</td>
<td>-1.0</td>
<td>-0.8</td>
<td>A</td>
<td></td>
<td>D+0.1</td>
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<tr>
<td>YouGov</td>
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<td></td>
<td></td>
<td>707</td>
<td>6.7</td>
<td>93%</td>
<td>-0.3</td>
<td>+0.1</td>
<td>B</td>
<td></td>
<td>D+1.6</td>
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<td>Rasmussen Reports/ Pulse Opinion Research</td>
<td></td>
<td></td>
<td></td>
<td>657</td>
<td>5.3</td>
<td>79%</td>
<td>+0.4</td>
<td>+0.7</td>
<td>C+</td>
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<td>R+2.0</td>
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<td>Zagby Interactive/JZ Analytics</td>
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<td>465</td>
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<td>78%</td>
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<td>+1.2</td>
<td>C-</td>
<td></td>
<td>R+0.8</td>
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<td>Mason-Dixon Polling &amp; Research, Inc.</td>
<td></td>
<td></td>
<td></td>
<td>415</td>
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<td>86%</td>
<td>-0.4</td>
<td>-0.2</td>
<td>B+</td>
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<td>R+1.0</td>
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<td>Public Policy Polling</td>
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<td>383</td>
<td>4.9</td>
<td>82%</td>
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<td>-0.1</td>
<td>B+</td>
<td></td>
<td>R+0.2</td>
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<tr>
<td>Research 2000</td>
<td></td>
<td></td>
<td></td>
<td>279</td>
<td>5.5</td>
<td>88%</td>
<td>+0.2</td>
<td>+0.6</td>
<td>F</td>
<td>X</td>
<td>D+1.4</td>
</tr>
</tbody>
</table>
Aggregators of Polls: HuffPost Pollster

HuffPost Pollster tracks thousands of public polls to give you the latest data on elections, political opinions and more. Read our FAQ.

Featured Charts

2016 General Election: Trump vs. Clinton
- 46% Hillary Clinton
- 40% Donald Trump

2016 National Republican Primary
- 56% Donald Trump
- 23% Ted Cruz

2016 National Democratic Primary
- 54% Hillary Clinton
- 39% Bernie Sanders

Hillary Clinton Favorable Rating
- 41% Favorable
- 56% Unfavorable

http://elections.huffingtonpost.com/pollster
Aggregators of Polls: RealClearPolitics

http://www.realclearpolitics.com/
What are your favorites?
Resources


Recap:

1. Know how polling works.
2. Apply statistical skills.
3. Apply data visualization skills.
4. Look at multiple sources.

Questions?

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Martha Stuit

Email: stuitm@umich.edu
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Evaluation: