

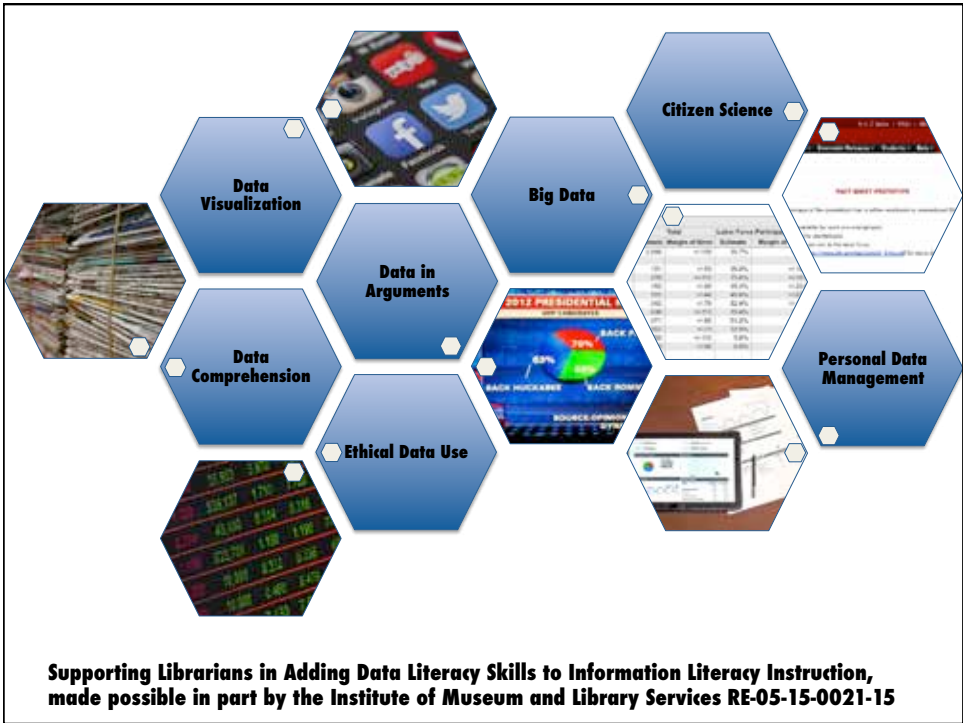
**Four Out of Five Dentists Say
Coca-Cola Cures Cancer!**
**Data Literacy Strategies to Help Patrons Identify
Fake – or Just Bad – Information**

Image: Public Domain; <https://pixabay.com/en/newspapers-leuwarder-courant-press-44448/>

**Kristin Fontichiaro | University of Michigan School of Information
font@umich.edu | @activelearning | <http://bit.ly/fontblog>**

#fakenews

#fakenews #badinformation



5

**Strategies to
Rapidly Improve
Your Students' /Patrons'
Ability to
Make Sense of the News**

1. "What's Being Counted?"

"Don't believe those phony numbers when you hear 4.9 and 5 percent unemployment ... the number's probably 28, 29, as high as 35. In fact, I even heard recently 42 percent." ([Politifact](#))

The screenshot shows the Bureau of Labor Statistics website interface. At the top, there is a navigation bar with links for 'Home', 'Subjects', 'Data Tools', 'Publications', 'Economic Releases', 'Students', and 'Beta'. A search bar is also present. Below the navigation bar, the page title is 'Labor Force Participation' and it is labeled as a 'FACT SHEET PROTOTYPE'. Under the heading 'Basic concepts', there is a list of bullet points explaining labor force participation, including definitions of employed, unemployed, and the labor force itself. The page also includes social media sharing options and font size/print controls.

https://www.bls.gov/bls/cps_fact_sheets/lfp_mock.htm

Subject	ZCTAS 48656							
	Total		Labor Force Participation Rate		Employment/Population Ratio		Unemployment rate	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Population 16 years and over	3,540	+/-109	39.7%	+/-4.3	31.3%	+/-4.1	21.1%	+/-7.9
AGE								
16 to 19 years	131	+/-53	35.9%	+/-18.2	34.4%	+/-19.4	31.9%	+/-28.2
20 to 24 years	270	+/-115	75.6%	+/-16.6	37.4%	+/-20.5	60.5%	+/-31.8
25 to 29 years	183	+/-69	45.4%	+/-20.6	33.3%	+/-18.5	26.5%	+/-28.6
30 to 34 years	101	+/-46	40.6%	+/-23.7	37.6%	+/-23.9	7.3%	+/-13.2
35 to 44 years	342	+/-75	52.9%	+/-12.9	47.4%	+/-13.6	10.5%	+/-10.0
45 to 54 years	638	+/-113	70.4%	+/-7.6	61.6%	+/-8.7	12.8%	+/-6.4
55 to 59 years	471	+/-89	51.2%	+/-10.9	36.3%	+/-10.6	29.0%	+/-16.5
60 to 64 years	367	+/-73	33.9%	+/-8.4	31.4%	+/-8.3	7.4%	+/-8.8
65 to 74 years	650	+/-110	5.8%	+/-3.1	5.8%	+/-3.1	0.0%	+/-42.0
75 years and over	403	+/-80	0.0%	+/-1.0	0.0%	+/-1.0	0.0%	+/-100.0

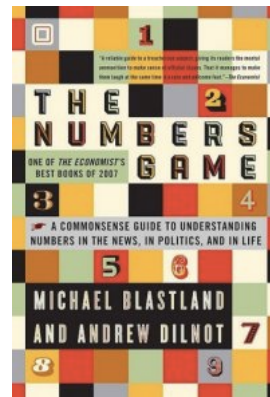
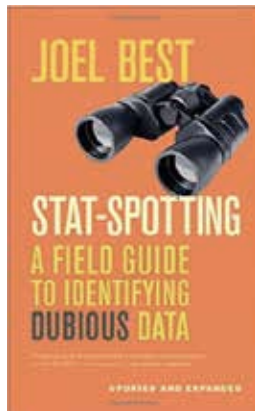
Source: <http://factfinder.census.gov> and a search for zip code 48656

“Don't believe those phony numbers when you hear 4.9 and 5 percent unemployment ... the number's probably 28, 29, as high as 35. In fact, I even heard recently 42 percent.” (Politifact)

Subject	ZCTAS 48656							
	Total		Labor Force Participation Rate		Employment/Population Ratio		Unemployment rate	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Population 16 years and over	3,545	+/-159	39.7%	+/-4.3	31.3%	+/-4.1	21.1%	+/-7.9
AGE								
16 to 19 years	131	+/-53	35.9%	+/-18.2	24.4%	+/-19.4	31.9%	+/-28.2
20 to 24 years	270	+/-115	75.6%	+/-16.8	37.4%	+/-20.5	50.5%	+/-31.8
25 to 29 years	183	+/-89	45.4%	+/-20.6	33.3%	+/-19.5	26.5%	+/-28.6
30 to 34 years	101	+/-46	40.0%	+/-23.7	37.0%	+/-23.9	7.3%	+/-13.2
35 to 44 years	342	+/-75	52.9%	+/-12.9	47.4%	+/-13.8	10.8%	+/-10.0
45 to 54 years	638	+/-113	70.4%	+/-7.8	61.8%	+/-8.7	32.8%	+/-8.6
55 to 59 years	471	+/-85	31.2%	+/-10.5	36.3%	+/-10.6	29.0%	+/-16.5
60 to 64 years	357	+/-73	33.9%	+/-9.4	31.4%	+/-8.3	7.4%	+/-8.8
65 to 74 years	650	+/-110	5.8%	+/-3.1	5.8%	+/-3.1	0.0%	+/-40.0
75 years and over	403	+/-80	0.5%	+/-1.0	0.5%	+/-1.0	0.0%	+/-100.0

Source: <http://factfinder.census.gov> and a search for zip code 48656

2. “Is That a Big Number? Compared to What?”



Statistical Benchmarks

- **U.S. Population 325 million (U.S. Census 2017)**
- **World population: Just over 7.3 billion (U.S. Census 2017)**
- **Number of births each year: Just under 4 million (NCHS 2014)**

3. Don't settle for average.

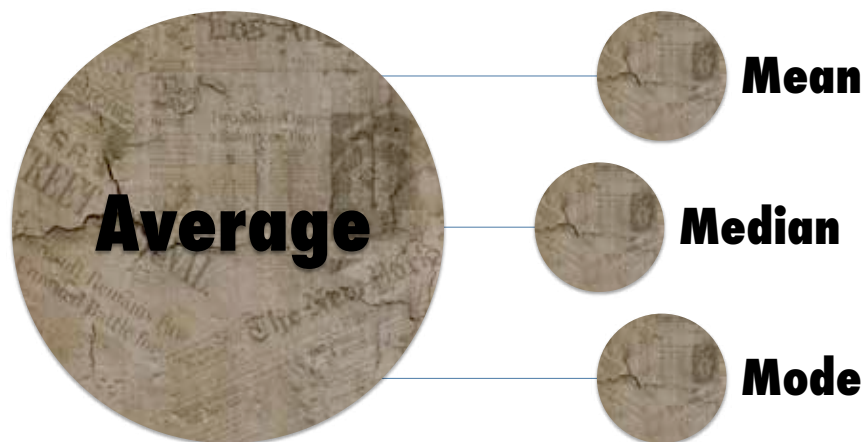
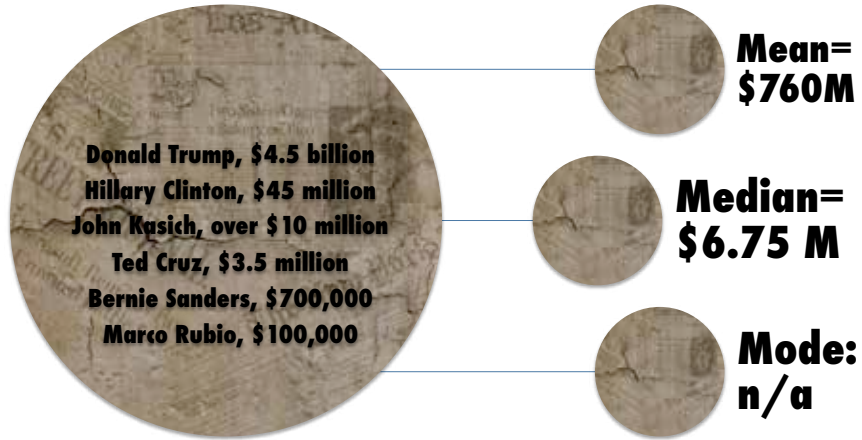
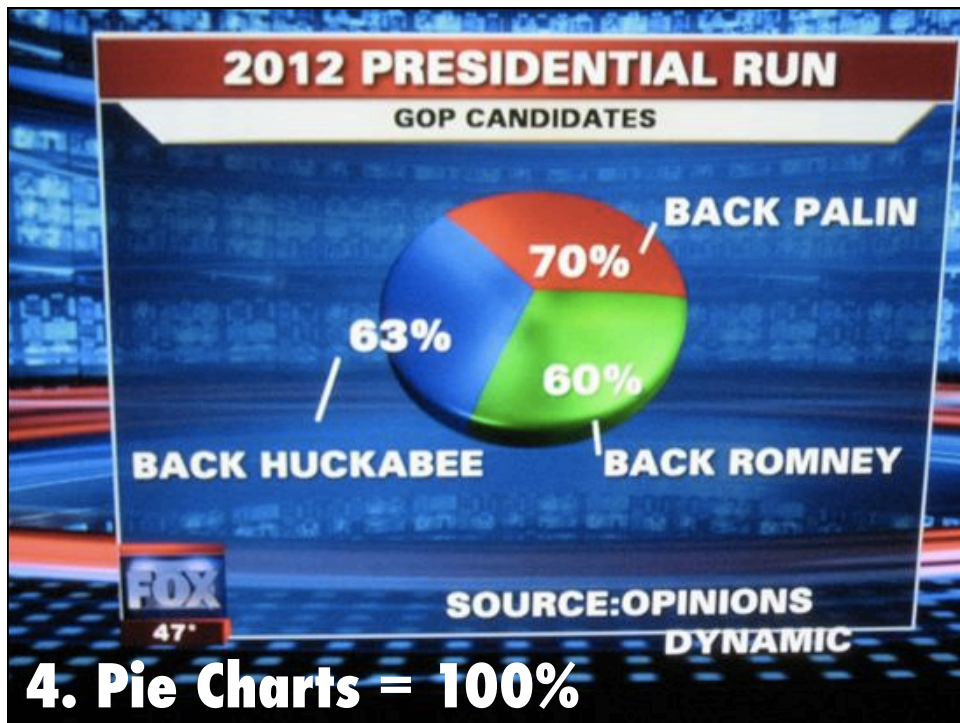


Image: Public domain. <https://pixabay.com/en/background-newspaper-press-1824828/>

3. Don't settle for average.

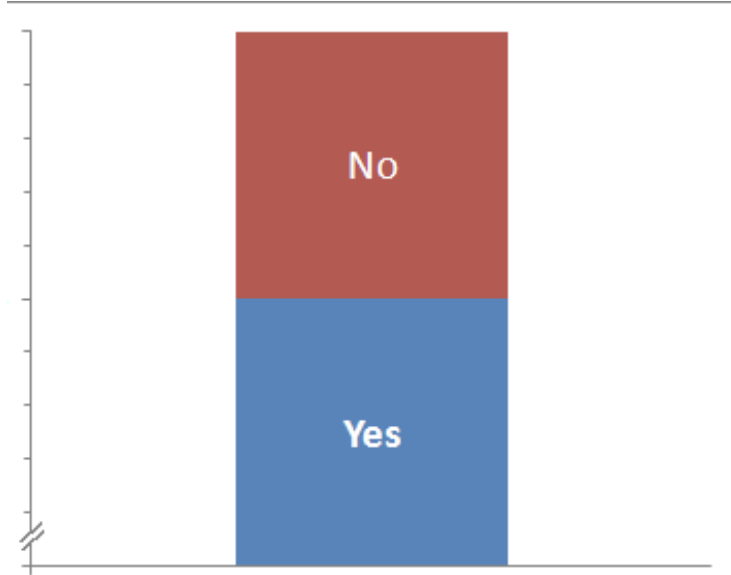


Date Source: Forbes 2015
Image: Public domain. <https://pixabay.com/en/background-newspaper-press-1824828/>



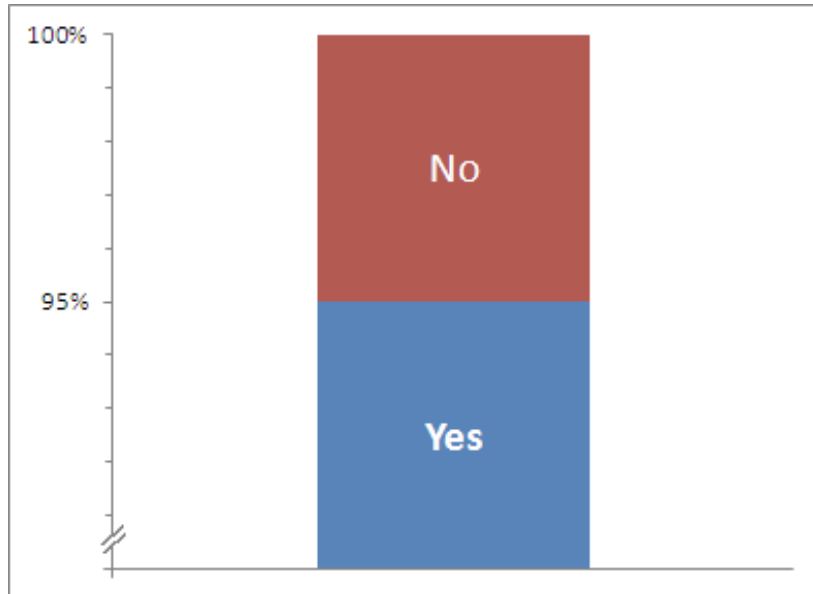
4. Pie Charts = 100%

5. Keep an eye on the y-axis.



<https://margawley.com/2014/12/07/misdirection/>

5. Keep an eye on the y-axis.



<https://margawley.com/2014/12/07/misdirection/>

4T Virtual Conference on Data Literacy - July 20-21, 2017
 Register free: <http://dataliteracy.si.umich.edu/conference>

DO YOUR HIGH SCHOOL STUDENTS UNDERSTAND DATA AND STATISTICS IN THE REAL WORLD?

Join us for a two-day exploration of data and statistics in the real world of students. How do students interpret and make sense of data beyond science and math class? How do they make sense of Big Data, citizen science, managing their personal data, and recognizing and responding to ethical data use? Featuring keynote presentations by Justin Scheel of the University of Michigan Library's Shapiro Design Lab and Emerson College's Catherine d'Ignazio of the Datafella.io project. Registration is free, and those registered with the Michigan Department of Education can earn 3-6 free SCECH credits. A satellite conference of the 4T Virtual Conferences led by the U-M School of Education, this conference is a project of the University of Michigan School of Information, and the U-M Library. This project was made possible in part by the Institute of Museum and Library Services RE-00-15-0113-15.

SCHOOL OF INFORMATION **LIBRARY** **Michigan Library**

- 1. "What's Being Counted?"**
- 2. "Is That a Big Number? Compared to what?"**
- 3. Don't settle for average.**
- 4. Pie Charts = 100%**
- 5. Keep an eye on the y-axis.**

Kristin Fontichiaro
University of Michigan
School of Information

font@umich.edu

@activelearning

Slides: <http://bit.ly/fontblog>