



Data Analytics

What is it anyway?



AmeriCorps State and National Symposium 2016



This session has two objectives.



1. **Demystify data analytics** by providing examples of how our colleagues and partners have used it.



2. Encourage everyone to **use evaluative thinking** in approaching when and how to use data analytics.



According to President Obama, data analytics is...

“Analytics is what makes [data] come alive.

Without analytics, [datasets] could be stored, and they could be retrieved, wholly or selectively. But what comes out would be exactly what went in.

Analytics, comprising a number of different computational technologies, is what fuels the [data] revolution. **Analytics is what creates the new value in [datasets]**, vastly more than the sum of the values of the parts.”

- Presidential Big Data and Privacy Working Group Review

Data analytics is not...



1. A new CNCS requirement...*because you're probably doing it already.*
2. Different than performance measurement and evaluation...*because it's built into both.*

There are four types of analytics.



*Diagram based on GovLoop report “How to Use Data Analytics to Change Government”

Data is there to answer your questions, not the other way around.

Deciding *how* to analyze data should begin with determining *what* is necessary and important to know.

- What **long-term change** are you trying to achieve?
- What are your **core activities** aimed at achieve that change?
- What tells you your core activities are **working well**?

Descriptive analytics – Simple Questions?

HOW MANY AMERICORPS MEMBERS SERVED IN 2015?

- A. 72,831
- B. 73,491
- C. 104,856



Descriptive analytics – D.A.R.E. to have good, clean data.

DEFENSIBLE

Facilitating correct interpretations and stress-testing our data to understand where data breaks and from there, inform methodologies.

ACCESSIBLE

Building shared systems for multiple stakeholders.

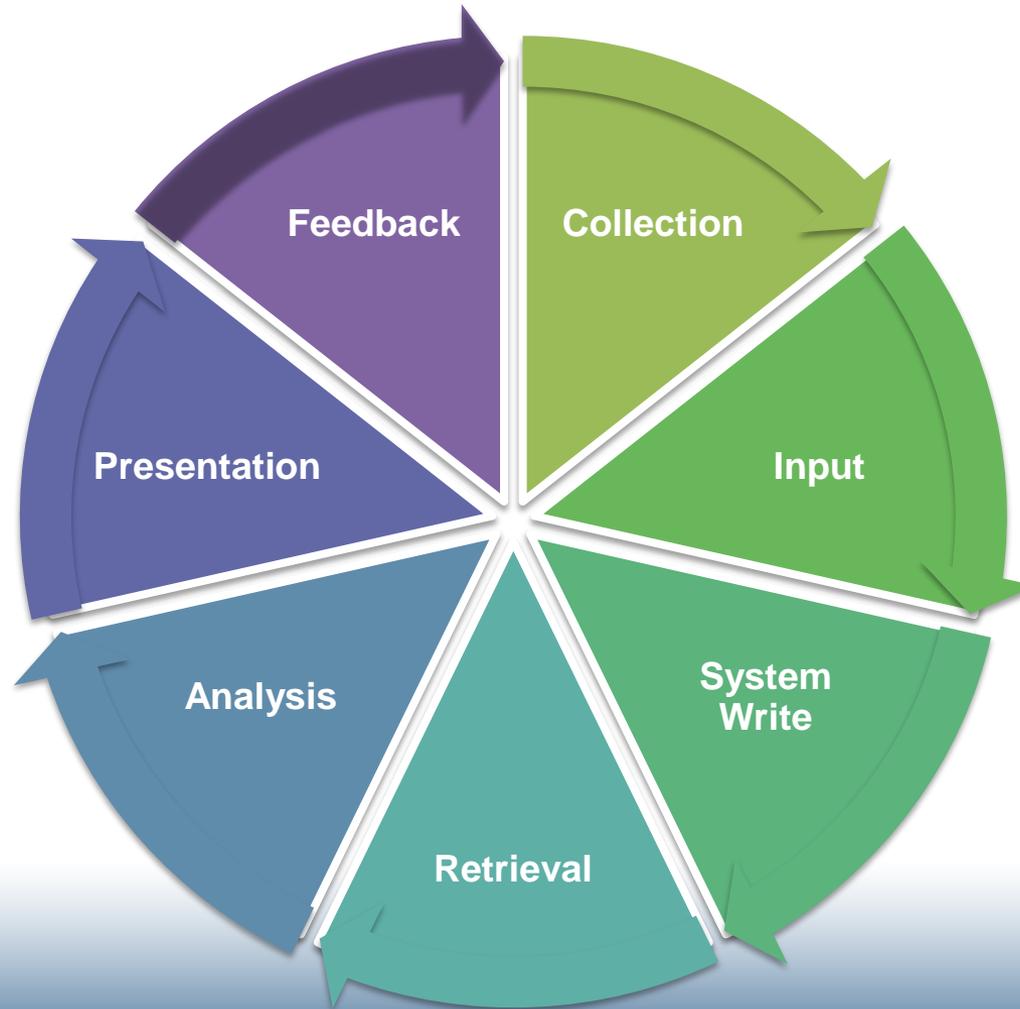
REPRODUCIBLE

Articulating methodologies and coding standards.

EXPLAINABLE

Choosing the figure with the simplest explanation tailored for the correct audience.

Descriptive analytics – D.A.R.E Analysis Lifecycle

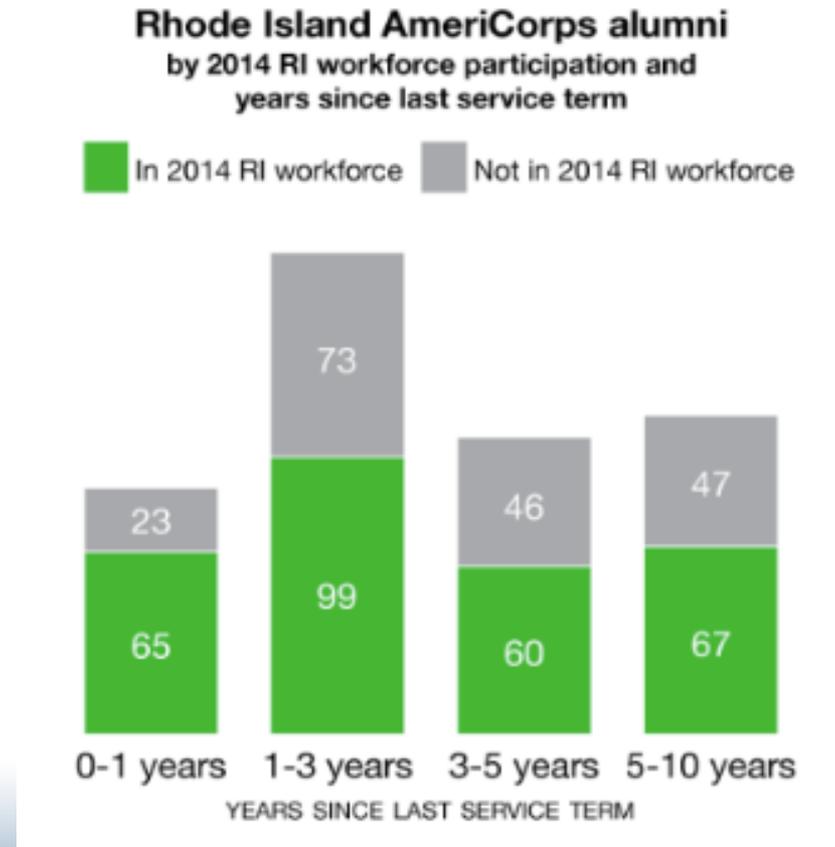


Diagnostic analytics – The only thing better than one good dataset? Two!

Impact of National Service on Rhode Island Communities

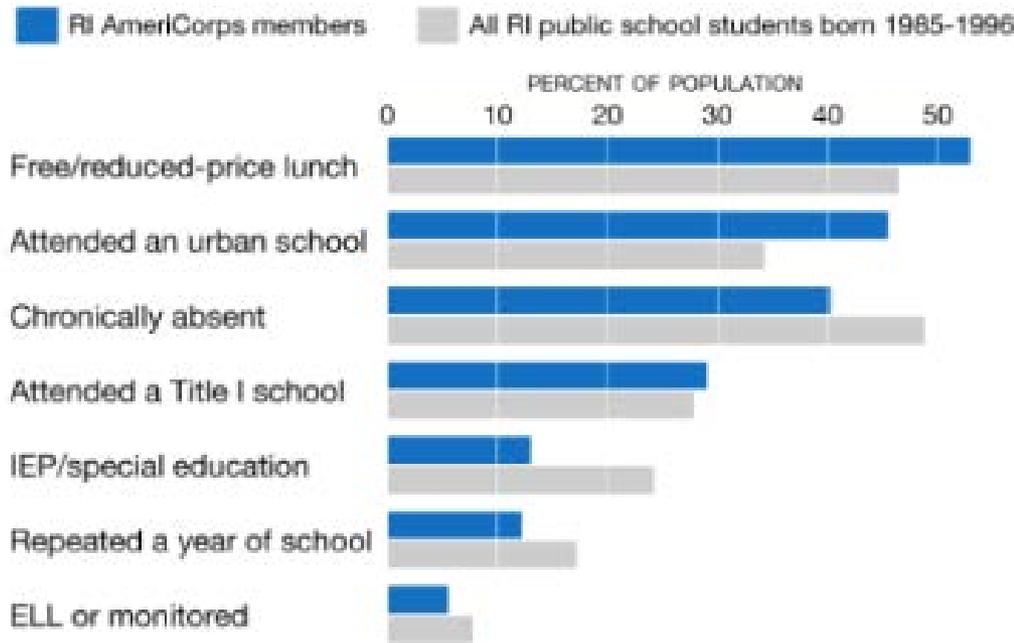
- Compared AC Member Downloads to Departments of Labor and Training and Education and Census data
- Run by RI DataHub- nonprofit that processes different data sets to develop data stories for community education

<http://ridatahub.org/datastories/52/1/>



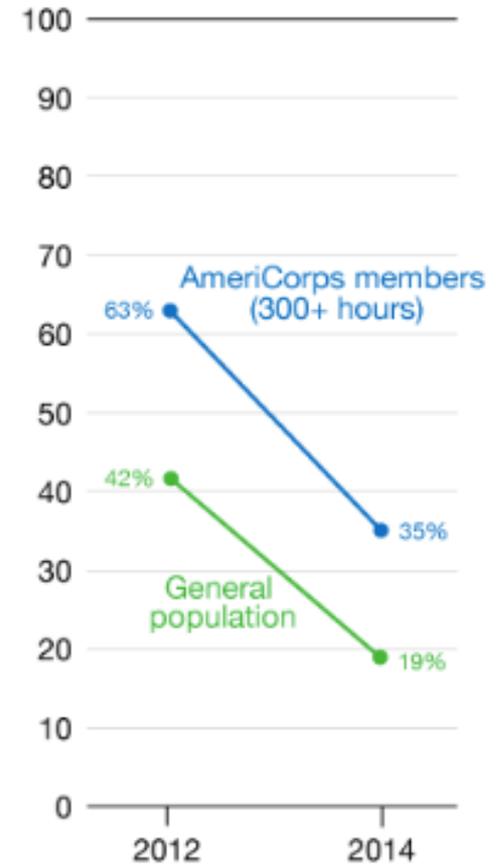
Diagnostic analytics – The only thing better than one good dataset? Two!

Comparing members to their peers: K-12 characteristics



Percent voter turnout

Registered voters born 1985-1994



Diagnostic analytics – The only thing better than one good dataset? Two!

Benefits

- Grounds ‘AmeriCorps data’ to community partners
- Actively involves community partners- creates buy-in
- Highlights impact of AmeriCorps outside of performance measures

Tips

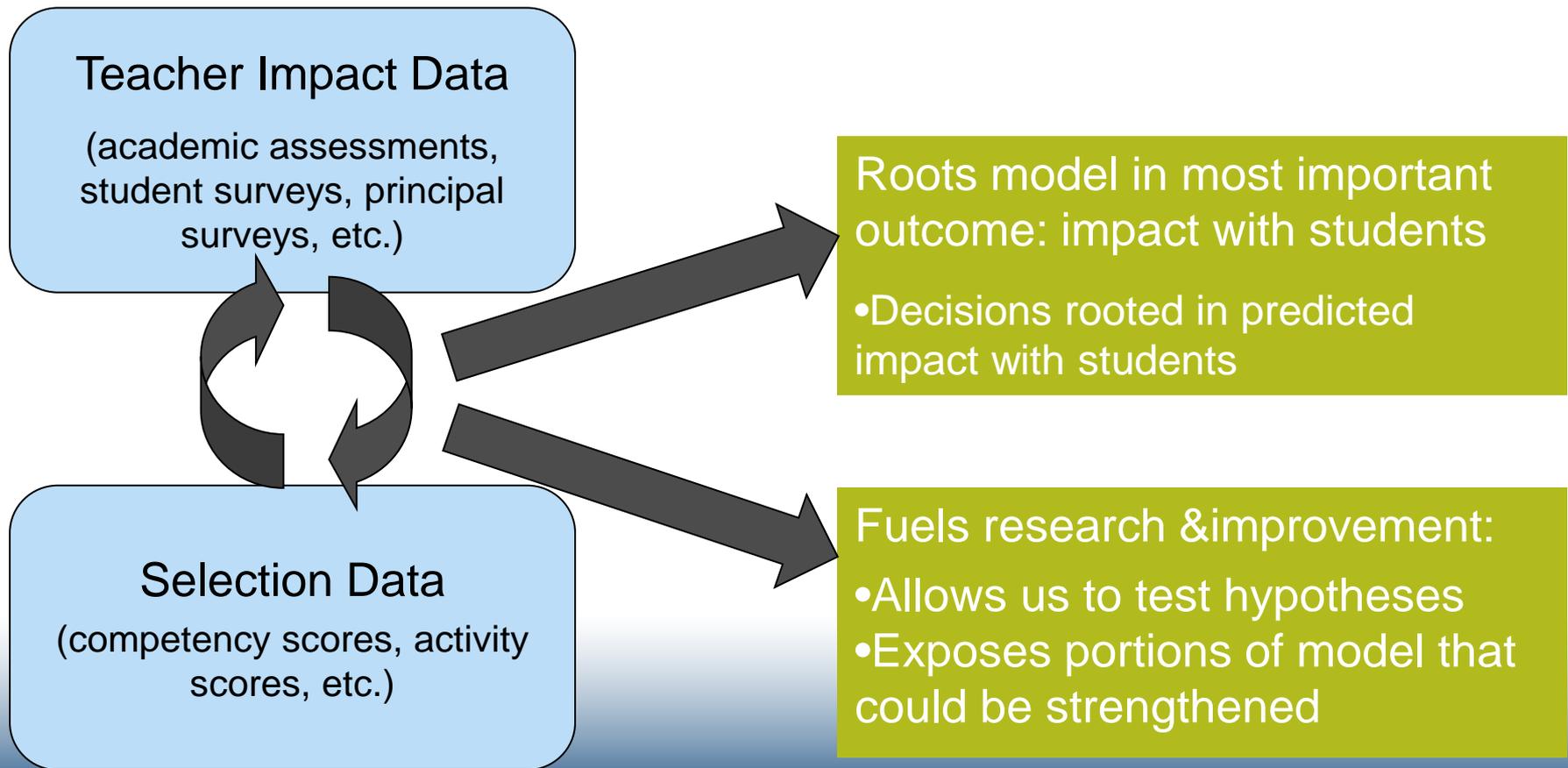
- Have clear guiding questions
- Patience and Persistence: it takes time to narrow the scope
- Other data sets=partners=other goals- do they align?

Resources

- Code for America
- Government agencies
- Local nonprofits/ AmeriCorps host sites
- AmeriCorps data (Service Locations, Member Downloads, Alumni Surveys, etc.)

Predictive analytics – The better you know the past the better you can see the future.

What differentiates our most successful corps members and how can we recognize that potential at the selection stage?



Predictive analytics – Examples of improvements driven by predictive modeling

Confidential

Improving Corps Member Retention

- We want corps member who will adapt to challenges in the classroom and fulfill their 2 year commitment
- We found that the number of academic withdraws in undergrad was correlated to not completing the corps
- As a result, we increased the training for selectors around academic withdraws and increased the importance of this in our selection model

Driving to Different Outcomes We Value

- One of our old selection assessments on relationship building was not correlating to academic results but was correlating to student survey results
- This drove us to research & pilot alternative assessments that could still predict student survey responses and also academic results.
- We removed the old assessment to incorporate the new activity

Predictive analytics – Key steps organizations can take to improve modeling

- Research what seems to matter (literature review, speaking with stakeholders)
- Define & collect outcomes evidence
- Collect input evidence on a scale (e.g., 1-5)
- Use excel; it is a powerful tool for directional alignment
- Consider investing in more advanced programs (e.g., STATA, SPSS software programs)

Prescriptive analytics – Because Google Maps has replaced all our brains.

250 E Street Southwest, Washington, D.C.

Hyatt Regency Crystal City at Reagan National Airport

Arrive by 10:34 AM Thu, Jul 28

Send directions to your phone

via I-395 S	typically 9 - 16 min
via US-1 S	typically 12 - 22 min
9:54 AM – 10:32 AM	38 min

Map data ©2016 Google



Q&A