Data Science Usage by State Level Child Advocacy organizations

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48th ANNUAL ARNOVA CONFERENCE Nonprofits and Philanthropy in a Polarized World: Speaking Truth to Power and Using Power to Speak Truth November 21-23, 2019, San Diego, CA

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The authors would like to thank Dr. Kate Boland for her help with the study

This slide set was corrected after the original presentation CONFERENCE DRAFT

Research Questions

(1) what types of big data/predictive analytics tools are state level child advocacy organizations using in their policy work?

(2) What data sources are being used?

(3) What type of data/predictive analytical tools are state level are used in advocacy practice by state level child advocacy organizations?

(4) Is there any evidence of collaborative data analysis or collection?

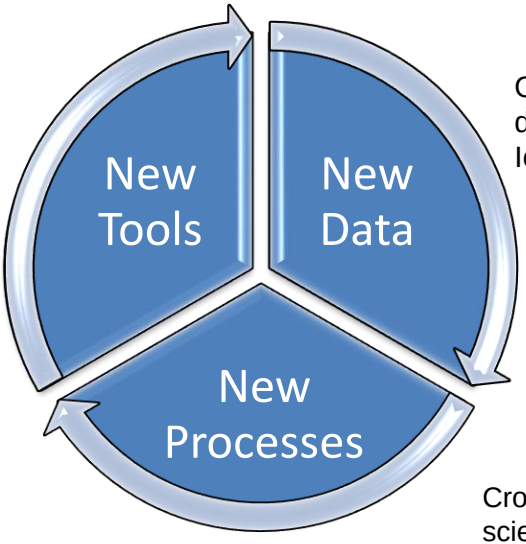
(5) Is Data science capacity an advantage in advocacy?

Theoretical Issues

- Role of Information in the Lobbying and Advocacy Process
- Information Asymmetry
- Informational Lobbying
- Transition from old to new methods in computational social science

The Data Science Revolution in Public Policy

Machine Learning, AI, Predictive analytics, data visualization, experiments



Open data, sensor data, data philanthropy, IoT data, NOSQL

Crowdsourcing, volunteer data science, hackathons

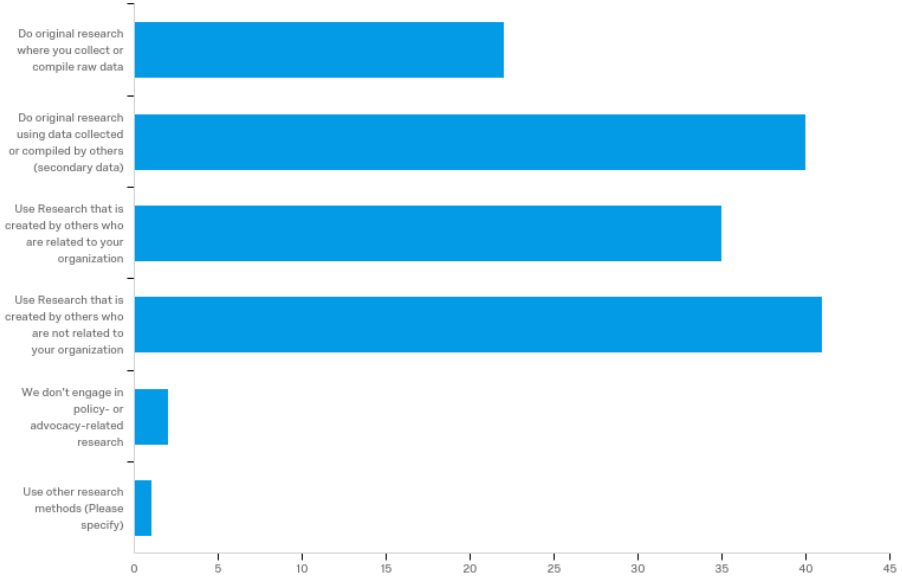
Methodology

- Subjects: Members of the KIDS COUNT network (n=53). Most are nonprofit.
- Web based Survey with multiple follow ups

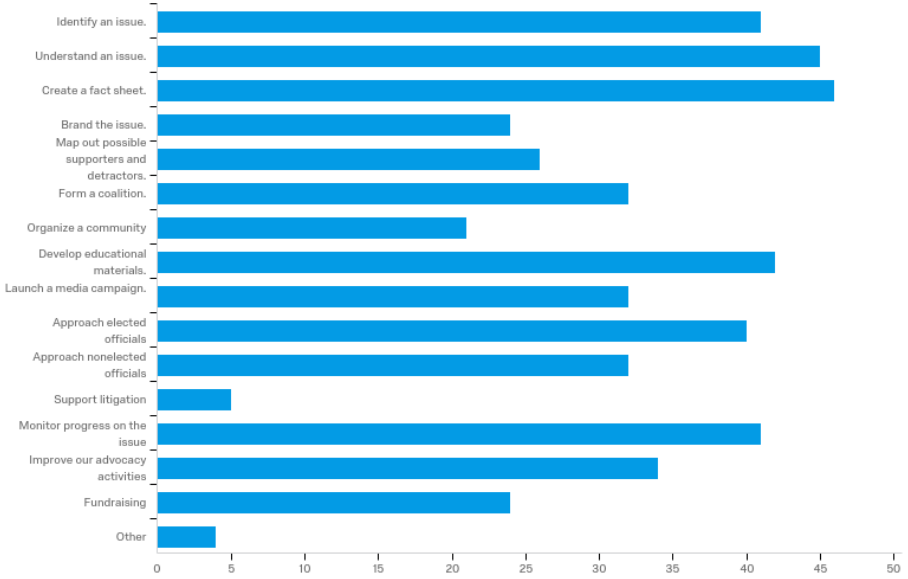
Results

Survey of the KIDS COUNT Network (44 Usable responses-return rate of 83%)/Web based survey. State level Child Policy Research Organizations. Mix of organizational sectors and sizes.

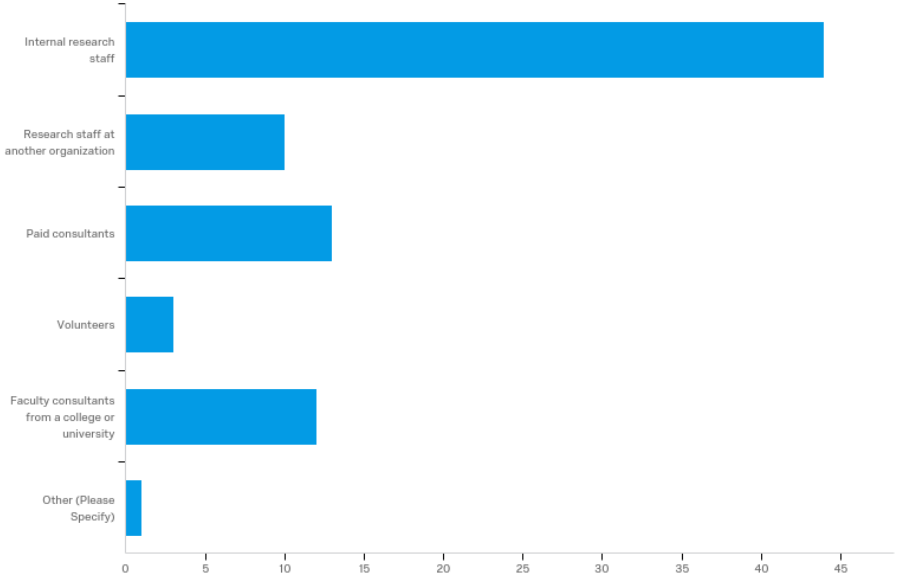
Type of Research Conducted



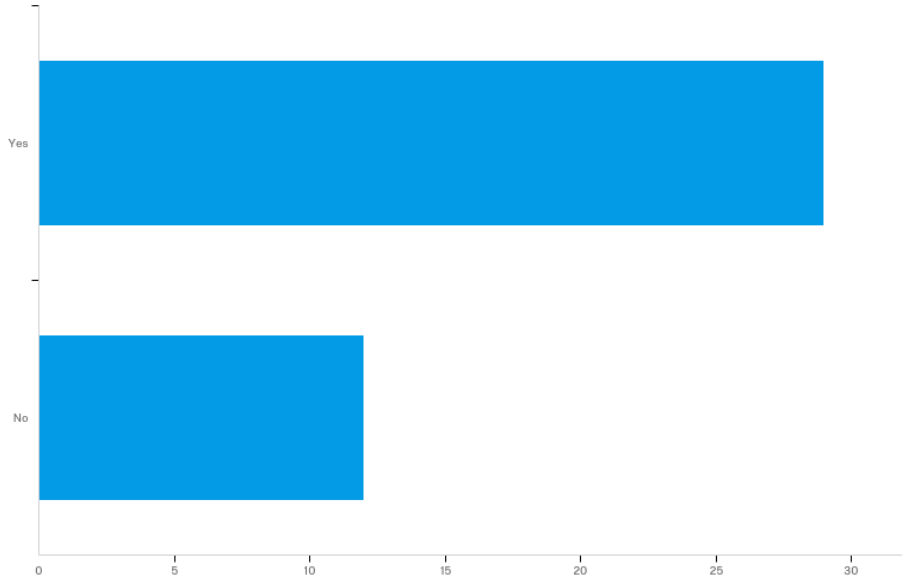
How do you use the information that you develop?



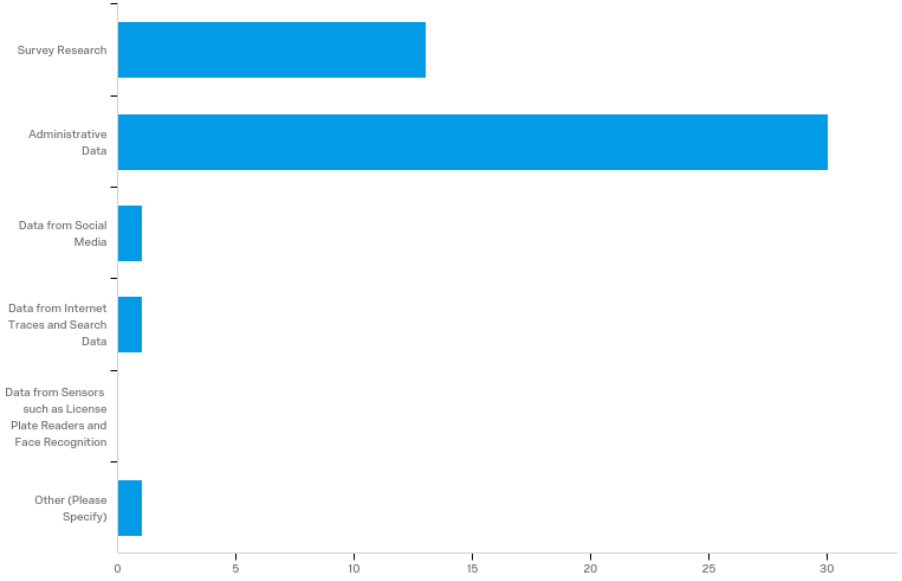
Who conducts the research for your organization?



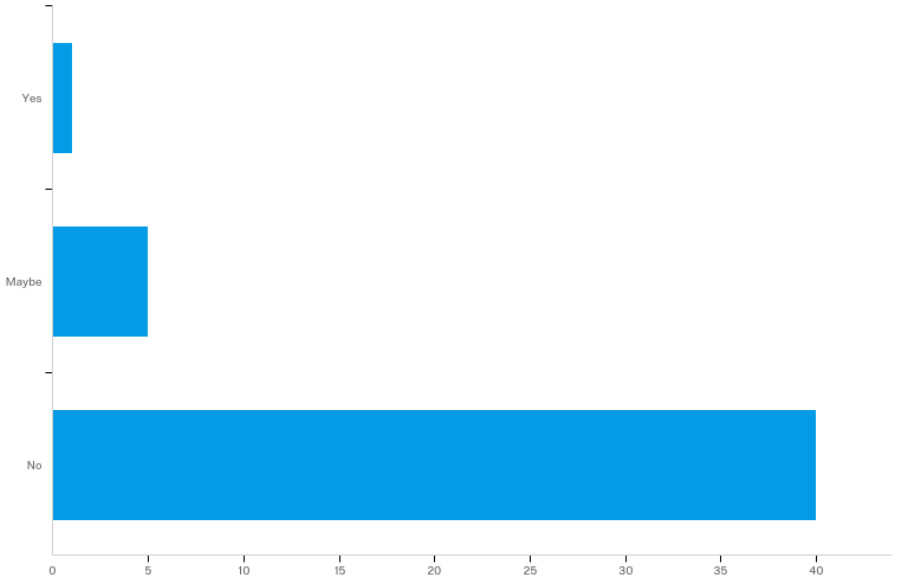
Does your work involve the use of very large data sets?



How are these very large data sets collected?



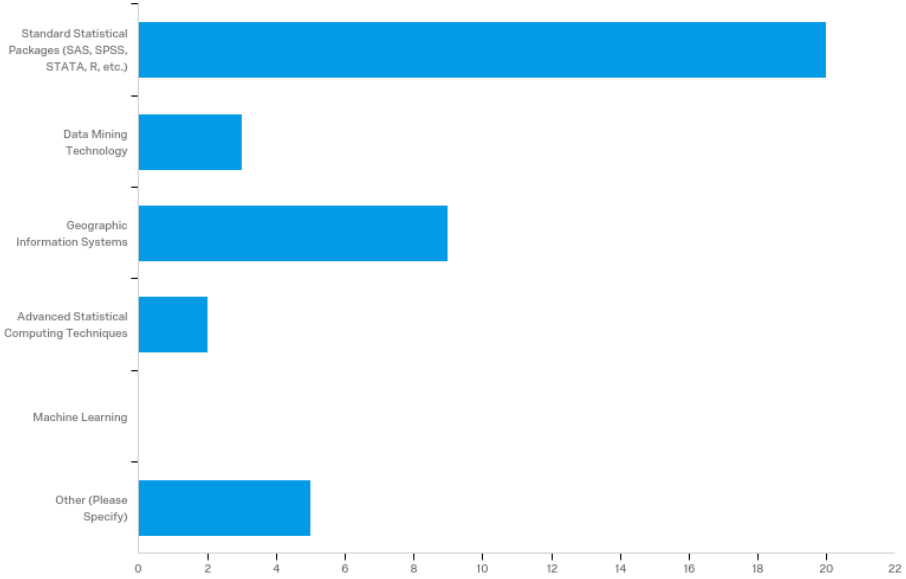
Does your organization use crowdsource or citizen-collected data?



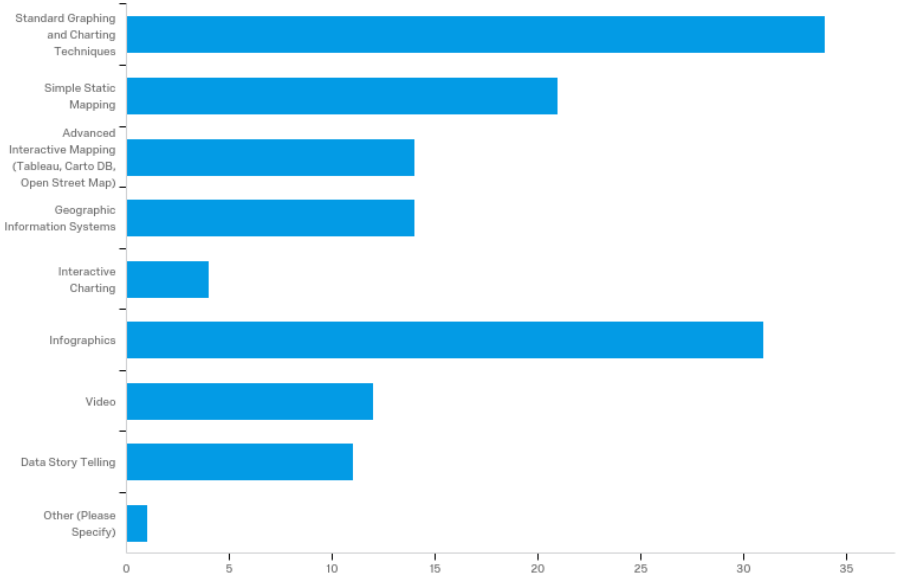
Data Philanthropy

No organizations reported using data collected by commercial organizations as a form of Data Philanthropy (such as data from Yelp, LinkedIn, MasterCard, etc.)?

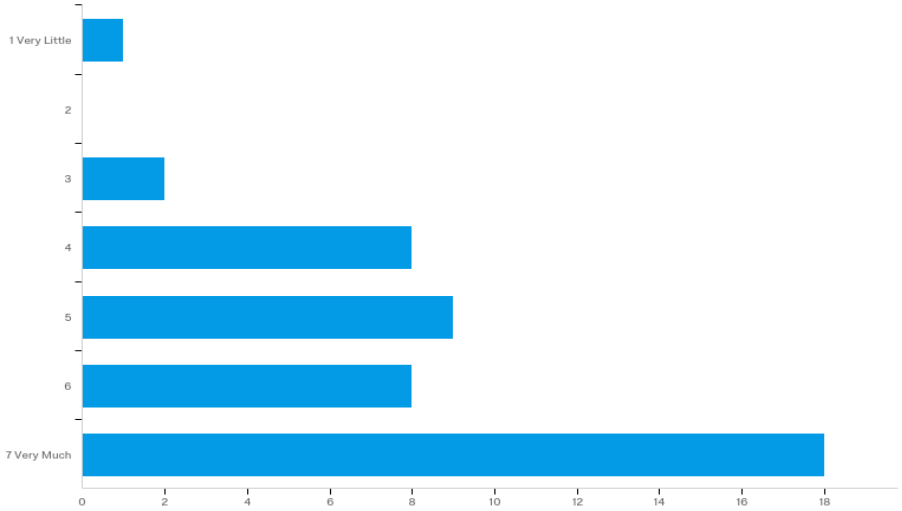
Data Analysis



Data Visualization

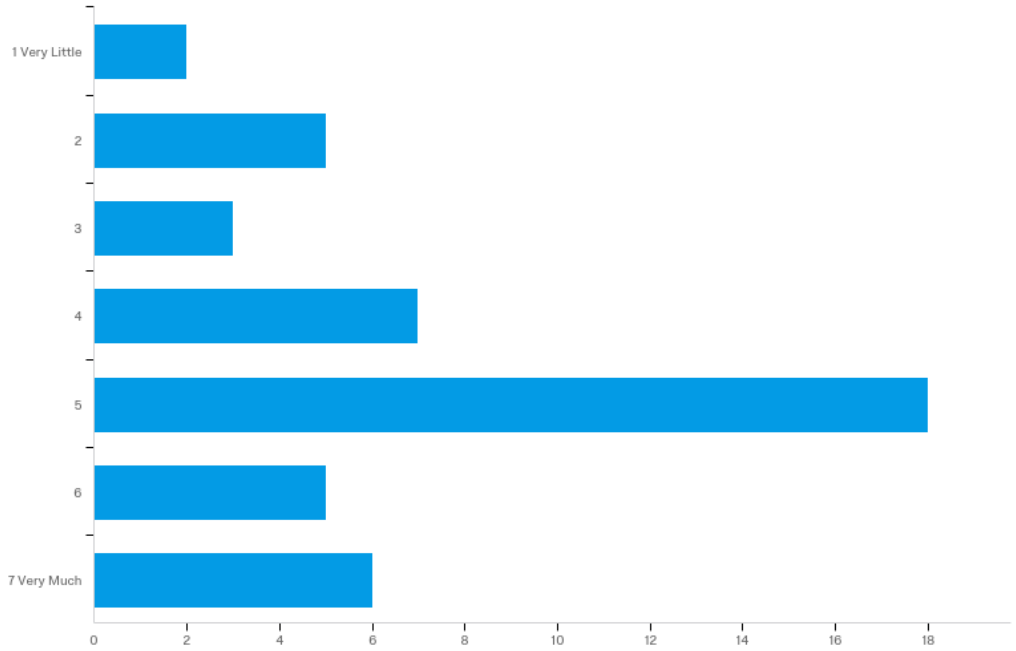


To what extent do you expect your organization to make more use of data in the future?



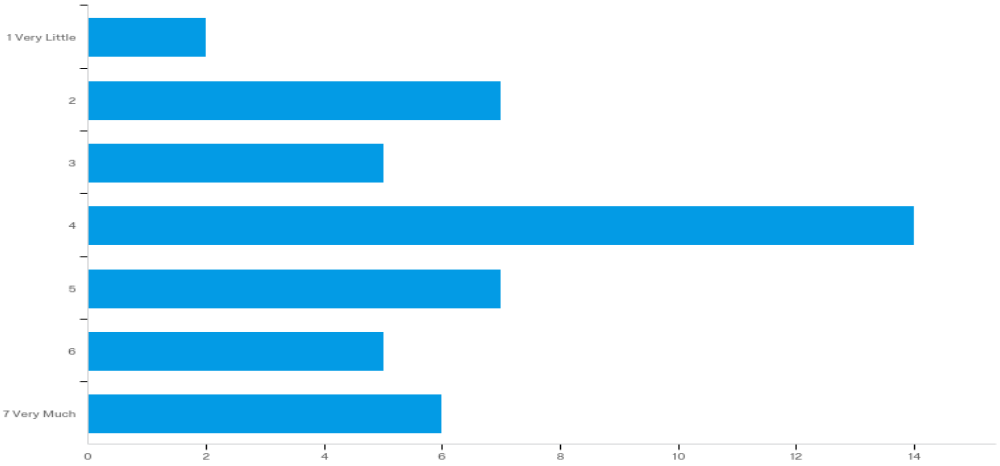
M=5.64 SD=1.46

Do you expect your organization will make more use of advanced data techniques in the future?



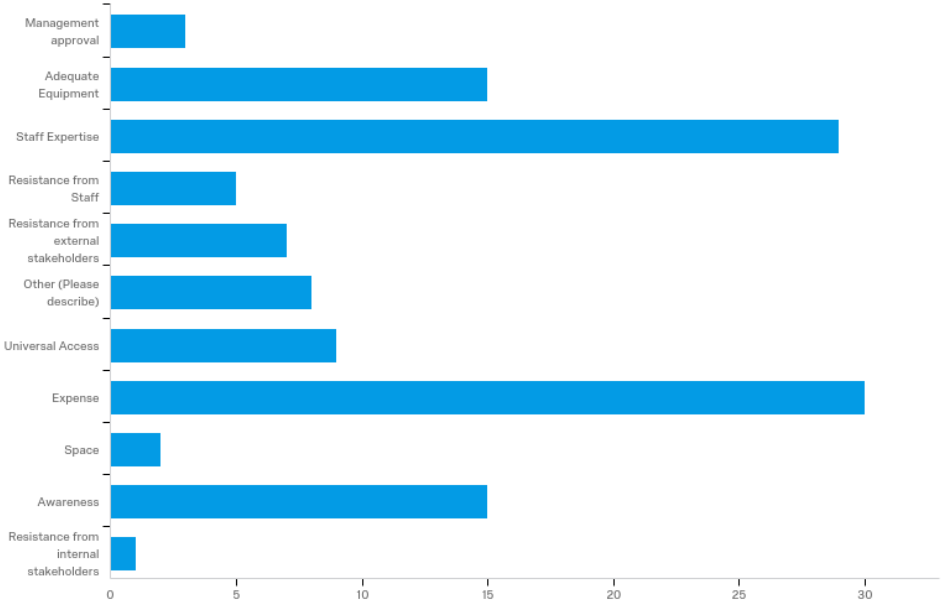
M=4.55 SD=1.62

To what extent do you feel that your organization is advantaged/disadvantaged in comparison with other advocacy interests in the policy arena because of the level of your data analysis capacity?

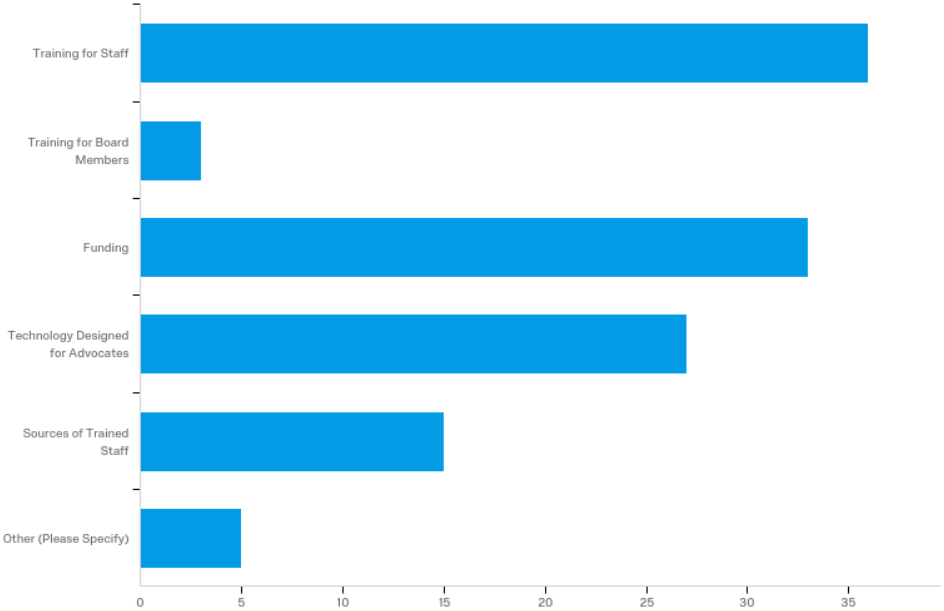


M=4.25 SD =1.71

What barriers has your organization experienced (if any) in using data in your advocacy efforts?



What types of resources would make it easier to use data science techniques in your work?



Discussion

- More than seven out of ten organizations report using very large data sets (Self defined by the organization)
- Most report the large datasets are from survey or administrative data/some sensor and Internet/social media traces
- Most have not use crowdsources or citizen collected data
- None reported using data philanthropy resources
- Most reported using standard statistical analysis/Advanced Techniques: some GIS advanced statistical computing/some used predictive analytics and data mining/none reported using machine learning to analyze data. Many reported plans to use more of these techniques n the future.

Discussion

- A range of data visualization techniques were reported
- Expense and Staff Expertise were the biggest reported barriers to data science
- Most reported training for staff, funding and new use-specific technology were the most needed resources to expand data science
- There was support for the possibility that data analysis capacity was important in advocacy
- Respondents suggested that their organization will make more use of data and advanced techniques in the future.

Discussion

- In general, we see the beginnings of data science usage in this population
- Limitations
  - General Survey Issues
  - Nonresponses

THANK YOU