



## Tools and data sets in Civic Statistics: affordances and constraints

< Rolf Biehler<sup>1</sup>>; <Daniel Frischemeier<sup>2</sup>>

<sup>1</sup> Paderborn University

<sup>2</sup> University of Münster

### Abstract:

Civic Statistics is concerned with data about society, health, migration, poverty, etc. For implementing Civic Statistics in high school and college classrooms and teaching statistics about society, the selection of adequate data sets is fundamental. In the ProCivicStat project (<https://iase-web.org/islp/pcs/>). We have identified relevant data sets from different sources and elaborated on their educational potential (including the development of lesson plans). These datasets are often large, aggregated and multivariate. For a decent exploration of civic statistics data, the use of digital data analysis tools is inevitable. However the range of adequate data sets and digital tools for data analysis is large.

In the first part of this talk we will present several authentic data sets we have found valuable in teaching Civic Statistics and we will reflect the complexities of data used to inform decision making about social issues. In the second part of this talk we will briefly discuss criteria for evaluating different data analysis tools ranging from educational to professional ones. Whereas educational tools provide a low entrance hurdle, they are limited in their features for data analysis, professional tools offer a broad range of data analysis packages and methods but require programming prerequisites. In the third part we will give some examples of (educationally designed) digital tools (such as TinkerPlots, Fathom, INZIGHT and CODAP) on action on data sets to discuss affordances. More details can be found in the forthcoming book Ridgway (forthcoming).

### References:

J. Ridgway (Ed.) (Forthcoming 2021). Teaching Statistics for Empowerment and Social Engagement: Resources for teaching civic statistics to develop informed citizens. London: Springer.

### Keywords:

<Civic Statistics>; <data sets>; <digital tools>;