

Pedagogical Strategies for Building 21st Century Competencies
36th Annual Teaching Public Administration Conference
Data Visualization Demonstration

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Workshop

This proposal, for a Demonstration / Workshop, is made under the following questions:

1. What instructional pedagogies can support students in acquiring 21st century competencies?
2. How can we support faculty in fostering 21st century competencies in the classroom?

One of the new skills developing very quickly here in the 21st century is the ability to analyze data and create effective data visualizations to allow users to understand underlying data and to manipulate the data to gain further insights. Originally part of the data analytics area in business, it is now spreading quickly through the public sector as a result of the Open Government movement as well as the technological advances involved in online mapping and interactive charts.

As we see how many agencies are now incorporating data visualization into their publications and websites and look at job notices, we see that the ability to go beyond statistical analysis (the typical fare in MPA programs) to create interactive visualizations will be a critical skill for future MPA graduates. Faculty will need to know how to go beyond static charts created in PowerPoint or Excel, to create interactive data visualizations with a variety of online and other software tools.

This workshop can support faculty in developing these skills and so, can help foster these 21st century competencies. Working in small groups on interactive projects in order to understand underlying patterns in data is one of the most important pedagogies that we can develop in order to help our students develop these skills.

The Demonstration / Workshop will cover the following:

- Development of charts and data visualization over time and how they have always been used to understand data
- Examples of good and bad visualizations
- Elements of good and bad
- Tools for data visualization today
 - Many Eyes, Tableau, R, HighCharts, others
- How to do simple charts—demonstration of process of making charts / data visualizations