



# Teaching with Data.Org : A Guide for Sociology

Teaching with  
Data.Org

Teaching with Data.Org is a web site devoted to providing faculty with tools to use in courses. This site gives you links to datasets, lesson plans, theoretical examples, charts, learning modules, sample assignments and more. These materials are useful in any course where you would like to incorporate digital materials into lectures (in-person and virtual), assignments, and active learning.

Teaching with Data.Org also promotes quantitative literacy based on the key competencies undergraduates should develop in the sociology major, endorsed by the American Sociological Association.

Learn More

TeachingWithData.org is intended to infuse quantitative literacy throughout the undergraduate social science curriculum. By making it easier for faculty to include data analysis activities in introductory and other non-methods courses, we aim to:

- improve quantitative literacy among students, particularly students in undergraduate social science courses;
- expose students to the creativity and excitement of empirical research;
- assist instructors in the development of content by providing easier access to data, tools for analysis and visualization, and pedagogical resources;
- attract instructors in the social sciences to the National Science Digital Library (NSDL) where they will find resources provided by other pathways and affiliated services;
- collaborate with the NSDL, other libraries, and service providers as a representative of the social science fields.

We view these as transformative changes in undergraduate instruction that not only improve the teaching of quantitative reasoning but also change the way that students understand content and research in the social sciences.

- [Inquiry-based Learning Slides](#)
- [2010 ASA Annual Meeting](#)
- [Inquiry-based Learning Webinar](#)
- [Outreach Team](#)

# How to use TwD.Org



First, go to the TwD.org website at: <http://teachingwithdata.org/>

Here are examples of resources you can find for various types of materials.

## Two ways to search



There are two ways to search the site. Use the **Find Resources** search box (upper right hand corner of website) or choose among **Data Resources** or **Instructor Resources**.

## Simple “Find Resources”

In this example, using the Find Resources search tool pictured above, click the “Higher Ed” button. This takes you to the “Full Text Search” box on the left. Enter “education” in this box and click the “Search” button. You can use the “Advanced Search option to narrow your search by :

- Title
- Contributor
- Resource type
- Interactivity type
- Author
- Language
- Education level
- Typical learning time

Below are part of the results of this search. On the left hand side is a list of the subjects, material type and resource types retrieved; the number of items is in parenthesis. On the right hand side is an example of the description on two possible resources. When you click on” the name of the resource, you will find details on using and downloading the material. Clicking on the [Go to Resource](#) button will take you externally to the resource.

**Subject**

- education (18)
- census (13)
- educational attainment (8)

[more »](#)

**Type**

- Activity (15)
- Lesson/Lesson Plan (13)
- Database (3)

[more »](#)

**Resource Type**

- Activities/Exercises/Assignments/ Modules (13)
- Exercise with Data (12)
- Data Source (2)

[more »](#)

**Discipline**

- Sociology (19)
- Economics (2)
- Political Science (2)

[more »](#)

**Education Level**

- (-) Higher Ed**
- Undergraduate (Lower Division) (27)
- Undergraduate (Higher Division) (24)

[more »](#)

### Search found 29 items

(-) Higher Ed

[Go to advanced search](#)

Fulltext search  Results per page  [Search](#)

#### Education Course Module [Go to Resource](#)

This module looks at educational issues, particularly at children who are having problems with the educational process.

**Creator:** Theodore Fuller  
**Submitted On:** 05/04/2011  
**Subject:** education, children, trend, dropouts, school dropouts, census  
**Access rights:** Free Access  
**Type:** Activity  
**Relevance:** ██████████

#### Mapping the Measure of America [Go to Resource](#)

Map showing America broken down by various measures of standard of living, environmental impact, demographics and crime. Focuses on applying the Human Development Index – the major measure of international development -- to inequalities within in the United States.

**Creator:** American Human Development Project  
**Submitted On:** 05/03/2011  
**Subject:** demography, educational attainment, health, income  
**Access rights:** Free Access  
**Type:** Map  
**Relevance:** ██████████

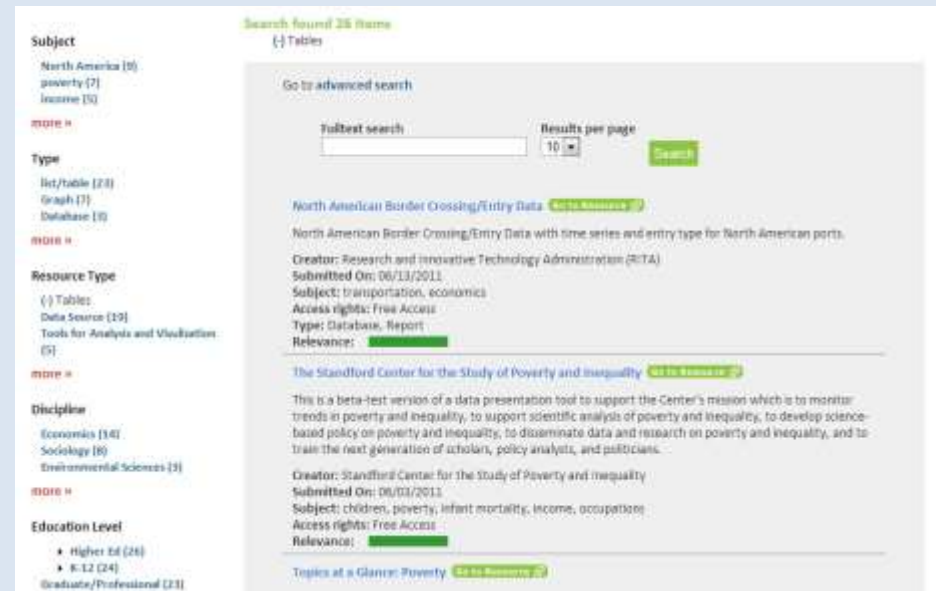
# Searching by Resource

## Data Resources

- Tables
- Maps
- Charts and other visualizations
- Exercises with data
- Extracts for educational use
- Data for online analysis

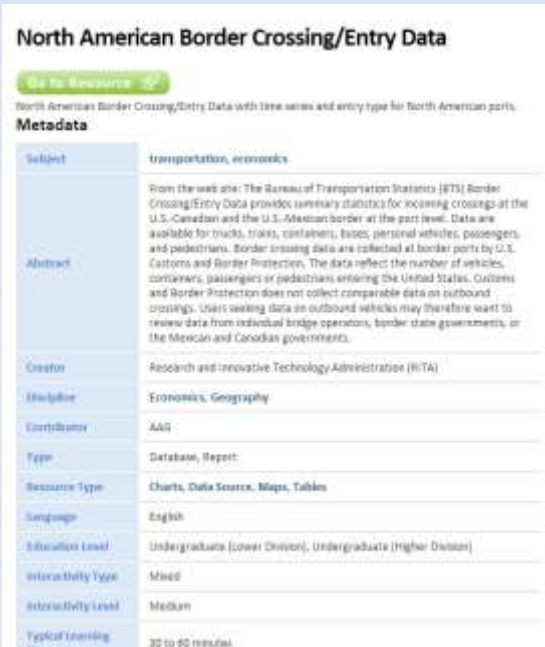
## Instructor Resources

- Lessons/Lectures
- Activities/Exercises/Assignments/Modules
- Syllabi/Reading Lists
- Tools for analysis, visualization, and course development
- Events (conferences, webinars, etc.)
- Pedagogical resources
- Data providers



Above is an example of a search of tables. Notice the left hand side provides links for more filtering and for browsing other resource types.

# Using a Resource



Field	Value
Subject	transportation, economics
Abstract	From the web site: The Bureau of Transportation Statistics (BTS) Border Crossing/Entry Data provides summary statistics for incoming crossings at the U.S.-Canadian and the U.S.-Mexican border at the port level. Data are available for trucks, trains, containers, buses, personal vehicles, passengers, and pedestrians. Border crossing data are collected at border ports by U.S. Customs and Border Protection. The data reflect the number of vehicles, containers, passengers or pedestrians entering the United States. Customs and Border Protection does not collect comparable data on outbound crossings. Users seeking data on outbound vehicles may therefore want to review data from individual bridge operators, border state governments, or the Mexican and Canadian governments.
Creator	Research and Innovative Technology Administration (RITA)
Subject	Economics, Geography
Contributor	ADG
Type	Database, Report
Resource Type	Charts, Data Source, Maps, Tables
Language	English
Education Level	Undergraduate (Lower Division), Undergraduate (Higher Division)
Interactivity Type	Mixed
Interactivity Level	Medium
Typical Learning Time	30 to 60 minutes

Click on the name of the resource. This will result in a set of metadata elements you can use to evaluate whether or not the source is right for your course. Highlighted items will link you to more resources using the same term; for example, clicking on Tables will display all tables in TwD. Below the metadata description are links to the resources available for downloading or viewing.

# Quantitative Literacy

Teaching with Data.Org was built to provide resources for incorporating quantitative literacy (QL) into social science disciplines and into coursework as a whole; not just in methods courses. Even if you are not a quantitatively focused instructor, you can still use these materials to build students' skills in becoming numerate and able to use quantitative reasoning in understanding sociology.

## What is Numeracy?

By the term "numeracy" we mean:

"ability to reason and solve sophisticated quantitative problems, ... basic understanding of the scientific method, and ... ability to communicate at a substantial level about quantitative issues in everyday life."

National Numeracy Network (<http://serc.carleton.edu/nnn/resources/index.html>)

## What is Quantitative Literacy?

By Quantitative Literacy we mean to build students' abilities in:

"comfort, competency, and "habit of mind" in working with numerical data ... as important in today's highly quantitative society as reading and writing were in previous generations."

National Numeracy Network (<http://serc.carleton.edu/nnn/resources/index.html>)

## What is Quantitative Reasoning?


Quantitative Reasoning is a competency that is part of QL:

"higher-order reasoning and critical thinking skills needed to understand and to create sophisticated arguments supported by quantitative data."

National Numeracy Network (<http://serc.carleton.edu/nnn/resources/index.html>)

## What are QL/QR competencies?

- Read and understand graphs, tables, etc.
- Interpret quantitative information and make appropriate inferences
- Solve problems using logic, math and statistics
- Communicate verbally, graphically and numerically
- Recognize limitations and bias
- Discriminate between association and causation; probability and chance

<p><b>How will using TwD.Org build QL/QR competencies?</b></p>	<ul style="list-style-type: none"> <li>• Demonstrate how social science applies to everyday life</li> <li>• Chance to “work like a social scientist”</li> <li>• Underscore importance of research methods using statistics</li> <li>• Strengthen quantitative literacy skills in all courses</li> </ul>
<p><b>Information and Resources</b></p>	
<p><b>Project Partners</b></p>	<p><a href="#"><u>Inter-university Consortium for Political and Social Research</u></a>  <a href="#"><u>Social Science Data Analysis Network</u></a>  <a href="#"><u>Social Science Research and Instructional Council</u></a>  <a href="#"><u>National Science Digital Library</u></a></p>
<p><b>Readings</b></p>	<p>“Responding to the Quantitative Literacy Gap Among Students in Sociology Courses” <i>Teaching Sociology</i> April, 2009 37:151-170</p> <p>“Integrating Sociological Research into Large Introductory Courses: Learning Content and Increasing Quantitative Literacy” <i>Teaching Sociology</i> January, 2006 34: 54-64</p> <p>“Using ICPSR Resources to Teach Sociology” <i>Teaching Sociology</i> January 1, 2008 36: 17-25</p> <p>“Integrating Data Analysis (IDA): Working With Sociology Departments to Address the Quantitative Literacy Gap” <i>Teaching Sociology</i> January 2006 vol. 34 no. 1 23-38</p>
<p><b>Quantitative Literacy</b></p>	<p><a href="#"><u>National Numeracy Network</u></a></p>