

Internet Access as a Human Right

- Internet access is not sufficient. It needs to be coupled with
 Information Literacy also recognized as a basic human right
 for access to be useful, meaningful, and productive.
- Information literacy education must encompass **Data Literacy** as the key competence for the connected data society.
- Data literacy education should take a **collaborative lifewide** approach to enable and empower people to interact with data in their academic, professional, civic, social, and personal lives.

Information Literacy

- ...encompasses knowledge of one's information concerns and needs, and the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address issues or problems at hand
- ...is a prerequisite for participating effectively in the Information Society, and is part of the basic human right of life long learning.

Towards an Information Literate Society Prague Declaration. Paris: UNESCO, 2003



See also

Alexandria
Proclamation on
Information Literacy
and Lifelong Learning,
2005

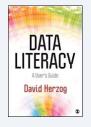
Paul Sturges & Almuth Gastinger, 2010, Information Literacy as a Human Right. *Libri*, 60(3), 195-210.



Using Big and Open Data for **Common Good** (NESTA, 2015)

21C Data Literacy Contexts and Conceptions

Discipline-specific silo-based education



UG Research Skills - Secondary Data (Herzog, 2016)

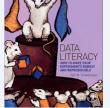


Community Challenges

What about everyday life information seeking?



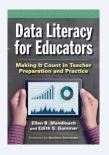
Data Literacy in the Workplace (Gemignani et al., 2014)



PG Research Methods - Primary Data (Smalheiser, 2017)



Reinventing Community **Engagement and Empowerment** (Data-Pop Alliance, 2015)



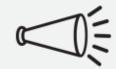
Data-Driven **Decision Making** (Mandinach & Gummer, 2016)

ISL: Enabling Data Literacy for Digital Society



A Base Vocabulary:

- Managing information
- Analyzing information
- Applying information and leading change



A Set of Dialects:

- Industry-vertical domains
- Business process domains
- Technical domains



Levels of Proficiency:

- Conversational
- Literacy
- Competency
- Fluency
- Multilingual



Language Development:

- Getting started
- Assessing data literacy
- Proof of concept
- Training and development
- Leading by example

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Fostering Data Literacy and Information as a Second Language: A Gartner Trend Insight Report



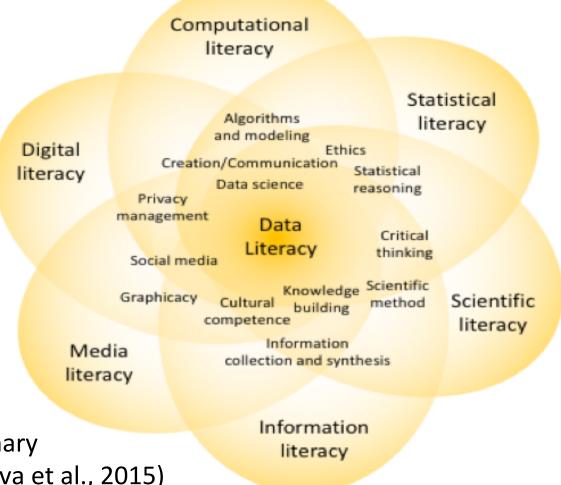
From

"the ability to read, work with, analyse and argue with data"

to

"the desire and ability to constructively engage in society through and about data."

Data Literacy as an Interdisciplinary Multi-literacy Construct (Bhargava et al., 2015)



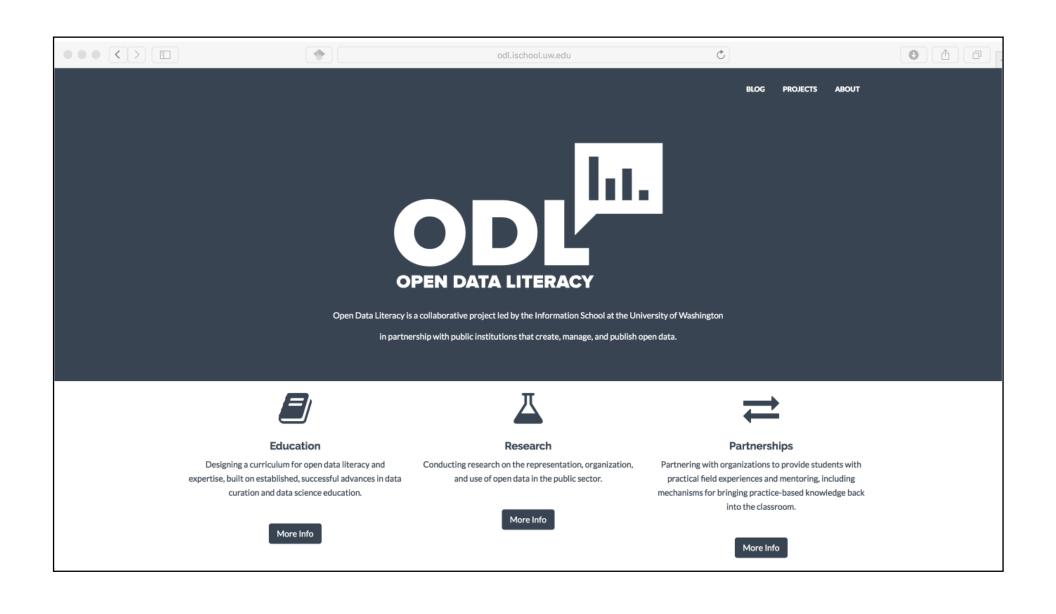
Working Toward Data Literacy and Data Inclusion

Challenges in designing data literacy programs (Bhargava et al., 2015)

- Making Big Data smaller, on scale where most or many more people are willing and able to engage than is the case today
- Understanding the importance of context and utilizing elements of human-centered design
- Understanding and leveraging the power of words and language in communicating and visualizing data

Actions for library and information professionals as datamediaries

- Put data literacy front and center in digital and information literacy programs
- Move beyond academic and professional applications to build lifewide data fluency
- Collaborate with other stakeholders to pool resources and accelerate development





Digital literacy at VT Libraries

- includes data, information, media, and invention literacies
- comprised of key values built on core competencies
- empowers learners to become engaged global citizens

The goal is to empower learners to navigate the complex digital world as both consumers and creators, enabling them to achieve their personal, academic, and professional goals.

