Data Literacy Programs 101: The What, Why, and How to Get Started

Webinar

April 7, 2020
Who We Are

The Data Foundation seeks to improve government and society by using data.

The Data Foundation focuses its nonpartisan research, education, and programming in five areas.

1. **Culture** for Evidence-Based Policymaking.
2. **Value** of Accessible Government Data.
3. **Technical** Capacity for Improving Data Quality.
4. **Use** of Data in a Responsible Manner.
5. **Future** Planning for Emerging Technologies and Innovation.
Presenters

Valerie Logan
CEO and Founder
The Data Lodge

Joe Willey, Ph.D.
Director of Research
Data Foundation
While living in unprecedented times, one thing is clear:

the ability to make data-informed and evidence-based decisions has never been more critical in our work lives and personal lives.

Data literacy has been emerging steadily as a top priority for workforce upskilling, yet we now also see firsthand the criticality of citizen data literacy.

As a basis for near-term steps and longer-term planning, this webinar sets a baseline and common language to address:

1. what is data literacy and why does it matter now (individually and collectively)
2. what does a data literacy program include, and who is doing this today
3. what are the key steps to get started
Data Literacy: The What & Why

Data Literacy Programs: How & Who is Doing This Today

Key Steps to Getting Started
Data Literacy: The Core Capability of Digital Society

While conversant in the “people, process and technology” capabilities of organizational change, most executives and professionals do not “speak data” fluently as the new critical capability of digital society.

[An adaptation of Gartner’s Published Definition of Data Literacy]
Data Literacy defined:
The ability to read, write and communicate with data in context in both work and life.

Includes an appropriate level of understanding of: (vocabulary)
- data terms and concepts
- analysis methods and concepts
- outcomes and actions

combined with the ability to: (skills)
- think critically
- engage with others collaboratively
- and apply data constructively.

Informally ... Do you “speak data?”
It’s all about fostering “Information as a Second Language™ (ISL)”.
What is data literacy, and how does it relate to fostering a data-informed culture?

The Ford English School, 1914
Fostering shared language across diverse immigrant workers for enhanced safety & efficiency.

“A large percentage of the employees in the factory could not speak the English Language, which necessitated the employment of a large number of interpreters.

It had been ascertained that it is almost essential that a workman have a knowledge of English, from a “Safety-First” standpoint, so that he be able to understand the explanations of safety devices in the factory, as well as to thoroughly understand the requirements of his work. This knowledge also helps to make better citizens.”

http://www.autolife.umd.umich.edu/Labor/L_Overview/FordEnglishSchool.htm
Understanding Data Literacy

Setting Context

- **Data Literacy**: at the intersection of three strategic imperatives.

- Not “another change management or training program”, data literacy is the foundation of capabilities of the 4th Industrial Revolution.

- We look at data literacy thru two lenses, both:
  - collectively as an organization, and
  - individually (as consumers and/or creators of data and analytics solutions)
### Understanding Data Literacy

#### An Individual Perspective

<table>
<thead>
<tr>
<th><strong>POOR/LIMITED DATA LITERACY</strong></th>
<th><strong>GOOD/STRONG DATA LITERACY</strong></th>
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<tbody>
<tr>
<td>Reacting, assuming or avoiding.</td>
<td>Being curious. Engaging with clarifying questions.</td>
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<td>Asking for “all of the data”. (We’ll figure out what to do with it once we get it.)</td>
<td>Asking good questions. Describing use cases, value drivers, and outcomes to help prioritize.</td>
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<td>Satisfaction with internal, structured data because that is what has always been used.</td>
<td>Exploring and considering the use of additional, diverse data sources that may add context and situational awareness.</td>
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<td>Reliance on static reports because “I’m not a &lt;data/math/IT&gt; person”.</td>
<td>Confidently interacting with data on a dashboard to compare, assess and derive insights, and able to tell a story based on it.</td>
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<td>Confusion about what type of chart to pick for a set of data.</td>
<td>Being open to using technology that actually helps pick the right type of chart for you! (e.g. not allowing you to plot time-series data in a pie chart)</td>
</tr>
<tr>
<td>Not knowing the source, assumptions, quality or lineage of data used for key decisions.</td>
<td>Hovering over a data attribute and seeing that it is from a certified dataset, as well as its key characteristics (definition, source, lineage, assumptions, and data steward name/email).</td>
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<td>Assuming a cause-and-effect relationship when there isn’t one.</td>
<td>Knowing the difference between correlation and causality and being able to explain it.</td>
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<td>Hoarding data within your group.</td>
<td>Sharing data as appropriate given an understanding of how your group’s data can inform other use cases.</td>
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Understanding Data Literacy
An Organizational Perspective

CURRENT STATE

CULTURE:
Hype and confusion prevail with pockets of adoption.

COLLABORATION:
Friction, disconnects and guarded at times.

WORKFORCE:
Data skills are just for the IT and math people.

DATA & ANALYTICS TALENT:
War on talent, then underleveraged.

Where to Start?

- Leadership Training?
- Communications?
- Community Development?
- Assessments?
- Self-Paced Training?
- Run some pilots?
- Broadcast some stories?
- Team up with HR?
- Create a Coaching program?
- Partner with a University?

TARGET STATE

“DATA-INFORMED CULTURE”

“COLLABORATION THROUGH SHARED LANGUAGE”

“DATA LITERATE WORKFORCE”

“THE PLACE TO BE FOR D&A PROFESSIONALS”

Data Literacy: The What & Why

Data Literacy Programs: How & Who is Doing This Today

Key Steps to Getting Started
What’s included in a Data Literacy program?

Success Factors:
- Fostering data literacy both top-down and bottom-up (grass roots).
- Making data literacy “part of” everything we do.
Where are some case studies of Data Literacy programs? Who’s doing this today?

**COMMERCIAL & PRIVATE SECTOR**

Lurie’s Childrens Hospital  “How to build end-user data literacy skills, step by step”, 5/27/18
- “The problem: Data, data everywhere -- and only a fraction of the workforce knows what to do with it.”

Airbnb  “How Airbnb is Boosting Data Literacy With ‘Data U Intensive’ Training”, 12/11/18
- “Data University is Airbnb’s dynamic data education program, with the vision to empower every employee to make data-informed decisions.”

S&P Global  “How S&P Global trained its workforce to be data-driven”, 5/1/19
- “…part of a company-wide initiative to teach employees skills to incorporate models and data science into everyday workflow.”

Red Hat  “How to Create Data Literacy: 3 Keys”, 1/8/20
- Plus an Interview with our Bootcamp Member Brian Kleinfeld who leads the Data Literacy Program.

**PUBLIC SECTOR**

U.S. Environmental Protection Agency (EPA), “Data with a Mission: Data Visualization at US EPA”, April 2018; Richard G. Allen, PhD- Chief Data Officer
- “Find champions and build. Take advantage of what you have. Fill needs - address administrative reporting and analytics gaps. Expand partnerships. More people can solve significant challenges. Train representatives from each Office and Region for more content creation. Create community of practice where Regions can share ideas. Sharing with States.”

Canada School of Public Service Digital Academy, CSPS Digital Academy
- “To help public servants gain the knowledge, skills and mindsets needed for government in the digital age”.

UK- Avon and Somerset Constabulary- Fighting Crime with Data, Stories from the Data Literacy Project
- “While many officers already had some level of data knowledge, we realized we needed to create a competent, free-flowing data literate culture across the entire organization.”
Data Literacy: The What & Why

Data Literacy Programs: How & Who is Doing This Today

Key Steps to Getting Started
GETTING STARTED

How to get started with a Data Literacy program?

KEY STEPS:

a) Determine who will Sponsor or Co-Sponsor. Assign a Lead.
   
   ___________

b) Develop the Narrative. Articulate/Document the Case for Change.
   
   ___________

c) Explore data literacy and “speaking data” with some pilot workshops across diverse business/data/quant groups.
   
   ___________

d) Sketch out your Blueprint and initial Plan, and inventory what you already have underway to leverage.
   
   ___________

e) Pick 3-5 quick wins to prove the value. Leverage existing internal resources and free external courses to get a kickstart, and early engagement.
   
   ___________

f) Enlist key members of the leadership team. Engage with HR and other key partners.

   ___________

g) Create launch momentum, communications. Share the story.
   
   ___________

h) Enhance the case and refine your plan for scale.
#1: GIVE IT A BRAND
Give data literacy a brand, identity. Make it fun.

- Create the case for change and make it explicit.
- Make data literacy “part of” immediately.
- Language matters. Call it out. Foster a shared language.
- Mitigate the Top Myths:
  - Data Literacy = Just Training
  - Data Literacy = Just Data Visualization
  - Data Literacy is about internal structured data and statistics
  - Data Literacy is about making everyone a junior data scientist
  - Data Literacy is just a work skill

#2: ASSIGN A LEAD
A Natural Change Agent First and Foremost.
Profiles to Consider:

- Learning & Development background
- Data & Analytics background
- Change Management background
- Both internal and external candidates

#3: DON’T GO IT ALONE
An emerging area w/resources available:

- Assessments & Competency Frameworks
- Education & Training
- SW, Technology Providers (Data viz, BI Self-Service, Data Catalogs, etc.)
- Service Providers

Sample of Providers:

- The Data Literacy Project (Focus: on providing assessments, learning & community)
- The Data Lodge (Focus: Data Literacy Program development and CDO Support)
- Databilities (Focus: a competency framework from Data to the People in AUS)
OUR MISSION
Committed to fostering data literacy in the world by teaching “Information as a Second Language™ (ISL).”

• Advisory Services: Practical advice and advocacy as an integral part of your broader data & analytics strategy and programs. (One hour discovery calls, 1-2 day onsite sessions, executive workshops, speaking engagements.)

• Bootcamps with Certification: Applied training via a 10-week virtual Bootcamp for your Data Literacy Program Lead, via a train-the-trainer approach by the world’s leading expert on data literacy, with certification upon completion. (Custom, onsite bootcamps also considered.)

• Community & Resource Library: Sustained connection with other Data Lodge graduates, with access to a continually growing resource library (templates, tips, cheat sheets, case studies, “best of” guides, and accelerators).

• Courses & Masterclass Series (On-Demand, Self-Paced): Data Literacy Program Planning Masterclass Series *(to be launched April 2020!)*

Visit us at: [https://www.thedatalodge.com/](https://www.thedatalodge.com/)
Thank you!

For more information about getting started with Data Literacy Programs, connect with us at:
https://www.thedatalodge.com/

(Just use the “For More Info” button!)

Valerie A. Logan
vlogan@thedatalodge.com
585.415.6672
Upcoming Events

Data Foundation Virtual Symposium
May 20, 2020
10:00 a.m. – 2:30 p.m.
Thank you for participating

Learn more and sign up to receive our latest research at datafoundation.org.