Data Literacy in the Age of Algorithms

Implications for the Refugee and Immigrant Serving Sector

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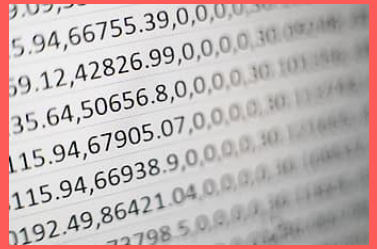
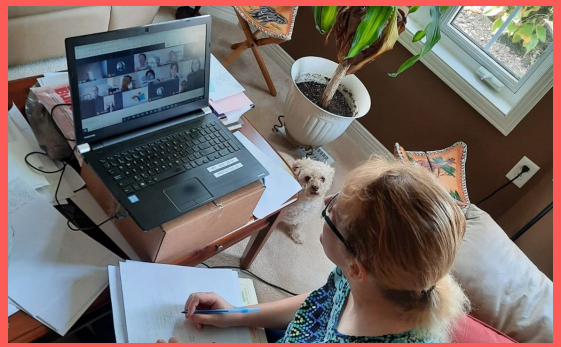
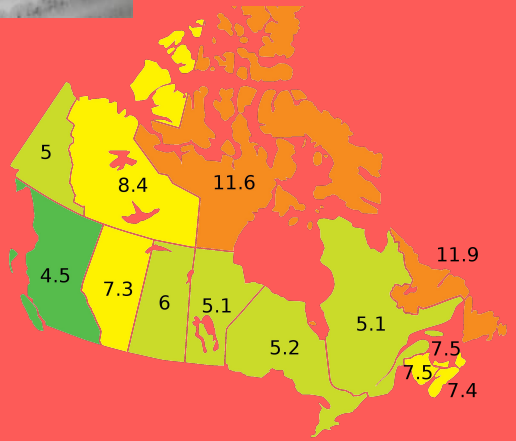
Goals

- Define Data & Data Literacy
- Understand the value and significance of data literacy
- Explore data literacy in community service contexts
- Share resources to expand knowledge

Data is here,
data is there!



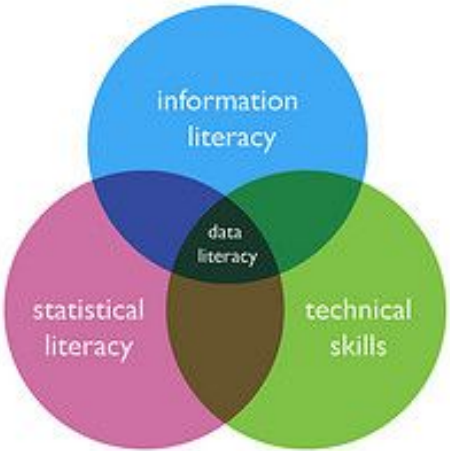




Data as pieces of information;
facts and stats

Data literacy

- “The ability to read, work with, analyze and argue with data as part of a broader process of inquiry into the world” (D’Ignazio and Bhargava, 2016)
- Using and protecting data more efficiently



Source: UN Data Revolution

Data in your organization

- Operational & organizational improvements
- Communicating your message
- Bringing people together
- Supporting clients' data literacy skills

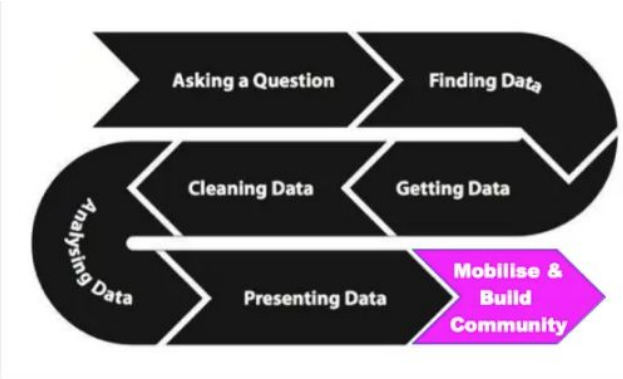
Model data literacy activities

Short term efforts: Workshops (multi-hour to multi-day events), community events (data clinics or data meetups)

Medium term efforts: Trainings with follow-up community of practice

Long-term efforts: Fellowship programs, research processes

Online efforts: Webinars, MOOC

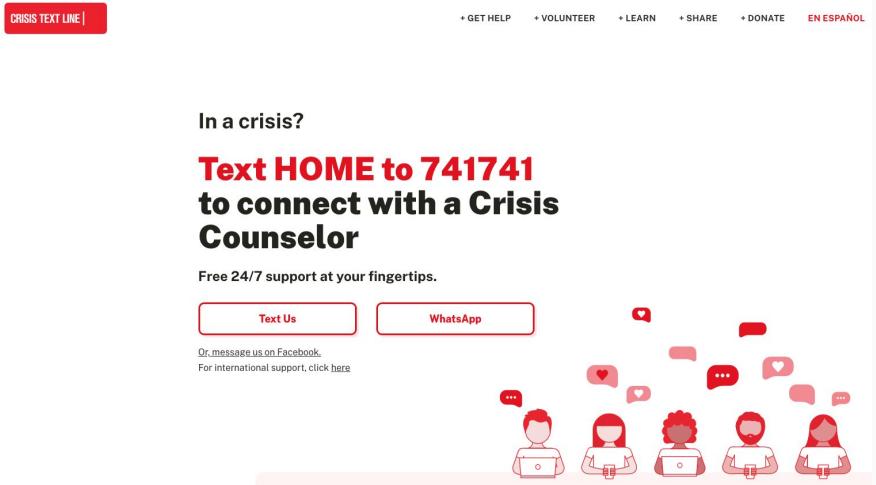


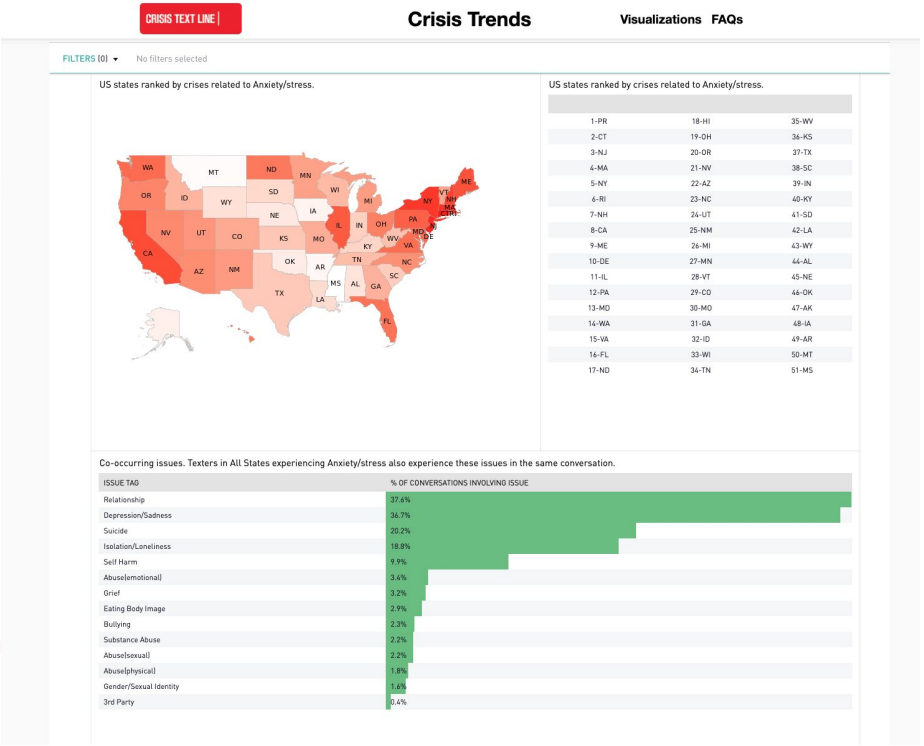
The Data Pipeline

Source: School of Data (2016)

Operational & organizational improvements

Designing services: a case study





Operational & organizational improvements

Use of text analysis in service design

Co-occurring issues. Texters in All States experiencing Anxiety/stress also experience these issues in the same conversation.

ISSUE TAG	% OF CONVERSATIONS INVOLVING ISSUE
Relationship	37.6%
Depression/Sadness	36.7%
Suicide	20.2%
Isolation/Loneliness	18.8%
Self Harm	9.9%
Abuse(emotional)	3.4%
Grief	3.2%
Eating Body Image	2.9%
Bullying	2.3%
Substance Abuse	2.2%
Abuse(sexual)	2.2%
Abuse(physical)	1.8%
Gender/Sexual Identity	1.6%
3rd Party	0.4%

Communicating your message

Stakeholder analytics

- Identifying stakeholders and gathering insights through social media analytics
- Data-driven fundraising & identifying giving patterns (Pathways to Education (2021)

Supporting clients' data literacy skills

Data literacy for marginalized youth and adults

THE DATABUZZ RESERVATION WORKSHOPS PRACTICAL INFORMATION MEDIA MORE...

The DataBuzz can be booked for a visit to your school, playground, event or festival. During the visit, the students, course participants or guests receive a workshop from our supervisors.
Thanks to the support of the **VGC**, this is free for Dutch-speaking schools in Brussels.

For schools & playgrounds

For schools & playgrounds there is the following offer:

- **Workshop** : You choose from the 7 workshops and book the DataBuzz for this. We come to your school or playground and supervise the workshop(s). The DataBuzz visits the same school for a maximum of 5 days per school year. In addition, the DataBuzz can also be used for playgrounds.
  - Click here for more information about the different workshops

For concerts, festivals and other occasions we discuss with you which workshop best suits your event and target audience. Data Buzz can be booked up to three consecutive days per event and may charge (price on daily basis). **For those who want to know more about the AI Experience Center** The AI Experience Center is a joint project of 4 VUB research groups: the Artificial Intelligence Lab , Brubotics, SMIT and ETRO, and is located on the VUB campus Etterbeek. It is a high-tech test, demonstration and meeting environment where companies, tech entrepreneurs, researchers, policy makers and the general public can experiment with AI and collaborate to develop and produce technological solutions.

Bye Bye Bias

Target group: 2nd & 3rd grade secondary education

During this workshop, students not only learn about artificial intelligence, they are also confronted with the prejudices and stereotypes in our society. By means of riddles, assignments and film material, they learn how this human *bias slips* unobtrusively into the machine and thus influences our daily lives. Because aren't algorithms supposed to be neutral? And why is it called artificial intelligence? Click here for more information on this workshop.

Corona & (f) News

Target group: 2nd & 3rd grade secondary education

A teaching package for second and third grade about news consumption and reporting in corona times, but also about the use of technology in the fight against the virus. This in collaboration with the Knowledge Center Data and Society and Mediawijs. In the package reflect young people about how they can recognize handle news during this crisis, the danger of fake news surrounding corona, and of course how to fake news, but also can be used on the technology in the fight against the virus.

Data in community

What data-related workshops would you consider useful?

	Frequency	Percent
Developing (new) business plan	56	28.43
Enhancing job skills	72	36.55
To be empowered with new knowledge about data	79	40.10
To engage civically	63	31.98
Solving a problem in my community	87	44.16
Solving a problem in my family	67	34.01
Other	12	6.09

Source: Copeland, Andrea, Ayoung Yoon, and Sheng Zhang. 2021. “Data Reuse Practices and Expectations for Data Resources and Services among Public Library Users.” *Public Library Quarterly* 40 (4): 330–45. https://doi.org/10.1080/01616846.2020.1773749 .

Further areas

- Generate your own data: primary research, collect statistics

  → Ethical concerns?

Current state

How employees use data

75%

Read data

65%

Interpret data

63%

Make data-driven decisions

Only

25%

of employees believe they're fully prepared to use data effectively.

21%

are confident with their data literacy skills.

Source: Accenture (2020)

Why to invest (now)?

Because it’s fun!

More and more jobs require data skills

Thank you!

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