Understanding data (UD)

Being data-smart doesn't begin with learning to use tools or create charts and graphics. It begins by exploring big questions: What is data? Who works with data? Why do we collect data? Does data improve our lives? What data do our communities trust?

UD.1	Define communicative justice	Explain what **communicative justice** is, and identify at least 3 ways their community can support "communicative justice" by working with data
UD.2	Identify types of data	Identify different types of data in everyday life, including the value of 'street data'
UD.3	Identify different kinds of data visuals	Identify different types of data in everyday life (e.g., maps, word clouds, line graphs)
UD.4	Explain the connections between power and data	Explain the data cycle process, and the way power and barriers affects this cycle
UD.5	Assess the credibility and accuracy of a source	Use strategies to assess the credibility and accuracy of a data source
UD.6	Identify a need for data	Identify a need for data in their own communities and create an action plan to find or collect the data

Communicative Justice Learner Leadership Skills Framework

Learning to 'speak data' (SD)

If you don't know the technical language to talk about data and tools, it's better for you to just listen to what others say about data, right? *No way!* Too often, people don't join conversations about data because they feel they don't have the 'right' words or the 'right' knowledge. The reality is that to 'speak data', you need opportunities to play with language. We can't feel afraid to try out new words and ideas. We need to feel free to ask lots of questions and express our wonder and even confusion. And remember: English is not the only language we use to 'speak data'!

SD.1	Ask good questions	Practice asking good questions (yes/no, wh-questions) that help learners clarify understanding of a data set and promotes curiosity
SD.2	Use the language of discovery	Use language of discovery, such as language for sorting, categorizing, naming, doubting, etc.
SD.3	Use language for describing data	Use at least 20 new words for describing data and data visuals (e.g., *visual, outlier, categories, pie graph, line graph,* phrases such as *This line shows....* or *This color represents*...)
SD.4	Use language for describing data visuals	Use language for describing differences in shape, center, and spread in data visuals, as well as for describing the meaning of an outlier
SD.5	Use language for interpreting data and data visuals	Use language for interpreting data and data visuals, such as language for comparing/contrasting, language for expressing change over time, language for making predictions
SD.6	Use language for respectful dialogue	Use language that demonstrates respect for different interpretations about data
SD.7	Use language that expresses personal opinions and preferences about data	Use language for expressing preference, such as *I prefer this visual or I find this picture appealing*
SD.8	Use language expressing belief and doubt	Use language for expressing belief and doubt about the usefulness of data
SD.9	Use language for naming biases and assumptions	Use language for describing possible biases and assumptions, including one's own, when talking about data

Playing with data (PD)

How do we turn data – numbers, dates, words, trends -- into memorable big ideas? And then how do we turn these big ideas into community action? For sure, it's not magic. We need opportunity to play with data to discover their meaning. Sorting, sifting, testing out ideas, checking for errors, looking closely again and again – the more we play with data, the more confident we are that we're telling good stories with data.

PD.1	Carry out shared inquiry	With 'how-to' guidance and support, carry out shared inquiry projects that identify a key problem that matters to their community and gather data to learn more about the problem
PD.2	Use strategies for making data 'messy'	With 'how-to' guidance and support, use strategies for sorting, categorizing, labeling data; looking for outliers, checking whether data is missing
PD.3	Engage in critical dialogue about data	Strengthen critical thinking skills by asking and answering problem-posing questions
PD.4	Dialogue respectfully	Identify strategies for promoting respectful dialogues about data and use these strategies in a role-play scenario involving disrespectful dialogue
PD.5	Play with different kinds of data visuals	Strengthen data interpretation skills by looking at the way different visuals changes our interpretation of the same data

Data storytelling with a purpose (DS)

Adult learners can play an important role in leading conversations about data in the community. They can be inspiring data-storytellers. They can inspire others to be data-storytellers. Data story-telling in the community is a powerful way to put public speaking skills to work.

DS.1	Define data-storytelling	Explain how we tell stories with data – with numbers, words, dates, pictures, art, etc. -- and why data-storytelling can empower communities
DS.2	Adapt story-telling approach based on context, purpose, and audience	Adapt the way we talk with others about data – such as the choice of language, use of humor, metaphor, personal stories, or technical words -- based on context, purpose, and audience
DS.3	Promote data-storytelling in your community	Identify 3 strategies for promoting data-storytelling in our own communities, in places and to audiences we want to reach
DS.4	Use strategies to encourage community conversation	Identify and use strategies that facilitate community dialogue about data and inspire collective action
DS.5	Use effective persuasive speaking strategies	Identify and use effective persuasive speech practices for data-storytelling
DS.6	Use a strong voice	Identify qualities of good voice projection (e.g., volume, tone, thought groups, etc.) in effective data story-telling
DS.7	Use inclusive language	Identify and use inclusive language strategies to build a sense of solidarity with audience
DS.8	Use effective strategies for Q&A	Identify and use effective Q & A strategies that promote engagement with audience
DS.9	Identify barriers to public speaking	Describe why people are afraid of public speaking, and identify strategies for preparing for success in public speaking (e.g., breathing/visualization exercises, practice, etc.)

Communicative Justice Learner Leadership Skills Framework

Curiosity and courage (CC)

For many adult learners, being a data-storyteller takes a special kind of curiosity and courage. You will think about data in ways that are new and unfamiliar. You will ask questions about data that won't have easy answers. Curiosity is a commitment to asking good questions about data and exploring different answers. Stay curious, be brave: your questions as a data story-teller matter!

CC.1	Describe curiosity and courage in data storytelling	Explain how curiosity and courage help us to stay focused as data storytellers and leaders, when we don't understand data and feel frustrated, confused, afraid, or sad
CC.2	Demonstrate courage as a data storyteller	Display leadership strategies for staying courageous during difficult times, while encouraging the same courage in others
CC.3	Demonstrate curiosity as a data storyteller	Display leadership strategies for staying curious when "data is messy" by trying out new tools and skills, while encouraging the same curiosity in others
CC..4	Use strategies for addressing doubt	Identify strategies and tactics to respond in situations when listeners seem to doubt your authority or don't want to listen to your story
CC.5	Create a safe space for critical conversations about data	Use strategies that create a safe space for others to feel comfortable asking difficult questions about data, sharing their experiences, and exploring solutions
CC.6	Empower others to take action	Identify and use (3) strategies for empowering others to ask questions and to determine practical steps to make differences in their communities

Sources

Briggs, C. (2020). Beyond the Linguistic/Medical Anthropology Divide: Retooling Anthropology to Face COVID-19. *Medical Anthropology, 39*(7), 563-572. doi:10.1080/01459740.2020.1765168

Briggs, C., & Mantini-Briggs, C. (2016). *Tell me why my children died*. Duke University Press.

D'Ignazio, C., & Klein, L. F. (2020). Data Feminism. The MIT Press.

D'Ignazio, C. (2017). Creative data literacy: Bridging the gap between the data-haves and data-have nots. *Information Design Journal, 23*(1), 6–18. https://doi-org.jpllnet.sfsu.edu/10.1075/idj.23.1.03dig

Fotopoulou, A. (2021) Conceptualising critical data literacies for civil society organisations: Agency, care, and social responsibility. *Information, Communication & Society, 24*(11), 1640-1657, DOI: 10.1080/1369118X.2020.1716041

Handley, M. A., Santos, M. G., & Bastías, M. J. (2022). Working with Data in Adult English Classrooms: Lessons Learned about Communicative Justice during the COVID-19 Pandemic. *International Journal of Environmental Research and Public Health, 20*(1), 696. http://dx.doi.org/10.3390/ijerph20010696

Leslie, I. (2014) *Curious: The desire to know and why your future depends on it.* Basic Books.

Pury, C. L. S., Kowalski, R., & Spearman, J. (2007) Distinctions between general and personal courage, The Journal of Positive Psychology, 2:2, 99-114, DOI: 10.1080/17439760701237962

Safir, S. & Dugan, J. (2021). *Street Data: A Next-Generation Model for Equity, Pedagogy, and School Transformation.* Corwin Press.

CONTACT: Maricel G. Santos, mgsantos@sfsu.edu