Data and Information Literacy: Advancing Learner Leadership and Communicative Justice

COABE 2024

Nashville, TN - March 20, 2024

WORLD EDUCATION

CJI
COMMUNICATIVE
JUSTICE INITIATIVE

Alison Ascher Webber
Director of Strategic Initaitives,
EdTech Center
World Education

Maricel G. Santos EdD
Professor & Chair
English Department
San Francisco State University, Communicative Justice Initiative

Maria Bastias MA Tesol
EdD Candidate SF State, Communicative Justice Initiative
ESOL Program Manager at Mujeres Unidas y Activas, Communicative Justice Initiative

Agenda

1. Warm-Up
2. Data & Information Literacy in Adult Education
3. Overview: Communicative Justice Initiative
4. Your Turn: Onramps & Activities with Adult Learners
5. Reflecting on / Planning Your Instruction
6. Next steps

Warm Up

What is data?

What are your ideas?

What are your learners' ideas?

Data & Information Literacy

in adult education

Data, Information, Media & Algorithmic (Oh My!) LITERACIES

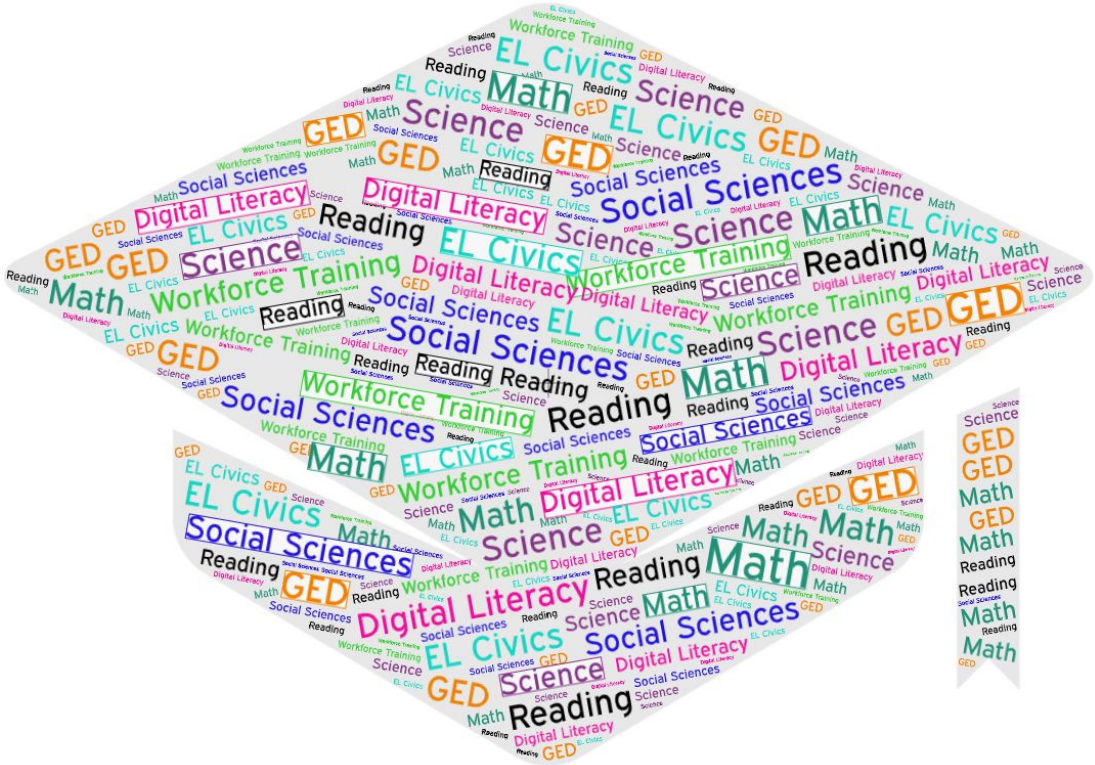
Increased use of technology in all aspects of our lives increases the need for…

DATA LITERACY

> The data-literate individual understands, explains and documents the utility and limitations of data by becoming a critical consumer of data, controlling [one's] personal data trail, finding meaning and taking action based on data. [One] can identify, collect, evaluate, analyze, interpret, present and protect data."- The Oceans of Data Institute

Definition adopted by American Library Association

Where is Data Literacy in Adult Education?



"A classroom of English language learners is hardly the image that comes to mind when people think of data scientists. At the same time, adult education learners hold powerful perspectives, voices, cultural competency, leadership skills, and more that must be brought into shaping the questions asked and strategies taken when collecting, analyzing, and communicating data."

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"Data is more than one voice in the room."

Mona Chalabi, Journalist and Artist

"Working with data is an increasingly powerful way of making knowledge claims about the world. There is, however, a growing gap between those who can work effectively with data and those who cannot."

Creative data literacy, **D'Ignazio**

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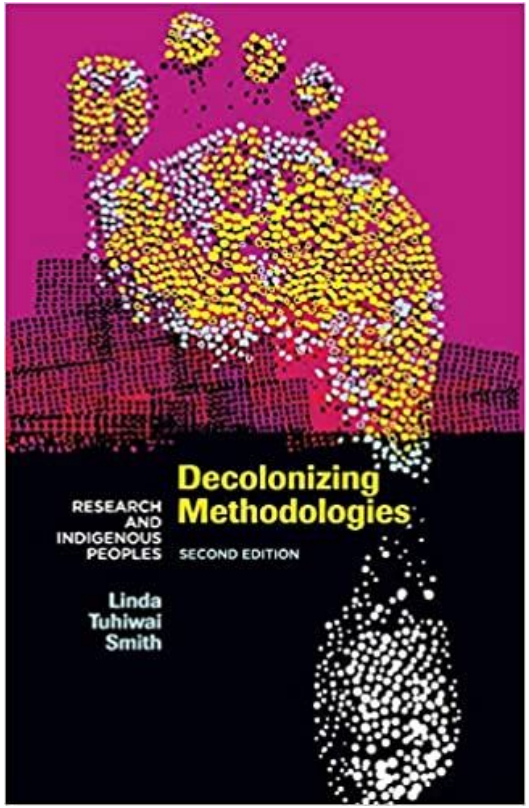
Linda Tuhiwai Smith



"Numbers tell us about colonial privilege and power. Indigenous cultures also counted and had mathematical concepts that helped them count what mattered."

"Numbers can represent and speak for the disappeared and the murdered, the absent and denied, the loss and the lost. Numbers can disappear Indigenous peoples so they do not count or so that they count less."

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Overview

Communicative Justice Initiative

Changing the way we think about health data by changing the way we engage adult learners as

DATA CREATORS

DATA STORY-TELLERS

DATA VISUALIZERS

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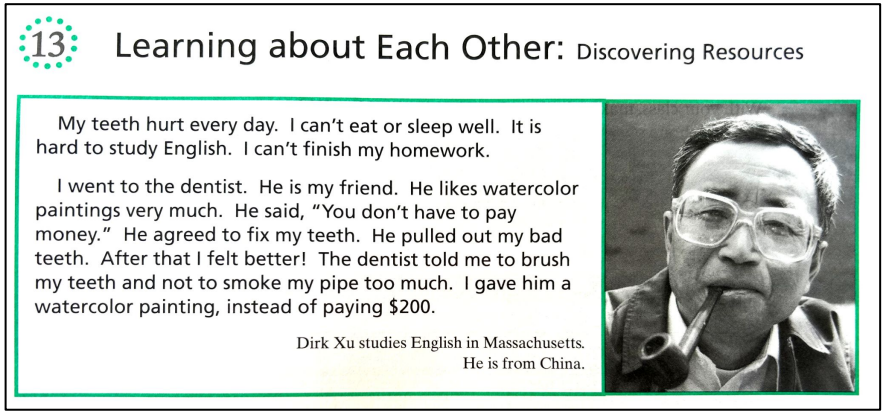
Our grounding in Weinstein's (1999) *Learners' Lives as Curriculum*

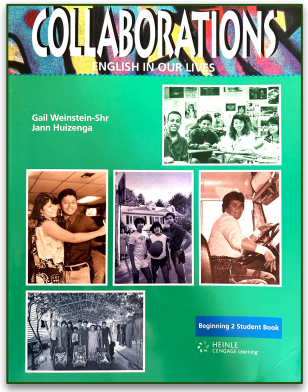


13 Learning about Each Other: Discovering Resources

My teeth hurt every day. I can't eat or sleep well. It is hard to study English. I can't finish my homework.

I went to the dentist. He is my friend. He likes watercolor paintings very much. He said, "You don't have to pay money." He agreed to fix my teeth. He pulled out my bad teeth. After that I felt better! The dentist told me to brush my teeth and not to smoke my pipe too much. I gave him a watercolor painting, instead of paying $200.

Dirk Xu studies English in Massachusetts.
He is from China.



The Anatomy of a Learner-Centered Lesson (Weinstein, 1999)

- Reading and reacting to a story
- Playing with / mastering the language of the story
- Generating new language to tell new stories
- Comparing experiences for reflection and/or action

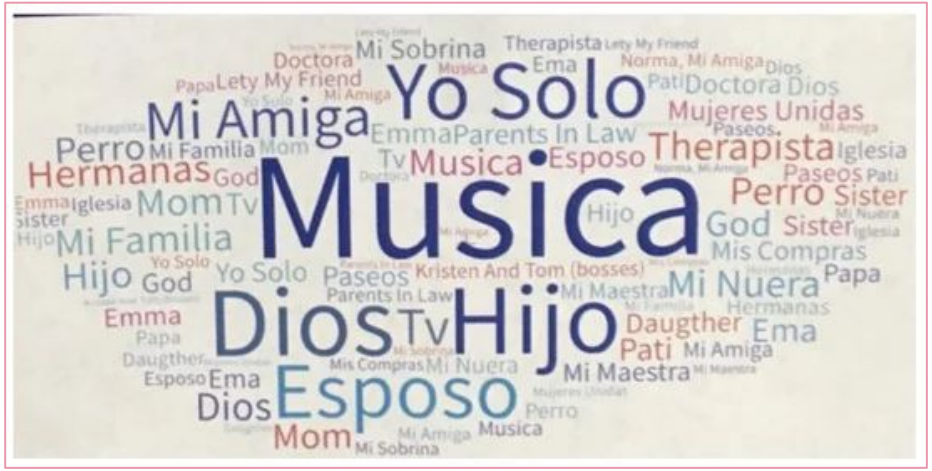
Learners as interpreters

Language Lessons on Immigrant Identity, Food Culture, and the Search for Home

MARICEL G. SANTOS
San Francisco State University

JEFF McCLELLAND
Alameda Adult School

MARGARET HANDLEY
University of California, San Francisco



This word cloud features ideas about stress relief and social support generated by Maria's class of adult English language learners.

Adapting Weinstein's (1999) Anatomy of a Learner-Centered Lesson

- Reading and reacting to **data**
- Playing with / mastering the language of **data**
- Generating new language to tell **new stories about data**
- Comparing experiences for reflection and/or action

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What supports data literacy learning?

Opportunities…

- to **play with data** – hear, see, read, write, say, embody it, imagine, **problem-solve with others**
- to **see yourself in the data**
- to **practice 'speaking data'** (D'Ignazio, 2017; D'Ignazio & Bhargava, 2016)

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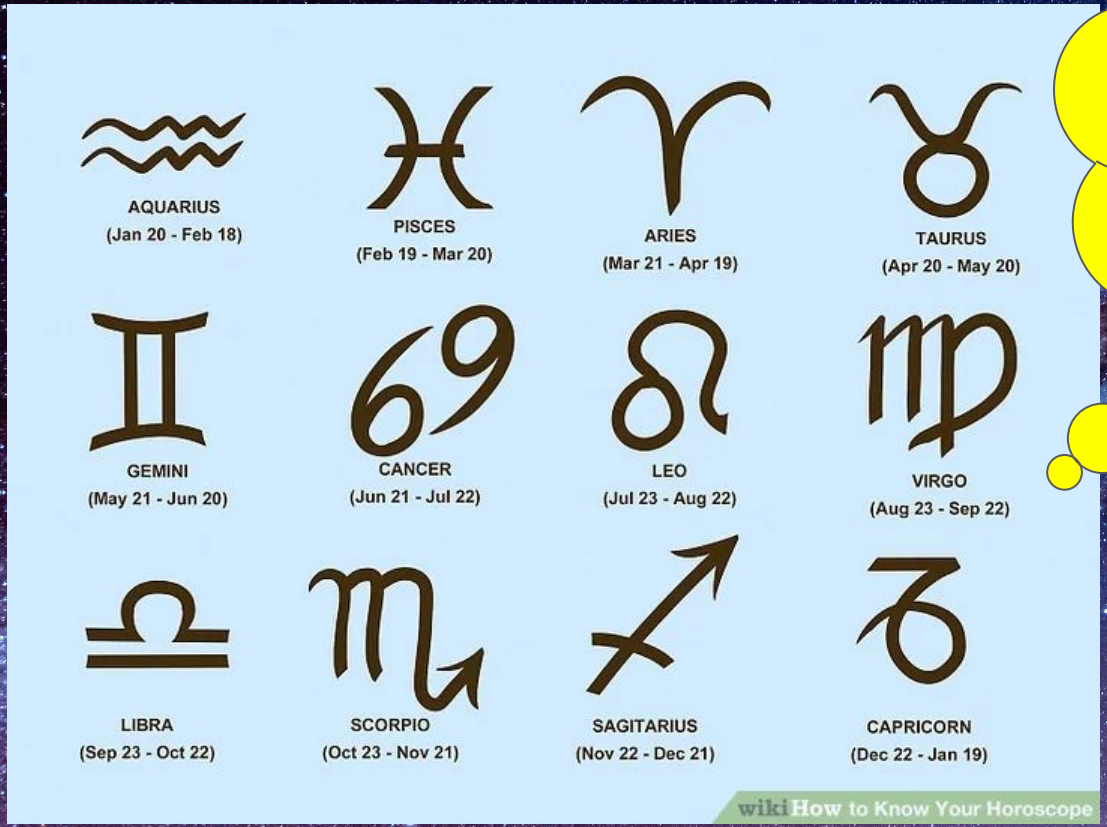
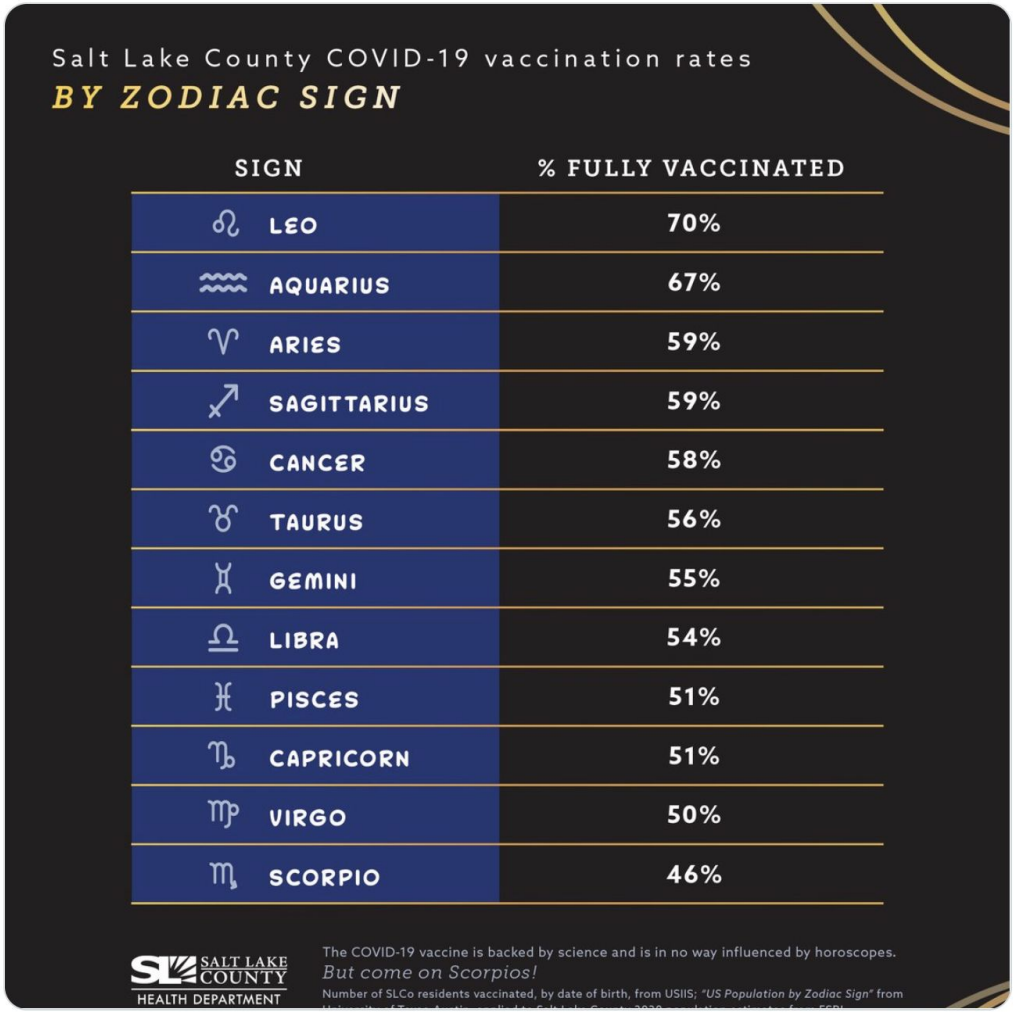


Who gets **vaccinated**? What do the **stars** say?

Photo by Graham Holtshausen on Unsplash



2:10 PM · Oct 19, 2021

Photo by Camilla Bixler, City College of San Francisco

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For me data is...

Dissertation (Bastias, 2024)

- Access to resources
- Resources
- Tools that help me do a better job
- Being invited to a conversation
- Being counted
- My story
- Someone's story
- How well I listen
- Numbers
- *Exchange of information
- *Trust

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Your Turn

On-ramps & Activities

with adult learners

Your Turn

Which of the following activities can you imagine adapting for your own classroom?

[Optional] What things do you already do with your learners that support:

- Playing with data?
- Supporting them seeing themselves in the data?
- Speaking data?

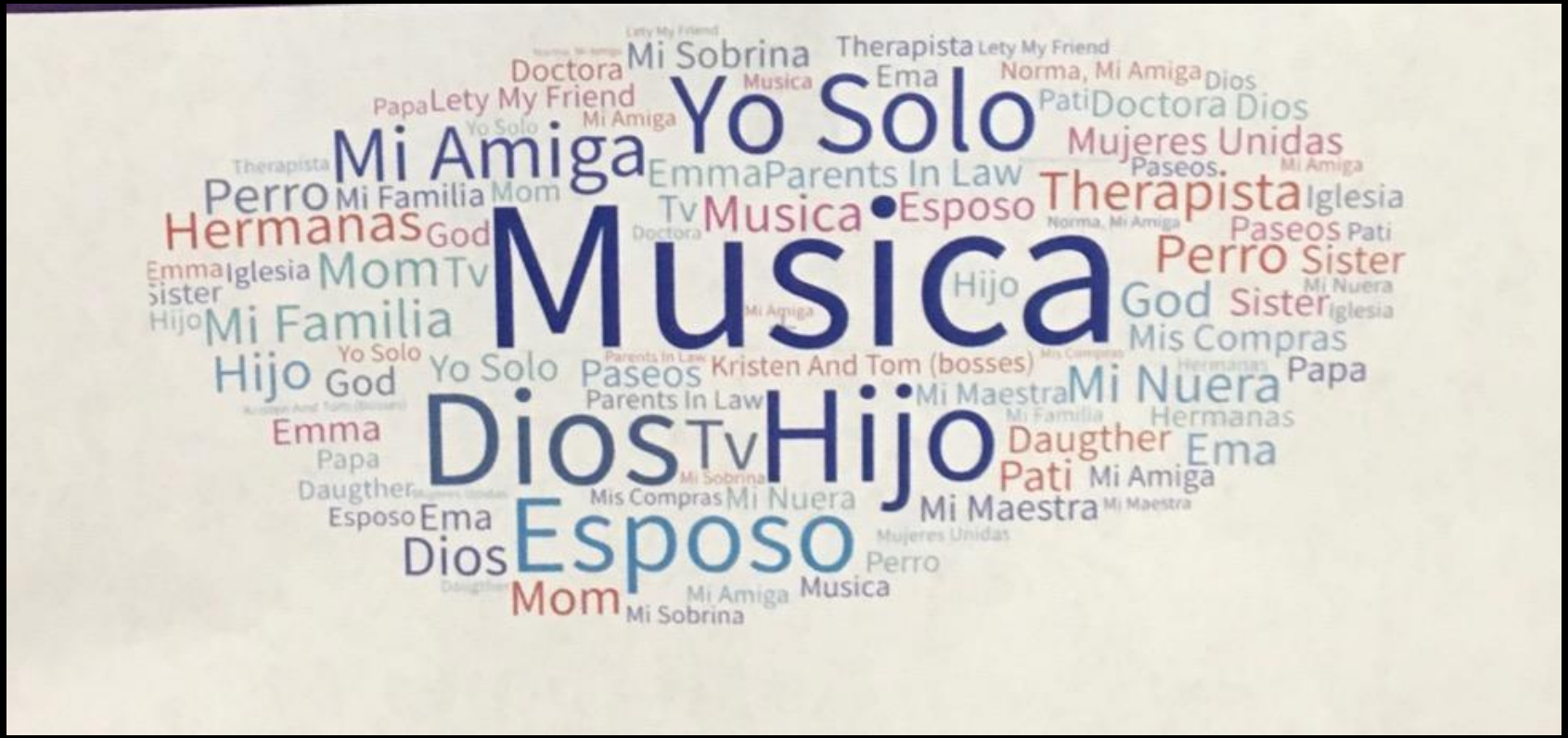


Photo Credits: Maria Jose Bastias

Collecting and analyzing our own data: What stresses you out?

Now in English

Use *most women*, *many women*, *some women*, and *few women*

Situación	Numero de personas	Most, many, some, few
Pagar la renta	6	
Buscar un lugar para rentar o vivir	3	
Trabajar	4	
Cuidar hijos	6	
Tener problemas con mi pareja	5	
Aprender ingles	5	
Estar en el trafico	4	
Viajar al trabajo	1	
Pagar cuentas	6	

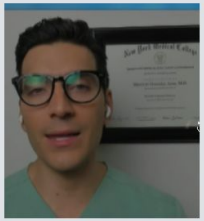
Photo Credits: Maria Jose Bastias

Photo Credits: Maria Jose Bastias

Who do you trust?

God

facebook



Dr. Mauricio Gonzalez

Dr. Fauci

Family and friends

My employer

La maestra

CNN

Doctors

Sharing our ideas

Which circle do you want to share?

- Closeness (how close are they to you?)
- Frequency (how often do you see them?)
- Intensity (how much do you trust them)

Share your screen and tell us!

Activity #2. Bubble Map.

1. **Who do you talk to about health?** Make a list of people you talk to you about health in general, your personal health, or health advice.

2. Use your ideas and draw a **bubble map**. Draw a big circle in the middle of your paper. Write "People I talk to about health" in the circle.

   Draw lines coming out from the circle, and connect new circles.

3. You can add new ideas: "We talk about Covid-19". "Sometimes we use English, sometimes Spanish". "It's easy to join online support groups".

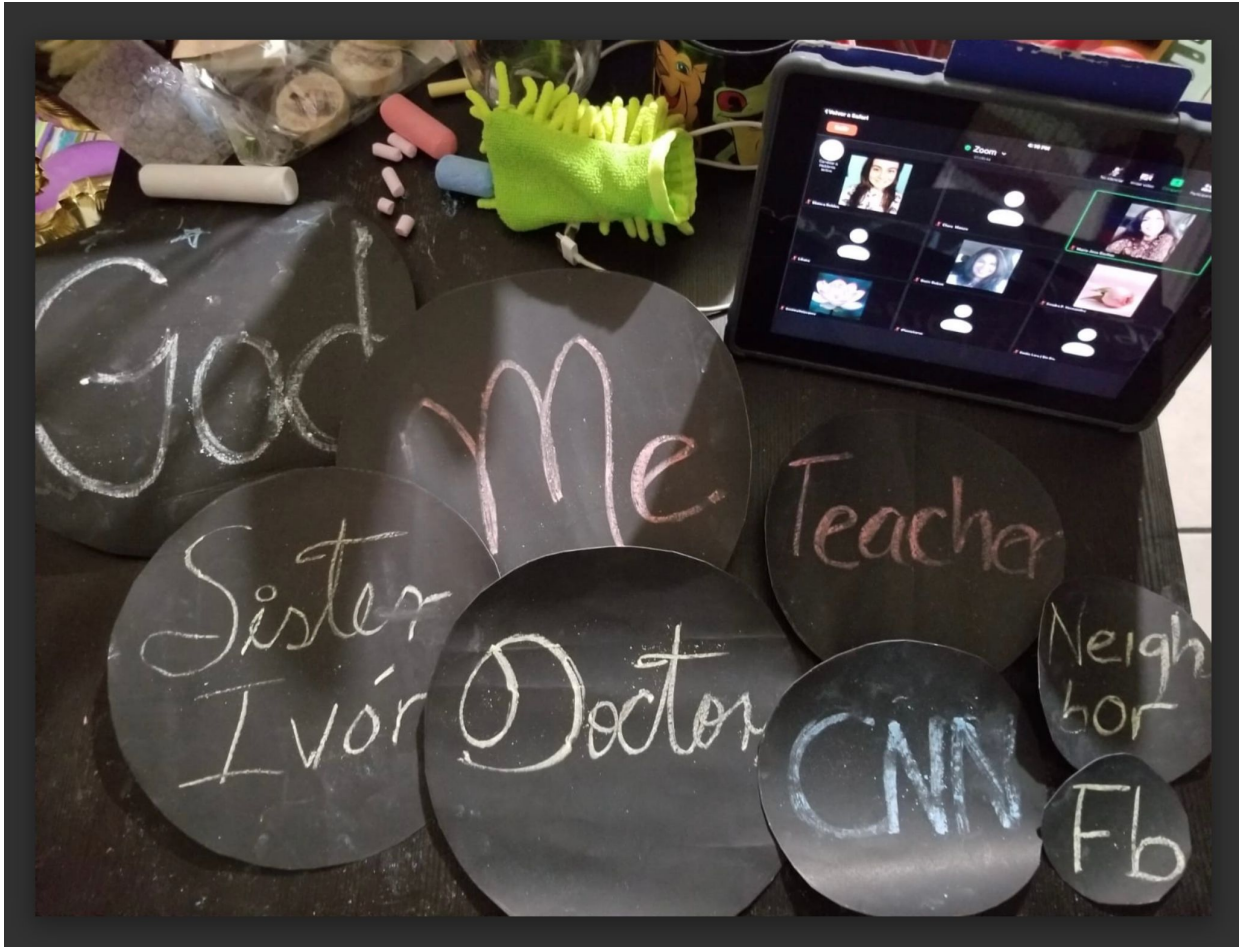
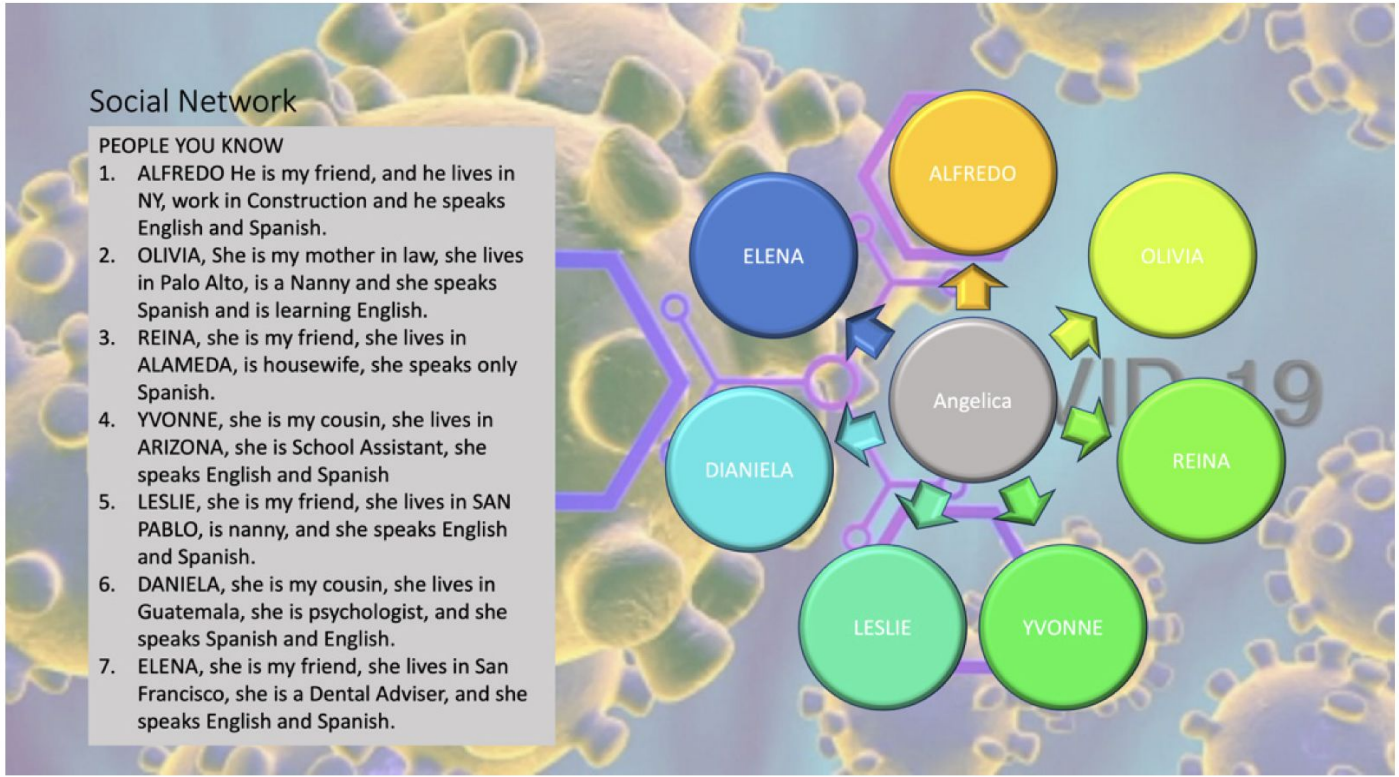
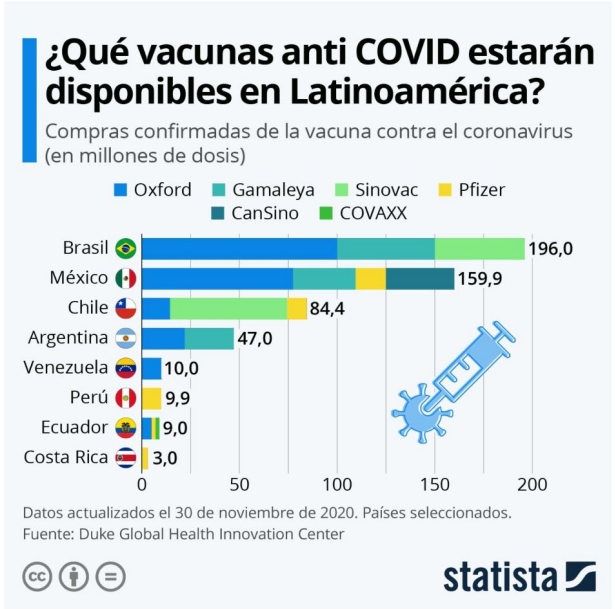

God
Me
Teacher
Sister
Ivór
Doctor
CNN
Neigh
bor
Fb

Figure 4. Depiction of a learner's social network as emanating from herself at the center, even as each name reveals they do not live nearby. Names have been changed to preserve confidentiality.

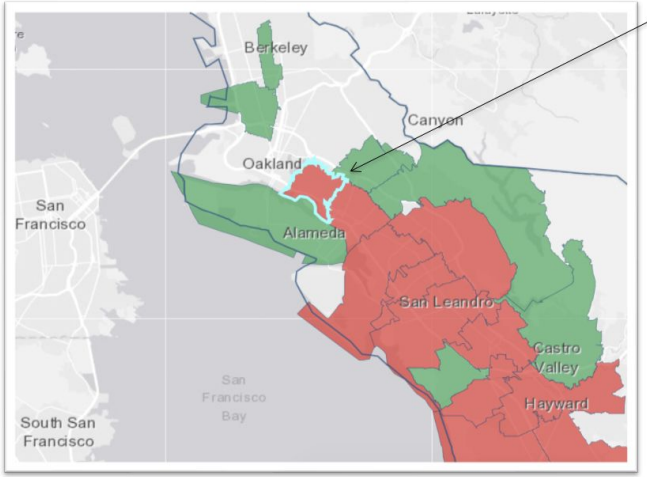




Analyzing a graph:
Point?
Purpose?
Audience?

Using heat maps to invite beginning-level English learners to see themselves in the data.

How many adults drink sugary drinks?



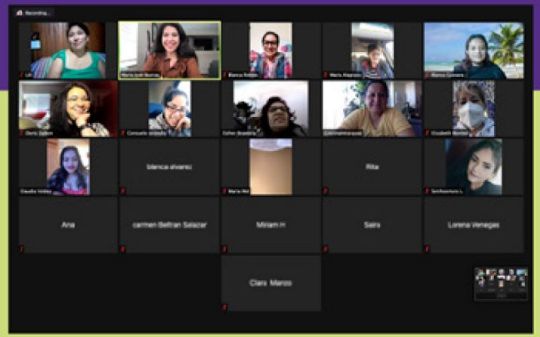
Look at the map. What do you see?

City Name	What color?
Oakland	
Alameda	
San Leandro	
Castro Valley	
Hayward	
Berkeley	

Listen to your teacher. Write the words.

1. The color red means _____ _____ drink sugary drinks.
2. The color green means _____ _____ drink sugary drinks.

SEGUIMOS APRENDIENDO VIRTUALMENTE
WE KEEP LEARNING ONLINE



— Claudia V., Doris D., Ana P. y Cristina V.

La clase de inglés en MUA nos permite el aprendizaje de una forma interactiva y participativa. Por ejemplo, aprendemos acerca de nuestros derechos laborales, nosotros practicamos como pedir ayuda para mejorar nuestra salud mental y física para nosotras y nuestras familias; interpretamos datos como gráficos de barras, gráficos circulares, nube de documentos de word, estadísticas, evaluar fuentes de información; y evitar fraudes y estafas relacionadas con COVID19. En nuestra clase no hay respuestas incorrectas lo cual nos da la confianza de NO tener miedo cuando hablamos frente a otros; por lo tanto, nos sentimos más confiadas y empoderadas.

The English class in MUA gives us the opportunity to learn in an interactive and proactive way. For instance, we learn about our labor rights; we practice asking for help to improve our physical and mental health for us and our families. We interpret data like bar graphs, pie charts, word clouds, statistics; we evaluate sources of information; and learn to avoid fraud and scams related to COVID 19. In our class there is never a wrong answer, which provides us with the confidence to not be afraid when talking in front of others; therefore, we feel more confident and empowered..

To learn more about our ESL program or to sign up,

Your Turn

Which of the activities shared can you imagine adapting for your own classroom?

[Optional] What things do you already do with your learners that support:

- Playing with data?
- Supporting them seeing themselves in the data?
- Speaking data?

RECAP: What supports data literacy learning?

Opportunities…

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ESOL and Adult Ed Classrooms: A Haven for Indigenous and Community Epistemologies, Data, and Leadership

Dissertation (Bastias,2024)

> “When you look at things outside and notice that there are children who don’t have a stable place to live, don’t have breakfast, they bite, or act in a specific way, well, how they act with others. I think this is data. If you start looking at them, they are data. They are data that helps us know what we can do, how we can help, what the school needs, the resources that there are for those families. I had not looked at it that way before, but we’re already working with data.”

Community leader working with Latino Community in Parent Engagement and Housing in the San Francisco Bay Area

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ESOL and Adult Ed Classrooms: A Haven for Indigenous and Community Epistemologies, Data, and Leadership

Dissertation (Bastias,2024)

> “To work the land you have to look for the tools, right? For example, you have to search for cattle. This would be the computer, internet access, and also your phone, maybe? Because… without that you can't do anything with data. Also, for example, the seed, the most important part when you harvest, what we give to our community when they help us. When you learn to work with data and technology, it is like you are also harvesting or sowing something that you are going to continue cultivating. It is obvious that you can give some of that seed to someone else, share your knowledge with your people, with your community.”

A Maya Mam community leader working with Indigenous women from Guatemala in the San Francisco Bay Area

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DATA LIT & COMMUNICATIVE JUSTICE INITIATIVE PRINCIPLES

Learner workers have opportunities to:

1. Understand Data - ask questions like what's data? who works with data? does data improve our lives?
2. Speak Data - learning and using language to talk about data and how we feel about it
3. Play With Data - hear, see, read, write, speak, imagine collect, and interpret data while problem-solving with others.
4. Engage in Data Story-telling - see themselves in data and tell stories with a purpose, through a fun discovery process that shows learners/worker how data affects us all.
5. Cultivate Courage and Curiosity - in sharing their data stories with their communities.

Explore

CJI Competency Framework:

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Digital literacy and other literacies are embedded in all these steps.

www.communicativejustice.com

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The Communicative Justice Initiative brings together adult education, public health, and data science.

Adult learners have powerful stories that should be part of the data that informs what we know about the health and well-being of linguistically diverse populations in the U.S. Rarely do they find opportunities to share these interpretations and experiences—with other learners, local communities, and public health professionals.

CJI seeks to change the way we see health data by changing the way we engage adult learners from linguistically diverse communities.

CLASSROOM ACTIVITIES & LESSON IDEAS

Note to Teachers

Our CJI activities aim to promote learner talk and interaction around data, with the following principles in mind:

- **Learners need to play with data** - they need frequent, scaffolded opportunities to test out the meaning in data.
- **Learners need to see themselves in data** - they need opportunities to explore the world of data through their own eyes, from their own experience.
- **Learners need practice 'speaking data'** - our learners can learn to 'speak data' in English — but English is not the only language we can use to 'speak data'. We should support learners' use of everyday language, first languages, science language, math language, even their use of imperfect English, as valuable resources for meaning-making.

We invite you to look for these principles in our activities. We also invite you to develop your own activities that put these principles to work and cultivate a community of data storytellers in your own classroom.

See all Activities

Search through the Activities by Tag

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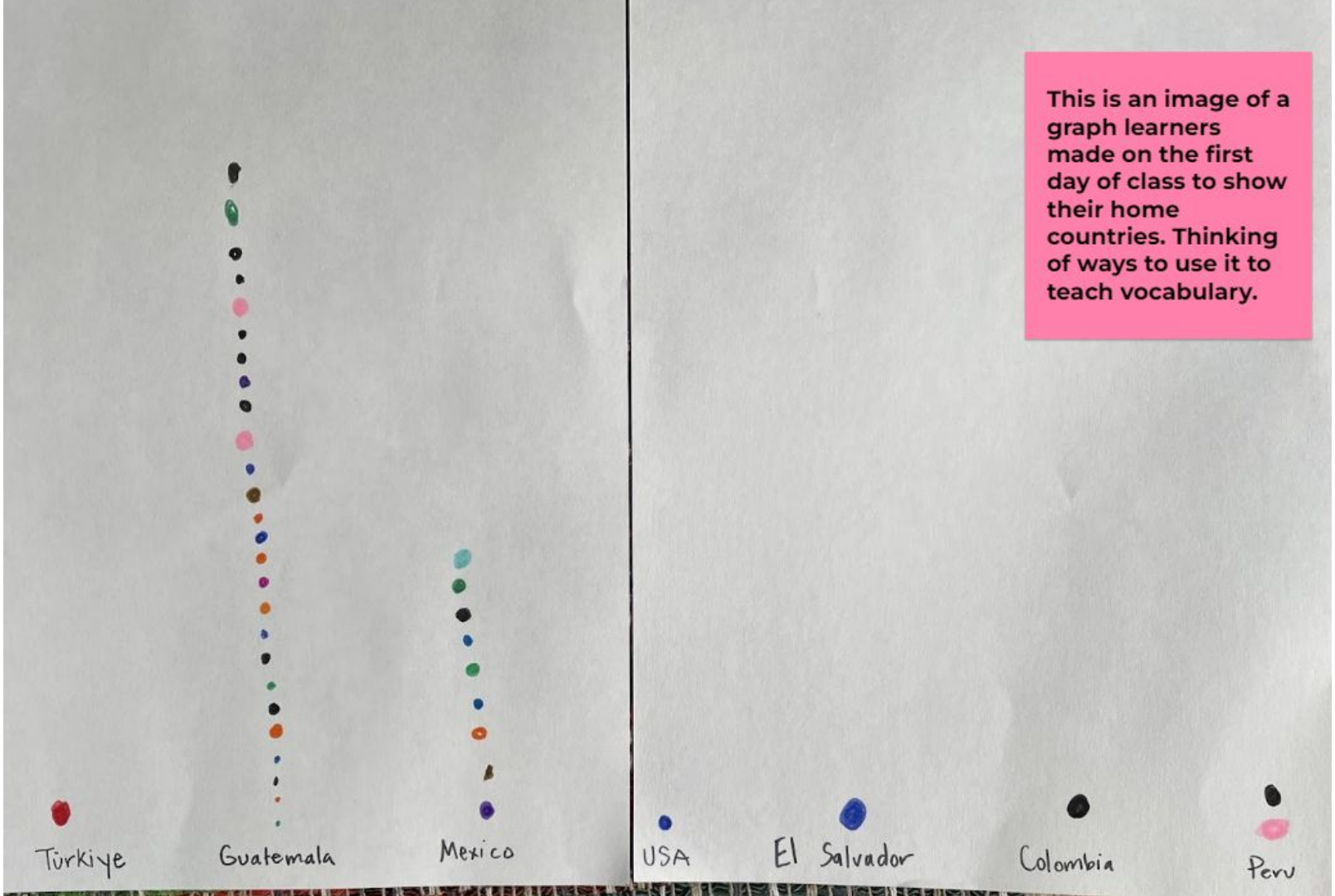
Fun with data visuals

with adult learners

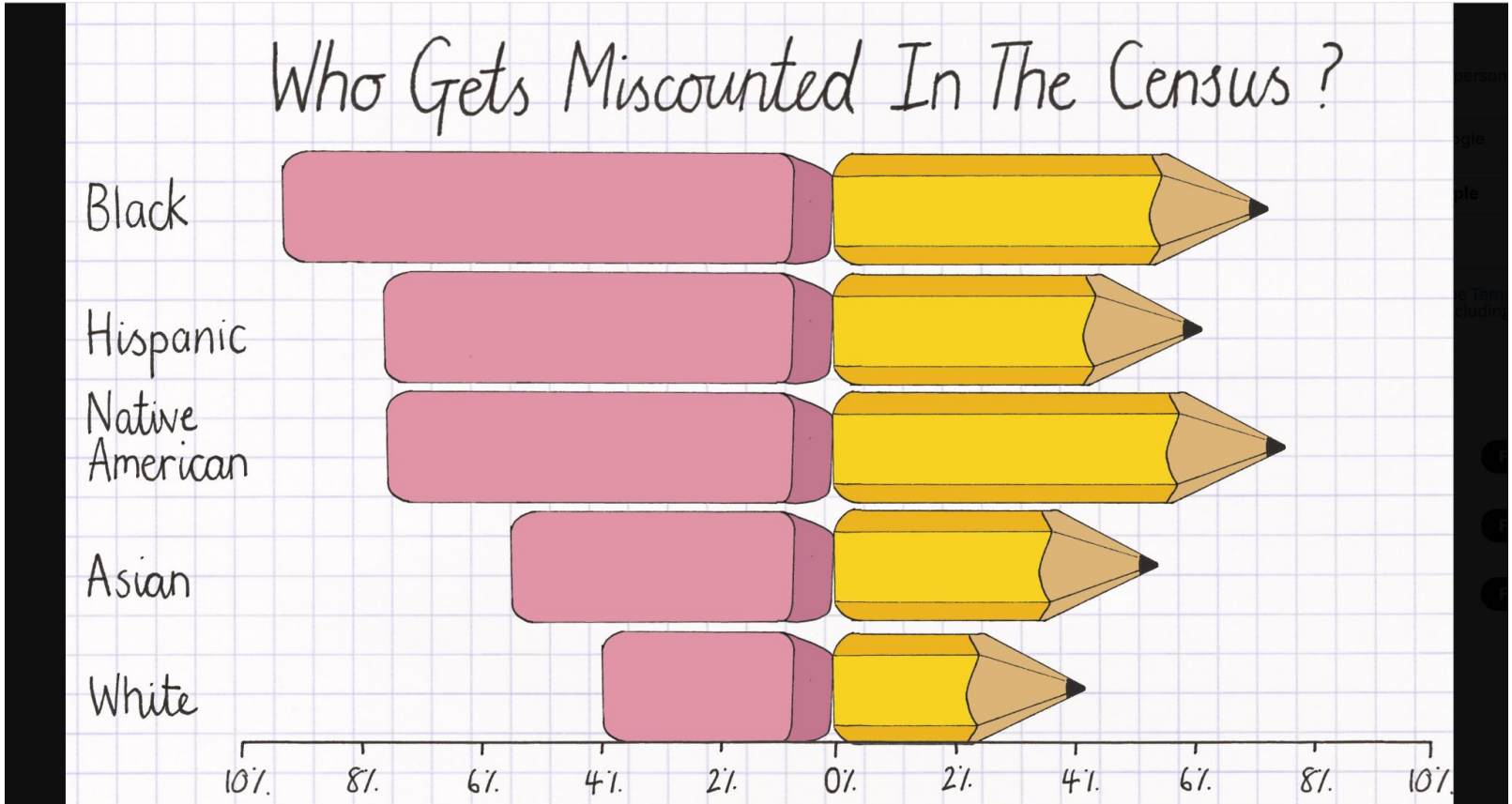


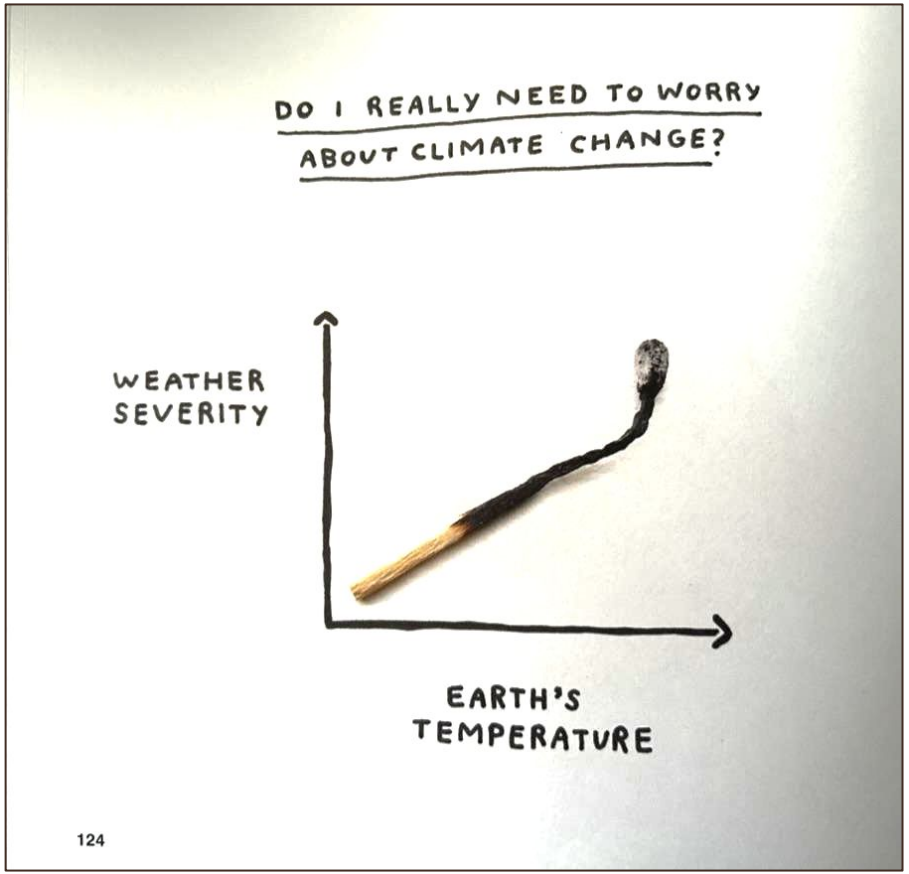
This is an image of a graph learners made on the first day of class to show their home countries. Thinking of ways to use it to teach vocabulary.

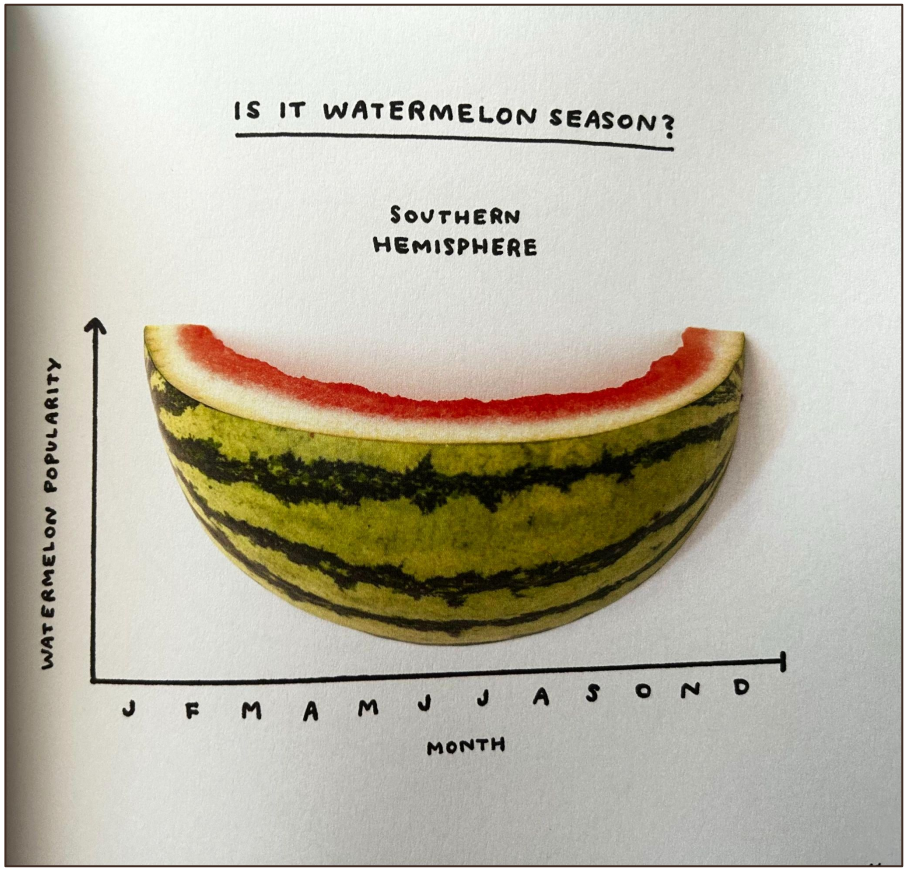
Mona Chalabi
@MonaChalabi

Data Editor, Guardian US. Trying to take the numb out of numbers, left with lots of ers. Email me... mona@monachalabi.com

NY via LDN monachalabi.com Joined February 2012



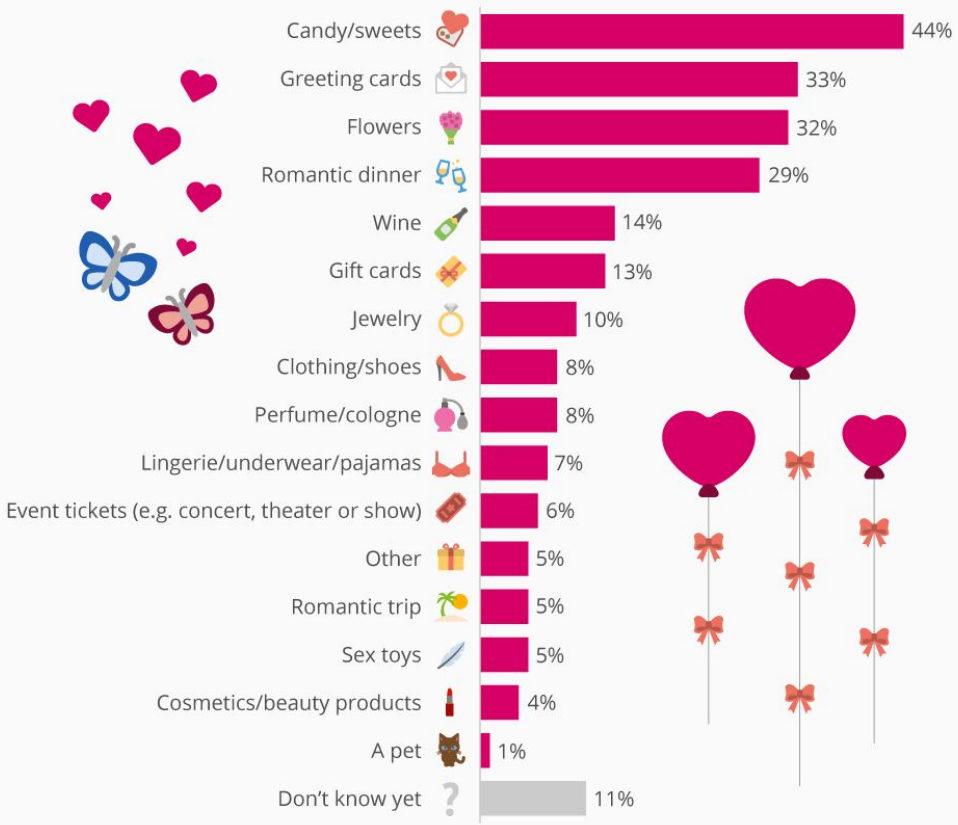




Am I Overthinking This? Book, Journal, Planner – Michelle Rial

The Most Popular Valentine's Day Gifts In The U.S.

"What kind of gifts will you be purchasing for Valentine's Day?"



n=685 respondents that plan to buy gifts. Multiple answers possible.

Source: Statista Survey Valentine's Day 2017

@StatistaCharts

statista

monachalabi
Common Birthdays
J F M A M J J A S O N D
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Reflecting on/ Planning Your Instruction

Reflecting on / Planning Your Instruction

Inspired? Let's reflect and plan!

What are topics that your students would be interested in exploring by analyzing or collecting data?

Reflecting on / Planning Your Instruction

On the website: www.communicativejustice.com/activities
Read the essential questions as you think about your students:

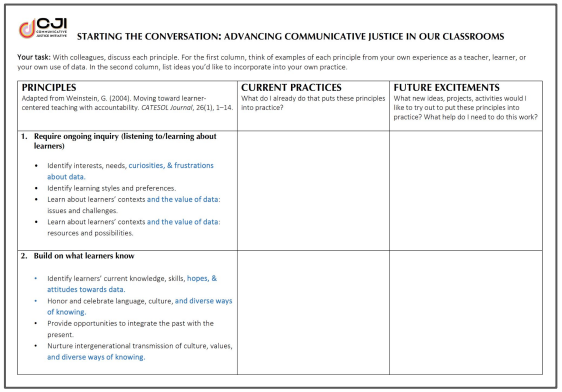
- What stories are told with data? Who gets to decide what data and what stories?
- Do you trust data? Are you afraid of data? How do we get overcome these fears?
- Who is represented? Who is included? Who is left out? Are you represented? Are you left out of data?
- What can you do with data?
- Fake or real - can you tell the difference? How do you know what you know?
- Is my data safe? Is my data private? What are my rights?

Advancing Communicative Justice in Our Classrooms

1. Require ongoing inquiry (listening to/learning about learners) **(about the world of data)**
2. Build on what learners know **(about data)**
3. Balance skills and structures with meaning making, knowledge creation, and the use of data for community- owned purposes
4. Strive for authenticity
5. Promote shared responsibility of the classroom as a "data workspace" among learners and teachers
6. Build 'data-storytelling' communities of learners and teachers

https://www.communicativejustice.com/cji-framework

Teacher Reflection Worksheet



STARTING THE CONVERSATION: ADVANCING COMMUNICATIVE JUSTICE IN OUR CLASSROOMS

Your task: With colleagues, discuss each principle. For the first column, think of examples of each principle from your own experience as a teacher, learner, or your own use of data. In the second column, list ideas you'd like to incorporate into your own practice.

PRINCIPLES Adapted from Weinstein, G. (2004). Moving toward learner-centered teaching with accountability. *CATESOL Journal*, 26(1), 1–14.	**CURRENT PRACTICES** What do I already do that puts these principles into practice?	**FUTURE EXCITEMENTS** What new ideas, projects, activities would I like to try out to put these principles into practice? What help do I need to do this work?
1. Require ongoing inquiry (listening to/learning about learners) • Identify interests, needs, curiosities, & frustrations about data. • Identify learning styles and preferences. • Learn about learners' contexts and the value of data: issues and challenges. • Learn about learners' contexts and the value of data: resources and possibilities.		
2. Build on what learners know • Identify learners' current knowledge, skills, hopes, & attitudes towards data. • Honor and celebrate language, culture, and diverse ways of knowing. • Provide opportunities to integrate the past with the present. • Nurture intergenerational transmission of culture, values, and diverse ways of knowing.		

Next Steps

RECAP: What supports communicative justice?

Empowered opportunities (spaces, tools, networks) for learners to…

- **play with data** – hear, see, read, write, say, embody it, imagine, **problem-solve with others**
  - data story-telling as a collective act
- **practice 'speaking data'**
- **see yourself in the data**

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Home About CJI Framework
Classrooms Activities & Lesson Ideas Contact

The Communicative Justice Initiative brings together adult education, public health, and data science.

Adult learners have powerful stories that should be part of the data that informs what we know about the health and well-being of linguistically diverse populations in the U.S. Rarely do they find opportunities to share these interpretations and experiences—with other learners, local communities, and public health professionals.

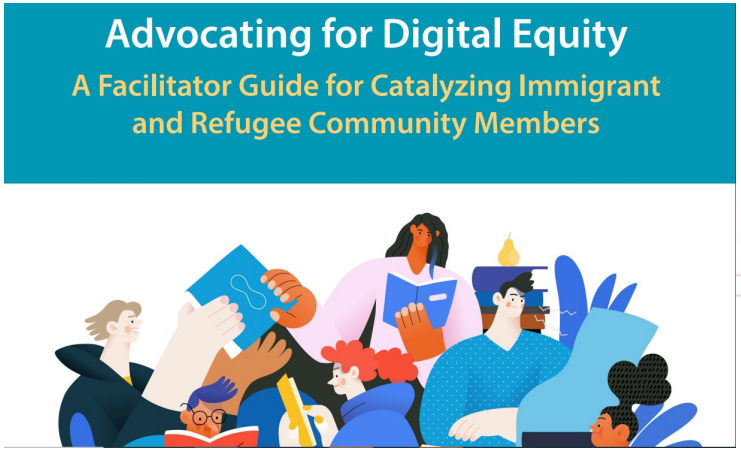
CJI seeks to change the way we see health data by changing the way we engage adult learners from linguistically diverse communities.

https://padlet.com/mgsantos1/brainstorm-what-is-communicative-justice-rdqas7nufejq6azk

Next Steps: Curriculum, PD, Policy

1. **Curricular Activities and resources**: Data literacy, data privacy & consent, AI and data literacy- **www.CrowdEDLearning.org** and its Skillblox app

2. Learners using data to advocate for digital equity
   https://worlded.org/digital-equity/



3. Voices of **learner leadership as data storytellers** - **www.changeagent.nelrc.org**

- Online multi-level magazine ***by*** and ***for*** adult learners
- Engaging and relevant, includes standards-aligned activities
- Available in PDF, audio, and Google slides
- Inexpensive individual and bulk **subscriptions** available to teachers. Students log in for free.
- **Call for Articles** - articles due May 2 on “Our Digital Future” Students whose pieces are accepted receive a $50 gift card
-

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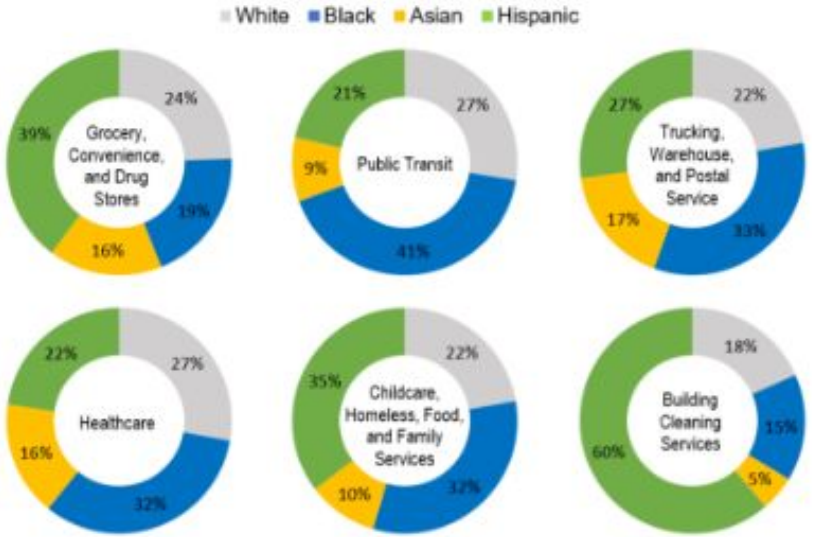
In her piece, Adriana Herrera López writes, “In New York City where I live, people of color do more than their fair share of the essential work. They are disproportionately represented.”

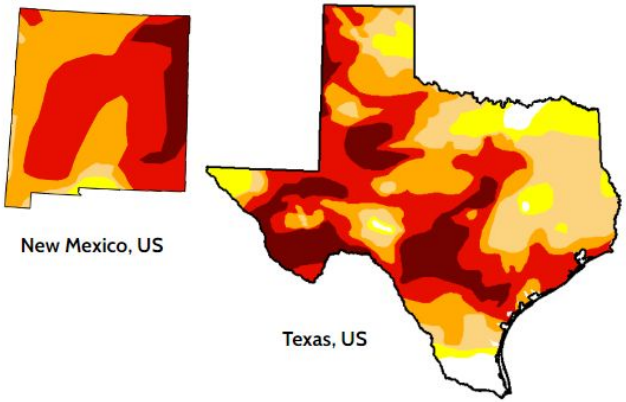


Better Future: At Home, There Are No Jobs, The Cities Are Unsafe, and the Rivers Are Dry

Hortensia Reza

Climate change is part of the problem. In Juárez City, in an area called Anapra, people used to benefit from the Rio Bravo. They used the water for their lands, but the river doesn't have as much water anymore. There are not many job opportunities. This is one of the reasons why people leave."

Write 2-3 true statements about the drought conditions in New Mexico and Texas.



Words you might use:	
about	*approximately*
more than	*less than*
almost	*at least*

Intensity

- Abnormally Dry
- Moderate Drought
- Severe Drought
- Extreme Drought
- Exceptional Drought

Next Steps: Curriculum, PD, Policy

4. Stay tuned for a **practitioner study circle!**
5. Interdisciplinary networking
6. **Integration with state competency and national reporting standards** affiliated with English Literacy and Civics Education, tied to the Workforce Innovation and Opportunity Act (WIOA), Title II: Adult Education and Family Literacy Act (AEFLA)
7. Championing **data literacy policies** that support access to education and tools

World Education experts are leading discussions on critical topics including artificial intelligence, digital skills and inclusion, immigrant integration, open educational resources (OER), career pathways, and more!

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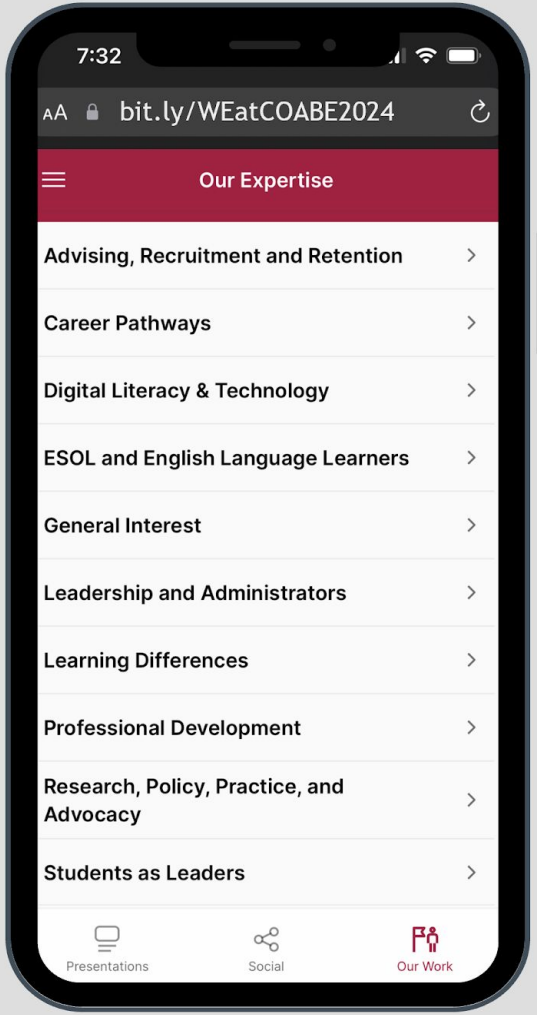

Thank you!

alison_ascher@worlded.org

mgsantos@sfsu.edu

mbastias@mail.sfsu.edu

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