WORK IN PROGRESS · FALL 2026

Undergraduate Facilitation of a Role-Based Data Literacy Program for Youth Advocacy

Rafaella Sampaio de Alencar[1,2], Journey Thornton-Darby[2], Olivia Mobley[2], Lucy Lipson[2], Jaime Booth[3], Erin Walker[1,2], Rosta Farzan[2]

[1]Learning Research & Development Center · [2]School of Computing and Information · [3]School of Social Work

University of Pittsburgh
Learning Research and Development Center

01 Learn Data Advocacy

Youth explore real data about their neighborhoods and use it to **advocate for change**. Complementary **data roles** broaden data literacy beyond technical analysis (Risha et al., 2022, 2026).

Journalist
Tells stories about the data

Detective
Investigates data for insights, gaps, and irregularities

Artist
Creates symbolic representations that evoke emotion

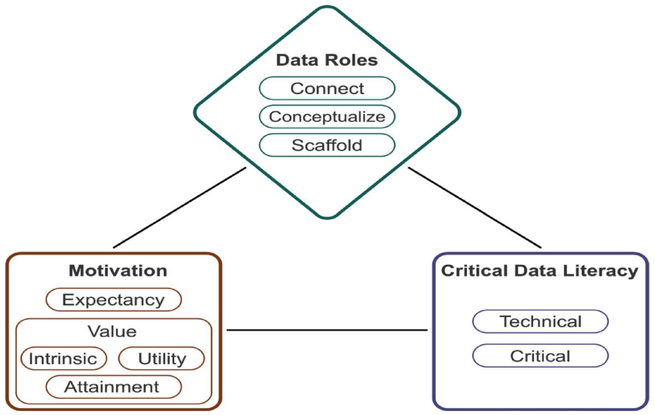


Figure 1. Conceptual framework for data roles. Reprinted from Risha et al. (2026).

Prior deployments

Earlier deployments, including the Women and Girls Foundation's GirlGov summer program, were facilitated by the research team (Risha et al., 2022, 2026):

- Roles engaged different critical data literacy processes
- Learners connected to roles through experiences, values, and enjoyment

This work resulted in a web-based platform called **LearnDataAdvocacy**, that we used in this iteration too. Its role-specific interfaces support youth's work with data.

02 This iteration

For the first time, **undergraduates** facilitated the program, yet little is known about how novice facilitators adapt such curricula.

RESEARCH QUESTION
How did undergraduate facilitators adapt the data-role curriculum before and during the workshop, and how did they experience that process?

Expected contributions

- An account of how novice facilitators enact and adapt a data-role curriculum, and how that impacts their own understanding of data advocacy
- Design implications for preparing undergraduates to facilitate community data literacy programs

Participants & setting

3 undergraduate facilitators

17 high school students

4 2.5-hour workshop sessions

Pitt's CEC in the Hill District · August 10–13, 2026 · 9:00–11:30 am



Figure 2. Youth artifact connecting service-request data to lived experience in the Hill District.

03 Data & analysis

Data sources

YOUTH
39 artifacts
Made in each role, plus 6 whiteboard photos

YOUTH
71 reflections
Answers to daily prompts and pre-workshop questions

OBSERVERS
4 observer notes
One file per session, written by the first author

UNDERGRADUATES
28 reflections
Written during training and the workshop

Sessions were not recorded, so the analysis draws on artifacts, written reflections, and field notes.

Analysis plan

1. **Preliminary notes** — IN PROGRESS
   A first read of each data source, kept separately
2. **Analytic memos** — UPCOMING
   Interpretations linked back to the research question
3. **Qualitative coding** — UPCOMING
   First- and second-cycle coding across sources
4. **Themes** — UPCOMING
   How facilitators adapted the curriculum and how they experienced the process

Future work

Use findings to inform facilitator training and the LearnDataAdvocacy platform.

Acknowledgements. Supported by NSF 2016982 and LRDC internal award. Thanks to our undergraduate facilitators and youth participants.

References. Risha, Z., Mallavarapu, A., Farzan, R., Booth, J., Sondel, B., & Walker, E. (2022). Proposing a role-based framework for data literacy. *Proc. ICLS 2022*, 1601–1604. · Risha, Z., Mallavarapu, A., Farzan, R., Booth, J., Sondel, B., & Walker, E. (2026). A better fit: Using data roles to appeal to more learners and promote critical data literacy. *International Journal of STEM Education, 13*, 15.